CONSTRUCTION BUDGET 2010 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BAB10	T&D Improvements	200	831.4	602.2	802.6	Active	M
BAB11	Transformer PCB Removal	1000	0		0	Active	M
BAC10	T&D Improvements, Carryover	9000	23	794.4	-2.9	Completed 1/2010	M
BAO08	T&D Improvements	8000	0	605.4	0	Closed 11/2010	M
BBB10	New Customer Additions	201	186.2	176	245.5	Active	C
BBB11	Overhead Services	1001	0		0	Active	C
BBC10	New Customer Additions, Carryover	9001	23.1	184.1	5.1	Completed 1/2010	C
BBO08	New Customer Additions	8001	0	265.5	-23.6	Closed 2/2010	C
BCB10	Outdoor Lighting	202	83.3	82.7	110.7	Active	M
BCB11	Outdoor Lighting	1002	0		0	Active	M
BCC10	Outdoor Lighting, Carryover	9002	5.8	72.8	1.9	Completed 1/2010	M
BCO08	Outdoor Lighting	8002	0	101.2	0	Completed 2/2010	M
BDB10	Emergency & Storm Restoration	203	355.3	324.2	368.9	Active	M
BDB11	Emergency Restoration	1003	0		0	Active	M
BDC10	Emergency & Storm Restoration, Carryover	9003	6.9	448.9	-44.7	Completed 1/2010	M
BDO08	Emergency & Storm Restoration	8003	0	321.9	-73.8	Completed 2/2010	M
BEB10	Billable Work	204	127.1	88.6	37.6	Active	M
BEB11	MV Accident - Broken Pole	1004	0		0	Active	M
BEC10	Billable Work, Carryover	9004	3	246.8	2.2	Completed 1/2010	M
BEO08	BILLABLE	8004	0	183	-27.1	Closed 2/2010	M
BFB10	Transformers Company/Conversions	205	63.8	12.5	0	Active	I
BFB11	COMPANY TRANSFORMER	1005	0		0	Active	I
BFO09	TRANSFORMER-COMPANY	9005	0	28.4	0	Closed 1/2010	I
BGB10	Transformer Customer Requirements	206	526.1	434	426.8	Active	C
BGB11	CUSTOMER TRANSFORMER	1006	0		0	Active	C
BGC10	Transformer Customer Requirements, Carryover	9006	10.4	378.1	3.8	Closed 11/2010	C
BHB10	Meter Blanket Company Requirements	208	97.2	97.2	119.3	Active	M
BHB11	Electric Meter Purchases - Company Requirements	1008	0		0	Active	M
BHO09	METER-COMPANY	9008	0	45.3	0	Closed 4/2010	M
BIB10	Meter Blanket Customer Requirements	207	117.5	117.5	42.1	Active	C
BIB11	Electric Meter Purchases - Customer Requirements	1007	0		0	Active	C
BIO09	METER-CUSTOMER	9007	0	148.2	21.6	Closed 1/2010	C
		Sub-Totals:	2,460.00	5,759.10	2,016.00		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECE01	Two Way Radio Replacements	224	3	3	1.3	Active	O
ECE02	AMI Equipment, Unanticipated Replacements	212	52.8	52.8	16.9	Active	O
ECE06	SCADA Master Disk Backup System	235	7.8	3	2	Closed 9/2010	O
ECE09	Purchase SCADA Terminal	216	2	2	1.5	Closed 10/2010	O
ECE11	AMI Communication Trouble Call Response	256	9.9	9.9	0	Active	O
ECE12	SCADA Data Exchange with PSNH		17.4			Cancelled 10/2010	O
EEC01	Replace SCADA System (Phase 2)	250	16.1	16.1	17.8	Closed 11/2010	O
EEC02	AMI Installation Augmentation	8010	14.3	85	1.5	Active	O
		Sub-Totals:	123.2	171.7	41		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECC01	Outage Management System (OMS)	9059	180.2	667.5	99.2	Active	O
ECN01	Centralized Radio Electric Dispatch	228	0	7	8.4	Closed 9/2010	O
ECN02	ODI Enhancements/updates	234	0	1.1	0.6	Closed 11/2010	O
ECN03	CIS 2010 Projects	238	0	37.3	33.5	Active	O
ECN05	Unitil Website	248	0	23.1	20.7	Active	O
ECO01	Two Way Radio Replacements	9022	0	4	0	Closed 1/2010	O
ECO02	AMI Replacements	9048	0	26.3	0	Closed 10/2010	O
ECO03	SCADA MASTER PH 2	5057	0	202	0	Closed 6/2010	O
		Sub-Totals:	180.2	968.3	162.4		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DAB00	Overhead Line Extensions		28.8		-5.2	Active	C

Electric Category	2010
Growth	
Customer Additions (C)	807,300
Subtotal Growth	807,300
Non-Growth	
Reliability (R)	235,900
Maintenance Replacement (M)	2,445,000
Mandated (H)	74,700
System Improvement (I)	1,138,900
Other (O)	817,800
Subtotal Non-Growth	4,712,300
Total	5,519,600

5,519,600
0

Budget Category	
Annual Requirements Blankets	**2010**
T&D Improvements	799,700
New Customer Additions	227,000
Outdoor Lighting	112,600
Emergency & Storm Restoration	250,400
Billable work	12,700
Transformers	430,600
Meters	183,000
Sub-Totals:	**2,016,000**
Distribution	
Overhead Line Extensions over $20,000	(5,200)
Underground Line Extensions over $20,000	67,600
Street Light Projects	-
Telephone Company Requests	69,600
Highway Projects	50,500
Distribution Pole Replacements	335,600
Specific Projects: Distribution	2,473,400
Sub-Totals:	**2,991,500**
Substation	
Specific Projects: Substation	232,300
Sub-Totals:	**232,300**
Communications	**203,400**
Tools, Shop, Garage	**55,600**
Laboratory	**1,900**
Office	**800**
Structures	**18,100**
Distribution Totals:	**5,519,600.0**

CONSTRUCTION BUDGET 2010 UES Capital
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BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DAB01	3 PH, O/H Line Ext., 4 Northeast Ave, Bow	239	0	6.5	6	Closed 10/2010	
DAB02	Pole Relocations	247	0		-11.3	Completed 12/2010	
DAB03	Relocation of Poles, 45-49 S Main St, Concord	252	0		0.1	Active	
DAB99	Water St OH Line Ext-Epsom	9060	0	5	0	Closed 1/2010	
DAC00	Overhead Line Extensions - Carryover		12.5			Completed 6/2010	C
DBB00	Underground Line Extensions		62.2		27.5	Active	C
DBB01	URD Line ext-147 Loudon Rd, Concord	237	0	6.9	4.6	Closed 10/2010	
DBB02	URD Line Ext, Dunbarton Rd, Concord, St Pauls School	245	0	37.5	6	Completed 10/2010	
DBB03	Three Phase, urd line ext, 30 Pembroke Rd, Concord	254	0		-0.7	Active	
DBB04	Overhead Single Phase Guaranteed Line Extension	257	0	55.8	17.7	Active	
DBC00	Underground Line Extensions, Carryover		18.2		40.1	Completed 10/2010	C
DBC02	URG Ext-Parmenter Pl, Conc	9053	0	18.6	22.4	Completed 10/2010	
DBC03	Primary UDG Line Ext-Airport Rd Concord-NHANG	9056	0	7.9	0.9	Closed 4/2010	
DBC04	7X1 conversion & 3 ph URD Line Ext	9057	0	63.4	12.7	Closed 10/2010	
DBC05	Tower Cir URD Line Ext	9058	0	7	2.4	Closed 4/2010	
DBC06	3 Phase Pri URD Line Ext-45 Constitution Ave	9062	0	11.3	1.8	Closed 4/2010	
DBC08	URD Line Ext-Ph 3 Vineyards	8068	0	15.1	0	Closed 4/2010	
DCB00	Street Light Projects		12			Active	M
DCC00	Street Light Projects - Carryover		0.7			Completed 3/2010	M
DDB00	Telephone Company Requests		30		24.2	Active	H
DDB01	Penacook St. Conc-Fairpoint Req Add Height	241	0	30	24.2	Closed 11/2010	
DDC00	Telephone Company Requests, Carryover		0			Completed 3/2010	H
DEB00	Highway Projects		371.7		45.4	Active	H
DEB01	Manchester St., Road Relocation		0			Active	
DEB02	N State St. Conc-Relo (4) for Rd Constr	236	0	59.8	45.4	Closed 10/2010	
Dec-00	Highway Projects, Carryover		0			Completed 3/2010	H
DEO01	Relocate (7) poles and primary UG feed along roadway	9039	0	123	5.1	Closed 9/2010	H
DPB01	Condemned Poles	217	264.2	264.2	335.6	Active	M
DPB02	Purchase Voltage Regulators	242	44.7	44.7	11.3	Active	I
DPB04	Circuit 1H6 reconductoring along the 374 Line R.O.W.	225	106.9	246.6	233.6	Active	I
DPB05	Circuit 4W3, Replace sectionalizers on Abbott Road	215	1.2	15.5	7.5	Closed 9/2010	M
DPB06	Circuit 22W3, Upgrade Reclosers coil at Birchdale Rd	233	8.6	8.6	3.8	Completed 10/2010	M
DPB09	Circuit 4X1, Add 2 phases and Reconductor Carter Hill Road	231	148.3	207.2	207.4	Active	I
DPB10	Purchase Easement - 396 Line	226	597.3	597.3	305.7	Active	O
DPB12	DER - Crutchfield Solar Hot Water System		101.9			Active	C
DPC01	New 34.5 kV Line Garvins to Bow Junction	8066	1,435.30	2,269.00	774.8	Active	I
DPC02	38 Line Recloser at Horse Shoe Pond Tap	9042	14	65	41.9	Completed 10/2010	M
DPC03	38 Line Load Break and Remote Control Switch	9041	14	80	5.1	Active	M
DPC04	Purchase VacPac Switch	227	17.3	17.3	0	Cancelled 8/2010	M
DPN01	Wind Storm February 2010	255	0	698	681.6	Closed 9/2010	M
DPN03	Dec. Ice Storm	9064	0	540.2	0	Closed 2/2010	M
DPN04	One pole primary line extension	9066	0	23.6	23.6	Closed 10/2010	C
DPN10	Replace failed URD cable and terminators	253	0	74.6	74.6	Closed 10/2010	M
DPO01	Purchase Voltage Regulators	9045	0	108.7	12.6	Closed 10/2010	I
DPO02	Install (3) Voltage Regulators on Pole 65 Dover Rd	9043	0	86.7	0.9	Closed 5/2010	I
DPO03	Upgrade Stepdown transformer from 333kVA to 500kVA	9032	0	1.7	0	Closed 4/2010	I
DPO04	Cir 7W3 Add line ext to replace tie with Cir 22W3	9033	0	108	0.2	Closed 11/2010	M
DPO05	DW Highway, Boscawen Replace Failing Direct Buried Cable	9063	0	41.9	0	Closed 4/2010	M
DPO06	Puchase Volt Regulators 100 am	8050	0	15.3	0	Closed 10/2010	I

Electric Category	2010

Budget Category

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BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPO07	NEW SYSTEM SUPPLY,-Dist Easement	5073	0	726	-101.7	Closed 1/2010	I
DRB00	Reliability Projects		0		211.4	Active	R
DRB06	Circuit 13W2 Rebuild High St p. 83 to 110 on other side of the Street	211	208.5	208.5	211.4	Closed 9/2010	
DRC00	Reliabilty Projects, Carryover		0			Completed 6/2010	
DRO01	Cir 13W2 - Upgr High St Recl	9054	0	55	15.1	Closed 10/2010	R
DRO02	Install three-phase recl	9055	0	69.5	9	Active	R
DRO03	Cir 22W3 Birchdale Rd, Bow Install Spacer Cable	9061	0	104.8	0.4	Closed 4/2010	R
	Sub-Totals:		3,498.30	7,125.60	2991.5		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAE02	Purchase and Replace Hot Line Tools	218	2.5	2.5	1.7	Active	O
EAE03	Purchase and Replace Rubber Goods	219	3.3	3.3	5.2	Active	O
EAE04	Normal add & replace - tools & equipment EM&C	213	10	10	7	Active	O
EAE09	Man hole cover lifting system	229	2.1	2.1	2.2	Closed 10/2010	O
EAE13	Purchase/replace URD Grounding Equipment		3			Active	O
EAE19	Purchase Fire Retardant Safety Equipment		11			Active	O
EAE20	Purchase five (5) sets of Overhead Grounding Kits	222	30	30	30.9	Closed 9/2010	O
EAE21	Tools, Shop & Garage - Normal Additions and Replacements	220	10	10	8.7	Active	O
	Sub-Totals:		71.9	57.9	55.7		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAO01	Tools, Shop, Garage Normal Additions and Replacements	9016	0	10	0	Closed 1/2010	O
EAO02	Purchase Hot Line Tools	9018	0	2	0	Closed 1/2010	O
EAO03	Purchase rubber goods	9020	0	3	0	Closed 1/2010	O
EAO04	Purcase 1 Symbol Handheld	9013	0	4	0	Closed 1/2010	O
EAO06	Purchase 7 portable grounding mats	9023	0	3.2	0.1	Closed 1/2010	O
EAO08	Purchase Tools and Equipment - EM&C	9035	0	4	-0.2	Closed 10/2010	O
EAO10	Lab Equipment - Normal Additions and Replacements	9049	0	3	0	Closed 5/2010	O
	Sub-Totals:		0	29.2	-0.1		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBB01	Lab Equipment - Normal Add and Replace EM&C	214	5	5	1.9	Active	O
	Sub-Totals:		5	5	1.9		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDE01	Office Furniture & Equipment-Normal Additions and Replacements	221	3.5	3.5	0.8	Active	O
	Sub-Totals:		3.5	3.5	0.8		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDO01	Office Furniture and Equipment	9010	0	3.5	0	Closed 1/2010	O
	Sub-Totals:		0	3.5	0		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPB02	Normal Improvements to Capital Facility	223	10	10	6.9	Active	O
GPB03	Install Backup A/C Unit in Data/Tel Room	232	10	10	11.2	Active	O
GPO01	Normal Improvements and Replacements Facility	9019	0	10	0	Closed 1/2010	O
GPO02	EOC Furniture	9047	0	33	0	Closed 1/2010	O
	Sub-Totals:		20	63	18.1		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPB02	Iron Works Road - Install Capacitor Banks	243	125.4	125.4	25.1	Active	O

Electric Category	2010		Budget Category

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BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
SPB11	West Concord - Replace Strain Bus	230	220.9	220.9	54.6	Closed 11/2010	O
SPC01	Build 34.4-13.8 kV Mobile Substation	251	130.7	131.2	64.6	Active	O
SPC02	Replace Damaged Equip at Pleasant St S/S Concord	6066	34	67	0.2	Active	O
SPC03	Replace 33 Line Recloser at Bow Junction S/S	9044	87.7	130	70.3	Completed 9/2010	O
SPC04	15W2 West Portsmouth Street and 2H1 West Concord Breaker Changeouts	259	10	10	14.3	Completed 12/2010	O
SPO01	Replace station batteries at Pleasant St S/S	9051	0	8.3	3.3	Closed 9/2010	O
SPO02	Purchase New Transformer	9026	0	475	5	Closed 11/2010	O
SPO03	AMI Substation Work completed in 2006.	9065	0	28.6	-5.1	Closed 4/2010	O
SPO04	Replace 1H3 Breaker	8073	0	53.3	0	Active	O
SPO09	Build Mobile Substation	8061	0	1,793.10	0	Closed 6/2010	O
	Sub-Totals:		608.6	3,042.70	232.3		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
1-Feb	Replace truck #45		0			Completed 4/2010	O
	Sub-Totals:		0	0			
	Grand Totals:		6,970.70	17,229.40	5,519.60		

Electric Category	2010		Budget Category

CONSTRUCTION BUDGET 2010 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BAB10	T&D Improvements	200	964.9	1,149.00	1,236.20	Active	M
BAB11	Transformer PCB Removal	1000	0		0	Active	M
BAC10	T&D Improvements, Carryover	9000	84.5	1,087.40	59.2	Completed 1/2010	M
BAO08	T&D Improvements	8000	0	672.5	-4.5	Closed 10/2010	M
BBB10	New Customer Additions	201	397.9	399.8	468.3	Active	C
BBB11	Overhead Services	1001	0		0	Active	C
BBC10	New Customer Additions, Carryover	9001	16	340.5	5	Closed 9/2010	C
BCB10	Outdoor Lighting	202	185.5	190.4	277	Active	M
BCB11	Outdoor Lighting	1002	0		0	Active	M
BCC10	Outdoor Lighting, Carryover	9002	8.6	178.6	1.7	Completed 1/2010	M
BDB10	Emergency & Storm Restoration	203	576	584.4	525.4	Active	M
BDB11	Emergency Restoration	1003	0		0	Active	M
BDC10	Emergency & Storm Restoration, Carryover	9003	17.1	367.4	21	Completed 1/2010	M
BDO08	EMERG & STORM REST.	8003	0	393.1	0	Closed 4/2010	M
BEB10	Billable Work	204	346.6	342.6	180.5	Active	M
BEB11	P 142/28 broken pole replaced	1004	0		0	Active	M
BEC10	Billable Work, Carryover	9004	15.5	237.4	-5.9	Active	M
BEO07	BILLABLE WORK	7004	0	242.3	-0.3	Closed 4/2010	M
BEO08	Billable Work	8004	0	293.5	-3.6	Closed 6/2010	M
BFB10	Transformer Company/Conversion	205	227.6	227.6	196.6	Active	I
BFB11	COMPANY TRANSFORMER	1005	0		0	Active	I
BFC10	Transformers Company/Conversion Carryover	9005	0	217.5	0	Closed 1/2010	I
BGB10	Transformers Customer Requirements	206	785.5	772.7	1,018.60	Active	C
BGB11	CUSTOMER TRANSFORMER	1006	0		0	Active	C
BGC10	Transformer Customer Requirements, Carryover	9006	16.8	806.9	4.5	Closed 2/2010	C
BHB10	Meter Blanket Company Requirements	208	88.5	88.5	48	Active	C
BHB11	Electric Meter Purchases - Company Requirements	1008	0		0	Active	M
BHC10	Meters, Company Carryover	9008	0	81.6	0	Closed 1/2010	M
BIB10	Meter Blanket Customer Requirements	207	161.2	161.2	95.7	Active	C
BIB11	Electric Meter Purchases - Customer Requirements	1007	0		0	Active	C
BIC10	Meters Customer Carryover	9007	0	143.5	0	Closed 1/2010	C
	Sub-Totals:		3,892.10	8,978.30	4,123.40		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECE01	AMI Equipment, Unanticipated Replacement	214	50.3	50.3	22.5	Active	O
ECE04	SCADA Data Exchange with PSNH		16.5			Cancelled 10/2010	O
ECE08	Two Way Radio Replacements	232	5	5	4.3	Active	O
ECE09	Purchase SCADA Terminal	219	5.2	5.2	0.4	Completed 10/2010	O
EEC01	AMI Installation Augmentation	8012	18.2	406	17.2	Completed 11/2010	O
	Sub-Totals:		95.2	466.6	44.4		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECC01	Outage Management System (OMS)	9086	273.2	1,012.00	116.8	Active	O
ECN01	Centralized Radio Electric Dispatch	235	0	7	6.9	Closed 9/2010	O
ECN02	ODI Enhancements/updates	239	0	1.6	0.9	Closed 11/2010	O
ECN04	Sungard 2010 Projects	246	0	54.3	47.4	Active	O
ECN06	Unitil Website	252	0	35.4	38.5	Active	O
ECO01	Wind Turbine	8090	0	50	25.2	Active	O
ECO02	Two Way Radio Replacements	9047	0	4	0	Closed 1/2010	O
ECO03	Purchase AMI Equipment - Unanticipated	9048	0	25	0	Closed 10/2010	O
	Sub-Totals:		273.2	1,189.20	235.7		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DAB00	Overhead Line Extensions - New Projects		61.3		61.8	Active	C
DAB01	Single Phase, O/H Line Ext, Pond St. Newton	238	0	15	15.7	Closed 4/2010	
DAB02	3 ph, O/H Line Ext, Rocks Rd, SE	245	0	5.8	6	Closed 11/2010	
DAB03	O/H Line Ext Parkersville Ln, SE	253	0	8	4.2	Closed 10/2010	
DAB05	Overhead Line Ext., Pond St, Newton	275	0	12.2	36	Active	

Electric Category	2010
Growth	
Customer Additions (C)	2,120,700
Subtotal Growth	2,120,700
Non-Growth	
Reliability (R)	248,800
Maintenance Replacement (M)	4,262,400
Mandated (H)	-162,100
System Improvement (I)	976,400
Other (O)	473,500
Subtotal Non-Growth	5,799,000
Total	7,919,700

7,919,700
0

Budget Category	
Annual Requirements Blankets	**2010**
T&D Improvements	1,290,900
New Customer Additions	473,300
Outdoor Lighting	278,700
Emergency & Storm Restoration	546,400
Billable work	170,700
Transformers	1,219,700
Meters	143,700
Sub-Totals:	**4,123,400**
Distribution	
Overhead Line Extensions over $20,000	71,900
Underground Line Extensions over $20,000	241,800
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	(162,100)
Distribution Pole Replacements	362,900
Specific Projects: Distribution	2,723,800
Sub-Totals:	**3,238,300**
Substation	
Specific Projects: Substation	191,500
Sub-Totals:	**191,500**
Communications	**280,100**
Tools, Shop, Garage	**72,000**
Laboratory	**8,200**
Office	**3,700**
Structures	**2,500**
Distribution Totals:	**7,919,700**

CONSTRUCTION BUDGET 2010 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DAC00	Overhead Line Extensions, Carryover		32.3		10.1	Active	C
DAC01	Upgrade 3 PH Service, 120 Portsmouth Ave, EX	9068	0	6.5	-1.2	Active	
DAC02	Added 2 phases, 80 State Rt 125, KI	9075	0	4.1	2.1	Active	
DAC03	3 ph service, 191 South Main St, NE	9078	0	12.2	-2.3	Active	
DAC04	OH Line Ext, 99 Ledge Rd, SE	9090	0	11.8	5.9	Active	
DAC05	Relocation of Poles	8100	0	6.8	5.7	Active	
DAC06	Upgrade 3 PH Service	8102	0	12.8	0	Closed 11/2010	
DBB00	Underground Line Extensions - New Projects		164.3		208.4	Active	C
DBB01	URD Line Ext, off Ashbrook Rd, EX	236	0	41.8	40.9	Active	
DBB02	Three Phase, URD Line Ext, Epping Rd., Exeter	242	0	52.8	57.4	Active	
DBB03	URD Line Ext., Colby Rd., Danville	243	0	31.4	33.4	Closed 10/2010	C
DBB04	URD Line Ext., Hampton Rd, Exeter	244	0	10.6	9	Closed 11/2010	
DBB06	3 ph, urd line ex, off Mill Ln, Seabrook	262	0	16.9	9.5	Active	
DBB07	1 PH, Primary URD LIne Ext., 9 Deer Run, AT	269	0	3.3	9.8	Active	
DBB08	3 PH, URD Line Ext, 31 Garden Rd, Plaistow	270	0	3.7	41.2	Active	
DBB09	Three Phase, URD Line Ext, Rocks Rd/Dows Ln, Seabrook	271	0	9.2	23.7	Active	
DBB10	Single Phase, URD Line Ext, 56 Drakeside Rd., Hampton	272	0	17.5	30.3	Active	
DBB11	Three Phase, URD Line Ext., Ocean Blvd., Hampton	273	0	5.2	-46.8	Active	
DBC00	Underground Line Extensions, Carryovers		215.6		166.9	Active	C
DBC01	3 ph, URD Line Ext, Riverwoods Dr, EX	9057	0	79.3	-8.7	Active	
DBC02	URD Line Ext, Caleb Dr, Danville	9071	0	97.1	29.5	Closed 6/2010	
DBC03	URD Line Ext, Maple Ave, AT	9073	0	31.7	34.1	Active	
DBC04	URD Line Ext, Halls Way, SE, off Farm Ln	9077	0	172.5	97.7	Closed 6/2010	
DBC05	URD line ext, 59 Portsmouth Ave, EX	9091	0	11.8	10.9	Active	
DBC06	Secondary URD Line, 201 Ocean Blvd, SE	9092	0	1.3	2.2	Active	
DBC07	URD Line Ext 83 Newton Rd, PL	8101	0	18.2	1.1	Closed 9/2010	
DCB00	Street Light Projects		36.8		0	Active	M
DCB01	Installation of Street Lights,State Rt 125/Rt 121A, Plaistow	265	0	6.4	0	Active	
DCC00	Street Light Projects, Carryover		0			Active	M
DDB00	Telephone Company Requests		0			Active	H
DDC00	Telephone Requests, Carryover		0			Active	H
DEB00	Highway Projects		49.5		0	Active	H
DEB01	NHDOT, Rt. 125, Plaistow	274	847.9	701.1	0	Active	
Dec-00	Highway Projects, Carryover		117.5		-162.1	Active	H
DEC01	relocation of urd utilities, I-95 Toll, Hampton	9087	0		-162.1	Closed 9/2010	
DPB01	Condemned Pole Replacement	222	465.5	465.5	362.9	Active	M
DPB02	Regulator Capital Improvements	233	60.6	60.6	35	Active	I
DPB03	Circuit 22X1 Install Capacitor Bank on Kingston Road	234	31	31	21	Active	M
DPB04	Circuit 6W1 Convert a Portion of South Road	229	162.6	162.6	87.7	Completed 9/2010	I
DPB06	Circuit 20H1 Load Transfer to 28X1	217	235.1	235.1	206.1	Closed 11/2010	M
DPB07	Circuit 56X1 Newton Junction Road Improvements	220	268.7	268.7	304.5	Closed 11/2010	M
DPB09	Circuit 21W1 Convert Salem Road	221	191.8	191.8	119.1	Completed 11/2010	I
DPB11	Replace One structures along the 3348 Line		52.1			Cancelled 7/2010	M
DPC01	Replace Guinea Road 47X1 Regulators	8046	31	55.4	20.6	Active	I
DPC02	3343/3354 Capacitor Banks	8065	14.6	78.4	0	Active	M
DPN02	Circuit 18X1 Load Transfer to 2X2	249	0	490	432.9	Active	I
DPN03	Feb 2010 Wind Storm (c-3533)	250	0	600	576.7	Active	M
DPN05	March 2010 Wind Storm	261	0	88.8	101.6	Active	M
DPN06	Replace the failed 51X1 recloser	268	0	25	0	Active	M
DPN07	3348 Transmission Line Repairs	247	0	356	311	Active	M
DPN08	Replace neutral - Correct Stray Voltage	260	0	110	62.7	Active	M

Electric Category	2010

Budget Category

CONSTRUCTION BUDGET 2010 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPO01	Replace & C/O Condemned Poles, Various Locations	9023	0	350	13.8	Closed 4/2010	M
DPO02	Purchase & Installation of Voltage Regulators	9015	0	252.2	0	Closed 1/2010	I
DPO03	Circuit 3H1, Transfer Ocean Blvd to 46X1	9076	0	35	0	Closed 2/2010	I
DPO04	Replace Two Distribution Capacitor Bank Controls	9084	0	11.1	0.8	Closed 9/2010	M
DPO05	Ice Storm - December 11th 2008	9058	0	1,191.90	0	Closed 1/2010	M
DPO06	46X1 Transfer to 17W1, Kings Hwy, Hamp	8061	0	355.3	0	Closed 1/2010	I
DPO07	28X1 Tap - Install Recl & Reg	8054	0	255	0	Closed 1/2010	M
DPO08	RECL/REG CIRCUIT 56X1, KINGSTON	7021	0	246.6	14.6	Completed 6/2010	M
DPO09	Rebuild & Convert 2H3 & 15W1	8014	0	1,002.80	0	Closed 1/2010	I
DPO10	58X1 - Convert Route 108/ Newton Rd to 34.5 kV	8016	0	330.6	0	Closed 1/2010	I
DPO11	Convert Portion of High St., Stratham	8076	0	72.5	0	Cancelled 1/2010	I
DRB00	Reliability Projects		0		299.3	Active	R
DRB01	Circuit 22X1 Install a Recloser on Danville Road	254	60.3	60.3	70.7	Active	
DRB02	Circuit 18X1 Install a Recloser on Route 27	264	60.3	62.3	71.4	Active	
DRB03	Circuit 5H2 Install a Recloser on Sweet Hill Road	255	60.3	60.3	72.9	Active	
DRB05	Exeter Switching Install Automatic Transfer Scheme		280.7			Cancelled 6/2010	
DRB06	Circuit 7X2 S/S Recloser Replacement	259	86.1	100	0	Active	
DRB07	Circuit 23X1 Install a Recloser on Mill Lane	256	60.3	60.3	84.3	Active	
DRC00	Reliabilty Projects, Carryover		162.7		-62.6	Active	R
DRC01	Pollard Rd, Plaistow, Circuit 58X1	9063	162.7	220	-62.6	Cancelled 4/2010	
DRO01	Main St, Circuit 21W2, AT	9062	0	90	3.4	Closed 1/2010	R
DRO02	Meditation Ln, AT Circuit 21W1	9064	0	75	8.7	Closed 1/2010	R
		Sub-Totals:	3,971.60	9,457.10	3238.3		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAE01	Tools, Shop & Garage – Normal Additions and Replacements	226	10.5	10.5	14.3	Active	O
EAE02	Purchase and Replace Rubber Goods	227	3.2	3.2	5.9	Active	O
EAE03	Purchase and Replace Hot Line Tools	228	2	2	2.5	Active	O
EAE04	Purchase underground grounding equipment	225	5	5	0	Cancelled 8/2010	O
EAE09	Replace Underground Pulling Rope and Reel	223	5	6.5	6.6	Closed 10/2010	O
EAE10	Purchase tooling and equipment for truck #8		4			Cancelled 1/2010	O
EAE12	Purchase Fire Retardent Safety Equipment		13			Cancelled 9/2010	O
EAE13	Tools and Equipment EM&C - Normal Additions and Replacements	216	10	10	8	Active	O
EAE22	Purchase Overhead Grounding Kits	224	32.5	32.5	31.9	Closed 10/2010	O
		Sub-Totals:	85.2	69.7	69.2		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAO01	Tools, Shop & Garage -Normal Additions and Replacements	9035	0	10.4	0	Closed 1/2010	O
EAO02	Purchase and Replace Rubber Goods	9036	0	3	0	Closed 1/2010	O
EAO03	Purchase and Replace Hot Line Tools	9037	0	2	0	Closed 1/2010	O
EAO06	Purchase eight (8) truck mats, Seacoast	9032	0	2.5	0	Closed 1/2010	O
EAO07	Purchase Tools and Equipment - M&S	9049	0	4	2.8	Closed 1/2010	O
		Sub-Totals:	0	21.9	2.8		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBB01	Lab Equipment EM&C - Normal Additions and Replacements	215	7	7	8.2	Active	O
EBO01	Purchase Lab Equipment	9050	0	3	0	Closed 1/2010	O
EBO04	Purchase ASE200 - Comm RTU test equipment	9041	0	3.5	0	Closed 1/2010	O
		Sub-Totals:	7	13.5	8.2		

Electric Category	2010

Budget Category

CONSTRUCTION BUDGET 2010 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDE01	Office Furniture & Equipment – Normal Additions and Replacements	230	3.5	3.5	3.7	Active	O
	Sub-Totals:		3.5	3.5	3.7		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDO01	Office Furniture and Equipment	9024	0	3.5	0	Closed 1/2010	O
EDO02	Purchase Copy Machine	9044	0	10	0	Closed 1/2010	O
	Sub-Totals:		0	13.5	0		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPB01	Normal Improvements to Kensington Facility	231	10	10	1.3	Active	O
GPO01	Normal Improvements Facility	9046	0	17.5	0	Closed 1/2010	O
GPO02	EOC Furniture	9081	0	18.3	1.2	Closed 3/2010	O
GPO03	Replace Well Seacoast Doc	9085	0	17	0	Closed 3/2010	O
	Sub-Totals:		10	62.8	2.5		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPB01	Kingston Sub. - System Supply Additions (Yr. 1 of 3)	240	224.5	224.5	62.5	Active	I
SPC01	Westville S/S Upgrade Circuit Voltage Regulators	9055	13.9	108.4	12.1	Active	I
SPC02	2nd Guinea Capacitor Bank	8052	40	420	45.5	Completed 11/2010	O
SPC03	Guinea Station relaying	7019	167.6	221	0	Active	O
SPC04	Install Capacitor Bank - Westville S/S	8069	6.4	39.3	0	Active	O
SPC05	Replace Circuit 11W1 Recloser	8067	19.2	50.7	0	Active	O
SPO01	Purchase New Transformer	9056	0	970	56.7	Closed 10/2010	O
SPO02	Exeter S/S-Repl 4 kv switchgear w/2 circ pos	8053	0	420	4.8	Closed 4/2010	O
SPO03	19X3 - Upgrade Volt Reg	8049	0	88.1	2.2	Closed 3/2010	I
SPO04	Install Cap Banks at E Kingston Sub	8068	0	39.3	0	Completed 1/2010	O
SPO05	Replace 19X2 Relaying	7106	0	23.9	0	Closed 3/2010	O
SPO06	REGULATION CIRCUIT 19X2	7033	0	175.6	7.7	Closed 4/2010	I
SPO07	REPL FREQ RELAY, EXETER	7023	0	13.2	0	Closed 6/2010	O
SPO08	2X2 FEEDER HAMPTON SS	6022	0	270.3	0	Closed 2/2010	I
	Sub-Totals:		471.5	3,064.30	191.5		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
2-Feb	Replace Truck #24		0			Completed 8/2010	O
3-Feb	Replace Truck #4		0			Completed 8/2010	O
4-Feb	Replace truck #36		0			Completed 8/2010	O
	Sub-Totals:		0	0			
	Grand Totals:		8,809.40	23,340.30	7,919.70		

Electric Category	2010		Budget Category

CONSTRUCTION BUDGET 2011 Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	?? ??						
DPBC01	Condemned Pole Replacements	2211	0		0	Active	M
BABC12	Electric T&D Improvements	2100	0		0	Active	M
BBBC12	New Customer Additions	2101	0		0	Active	C
BCBC12	Outdoor Lighting	2102	0		0	Active	M
BDBC12	Emergency & Storm Restoration	2103	0		0	Active	M
BEBC12	Billable Work	2104	0		0	Active	M
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	BLANKETS ELECTRIC						
BAB11	T&D Improvements	1000	816.7	820	663.3	Active	M
BAB12	Electric T&D Improvements	2100	0		0	Active	M
BAC11	T&D Improvements, Carryover	200	21.7	808.6	-14.9	Completed 9/2011	M
BAO09	T&D	9000	0		0	Closed 2/2011	M
BBB11	New Customer Additions	1001	259	255	188.2	Active	C
BBB12	New Customer Additions	2101	0		0	Active	C
BBC11	New Customer Additions, Carryover	201	23.2	250.5	6.4	Completed 7/2011	C
BCB11	Outdoor Lighting	1002	118.3	95	70.4	Active	M
BCB12	Outdoor Lighting	2102	0		0	Active	M
BCC11	Outdoor Lighting, Carryover	202	4	113.7	0.1	Completed 5/2011	M
BDB11	Emergency & Storm Restoration	1003	413.7	472.2	507.3	Active	M
BDB12	Emergency & Storm Restoration	2103	0		0	Active	M
BDC11	Emergency & Storm Restoration, Carryover	203	7.1	324.2	-27.7	Completed 7/2011	M
BDO09	Emergency Restoration	9003	0		0	Closed 2/2011	M
BEB11	Billable Work	1004	164.7	175	-55.9	Active	M
BEB12	Billable Work	2104	0		0	Active	M
BEC11	Billable Work, Carryover	204	3.5	88.6	63.1	Active	M
BEO09	Billable Jobs	9004	0	246.8	4.6	Closed 8/2011	M
BFB11	Transformers Company/Conversions	1005	66.9	98	155.4	Active	I
BFB12	Company Transformer Purchases 2012	2105	0		0	Active	I
BFO10	TRANSFORMER - COMPANY	205	0		0	Closed 2/2011	I
BGB11	Transformer Customer Requirements	1006	613.1	615	818.5	Active	C
BGB12	Transformer Requirements - Customer 2012	2106	0		0	Active	C
BGC11	Transformer Customer Requirements, Carryover	206	10.7	434	88.6	Completed 2/2011	C
BHB11	Meter Blanket Company Requirements	1008	179.6	179.6	39.6	Active	M
BHB12	Meter Requirements - Company/AMR 2012	2108	0		0	Active	M
BHO10	Meter Requirements - Company/AMR	208	0		-29.9	Closed 2/2011	M
BIB11	Meter Blanket Customer Requirements	1007	173	173	92.4	Active	C
BIB12	Meter Requirements - Customer 2012	2107	0		0	Active	C
BIO10	Meter Requirements - Customer	207	0	117.5	75.4	Closed 2/2011	C
	Sub-Totals:		2,875.20	5,266.70	2,644.90		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECE01	Two Way Radio Replacements	1015	3	3	2.6	Active	O
ECE02	AMI Equipment, Unanticipated Replacements	1014	37.5	39.5	34.9	Active	O
	Sub-Totals:		40.5	42.5	37.5		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECC01	Outage Management System (OMS)	9059	100	667.5	92.3	Active	O
ECN01	Outsource Payment Process to Kubra	1030	0	15.1	0	Active	O
ECN02	Bill Print redesign & outsource	1031	0	4.2	1	Active	O
ECN03	Website Phase 2	1032	0	33.8	39.7	Active	O
ECN04	Infrastructure	1034	0	59.3	24.4	Active	O
ECN05	Call Center	1035	0	5.3	1	Active	O
ECN06	MDS Fitchburg Rollout	1036	0	25.4	20.9	Active	O
ECN07	Power Plant	1037	0	107.7	117.6	Active	O
ECN10	CIS Enhancement Project	1040	0	14.8	31.6	Active	O
ECN11	April Fools Day Storm 2011	1065	0		0	Closed 10/2011	O
ECN12	2010 Telecom, Network and Systems Infrastr Upgrade	1089	0		129.4	Closed 11/2011	O
ECN13	Oct 29th Storm Event #111029-SYS-4-11-106	1097	0		561.5	Active	O
ECN14	GIS Upgrade to 9.3	1098	0	2.9	1.8	Active	O
ECN15	EMIS Enhancements	1099	0	0.6	0.1	Active	O
ECN16	Capital Budget System Enhancements	1100	0	0.3	0	Active	O
ECN17	Cash Systems Enhancements	1101	0	1.1	0.3	Active	O

Electric Category	2011
Growth	
Customer Additions (C)	1,385,500
Subtotal Growth	1,385,500
Non-Growth	
Reliability (R)	74,300
Maintenance Replacement (M)	1,804,800
Mandated (H)	232,900
System Improvement (I)	1,509,400
Other (O)	1,282,100
Subtotal Non-Growth	4,903,500
Total	6,289,000
	6,289,000
	0

Budget Category	
Annual Requirements Blankets	**2011**
T&D Improvements	648,400
New Customer Additions	194,600
Outdoor Lighting	70,500
Emergency & Storm Restoration	479,600
Billable work	11,800
Transformers	1,062,500
Meters	177,500
Sub-Totals:	**2,644,900**
Distribution	
Overhead Line Extensions over $20,000	29,800
Underground Line Extensions over $20,000	86,200
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	232,900
Distribution Pole Replacements	395,500
Specific Projects: Distribution	948,200
Sub-Totals:	**1,692,600**
Substation	
Specific Projects: Substation	777,200
Sub-Totals:	**777,200**
Communications	**1,103,500**
Tools, Shop, Garage	**38,900**
Laboratory	**5,800**
Office	**3,800**
Structures	**22,300**
Distribution Totals:	**6,289,000**

CONSTRUCTION BUDGET 2011 Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
ECN18	EDI Data Transfers	1102	0	7.2	1.5	Active	O
ECN20	Thanksgiving Storm	1104	0		24.7	Active	M
ECO02	Two Way Radio Replacements	224	0		0	Closed 2/2011	O
ECO03	AMI Equipment, Unanticipated Replacement	212	0		0	Closed 2/2011	O
ECO04	AMI Communication Trouble Call Response	256	0		6.2	Closed 3/2011	O
ECO05	CIS 2010 Projects	238	0	37.3	8.7	Completed 1/2011	O
ECO06	Unitil Website	248	0		3.3	Closed 2/2011	O
		Sub-Totals:	100	982.4	1,066.00		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DAB00	Overhead Line Extensions		44.7		25.6	Active	C
DAB01	Three Phase, Temp O/H Line Ext, 152 South Street, Concord	1018	0		-7.6	Active	
DAB02	N Spring St & Rumford St, Concord-Kimball School	1075	0		-6	Completed 12/2011	
DAB03	83 Appleton St, Concord-Customer	1079	0	10.1	4.3	Active	
DAB04	Old Suncook Rd, Concord-Customer	1080	0	40.6	38.2	Completed 12/2011	
DAB05	Dame Eastman School, Curtisville Rd, Concord	1084	0		-8.4	Active	
DAB06	Single Phase, O/H Line Ext to Primary URD, Silk Farm Rd, Nonbillable	1087	0	22.5	-0.6	Active	
DAB07	St. Paul's School Pole Relocation-Pleasant St & Rectory Rd	1088	0		5.6	Completed 12/2011	
DAB08	16 Portsmouth St, Concord-relocate pole	1094	0		0.1	Completed 12/2011	
DAC00	Overhead Line Extensions - Carryover		19.5		4.2	Completed 7/2011	C
DAC01	Relocation of Poles, 45-49 S Main St, Concord	252	0		4.2	Completed 7/2011	
DAO01	Pole Relocations	247	0		10.7	Closed 11/2011	C
DBB00	Underground Line Extensions		77		77.3	Active	C
DBB01	Three Phase Ug Line Ext 45-49 South Main St Concord	1029	0	11.8	13.4	Completed 7/2011	
DBB02	Three phase Ug line ext for 119 Hall St	1033	0	5.2	5.8	Active	
DBB03	Primary Single Phase Underground Line Extension, 16 Nesbitt Dr, Bow	1044	0	1.9	0.7	Completed 6/2011	
DBB04	River Rd, Bow-One Pole 3 phase OH Line Extension-single phase	1073	0	6.3	0.1	Completed 9/2011	
DBB05	Route 3A, Bow 2 Pole 3 phase line extension-single phase	1074	0	9.5	1.5	Completed 10/2011	
DBB07	15A Branch Londonderry Trpk, Bow-Customer	1082	0	9.7	-0.5	Completed 12/2011	
DBB08	Three ph urd line ext-Crescent St, Penacook-Customer	1083	0	33.7	48.7	Completed 12/2011	
DBB09	Three Phase Urd Ext-The Dollar Store-Loudon Rd	1085	0	9.4	13.6	Completed 12/2011	
DBB10	3 ph line ext-Felix Septic Serv-7-9 Ryan Rd, Bow	1086	0	4.3	9.6	Active	
DBB11	175 Manchester St-Concord Nissan 3 ph Primary Underground	1092	0	9	6.9	Active	
DBB13	Scales Rd, Canterbury-line extension-billable	1095	0		-9.6	Active	
DBB14	Route 3A, Bow Water Tower Urd Primary Line Ext-Billable	1096	0	9.5	-16.8	Active	
DBB15	70 N Pembroke Rd, Concord urd line ext-billable	1105	0		3.8	Active	
DBC00	Underground Line Extensions, Carryover		14.3		10.1	Completed 7/2011	C
DBC01	Three Phase, urd line ext, 30 Pembroke Rd, Concord	254	0		0	Closed 1/2011	
DBC02	Overhead Single Phase Guaranteed Line Extension	257	0		10.1	Closed 11/2011	
DBO01	URD Line Ext, Dunbarton Rd, Conc, St Pauls School	245	0		-7.7	Closed 2/2011	C
DBO02	URG Ext-Parmenter Pl, Conc	9053	0		-4.2	Closed 3/2011	C
DCB00	Street Light Projects		13.9			Active	M
DCC00	Street Light Projects - Carryover		4			Completed 5/2011	M
DDB00	Telephone Company Requests		34.9			Active	H
DDC00	Telephone Company Request - Carryover		4.2			Completed 5/2011	H
DEB00	Highway Projects	1041	193.6		232.9	Active	H
DEB01	Relocation of Street Lights at Rte 4 at Harris Hill Road, Boscawen	1070	0		18.5	Completed 10/2011	
DEB02	Relocate 15 poles, Concord	1041	0	64.5	88	Active	
DEB04	Manchester St., Concord - Road Reconstruction	1090	0	185.7	126.5	Active	
Dec-00	Highway Projects, Carryover		5.5			Completed 5/2011	M
DPB01	Condemned Poles (REP)	1013	335.3		385.8	Closed 11/2011	M
DPB02	Purchase Voltage Regulators	1027	90.9	90.9	45.6	Active	I
DPB04	Circuit 4X1, Upgrade Stepdowns at pole 51 Village St	1068	26.1	26.1	24.4	Completed 10/2011	I
DPB05	Circuit 13W2 - Install Voltage Regulator on Water St	1042	23.3	23.3	18.1	Closed 12/2011	I
DPB06	Circuit 18W2 - Install Voltage Regulators on Woodhill Rd	1043	33.2	33.2	23.4	Active	I
DPB07	Bow Junction S/S, New Circuit 7W4	1045	298.1	298.1	316.1	Active	I
DPB10	Extend circuit 1H5 to Theatre St	1078	141.7	155.7	128.2	Active	M
DPB01	Condemned Pole Replacements	2211	0		0	Active	M
DPC01	New 34.5 kV Line Garvins to Bow Junction	8066	187.1	2,269.00	192.1	Completed 8/2011	I
DPC02	Purchase Easement - 396 Line	226	5.5		4.8	Closed 3/2011	O
DPC03	38 Line Load Break and Remote Control Switching Device	9041	27.1	80	0.8	Active	M

Electric Category	2011

Budget Category

CONSTRUCTION BUDGET 2011 Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPN01	Hall St., Concord - Circuit 7X1 Conversion	1064	0	77.4	80.4	Closed 9/2011	I
DPN02	Broken Pole due to Wind Event on Hazen Dr, Concord	1071	0	22.5	22	Closed 8/2011	M
DPN03	Hurricane Irene	1091	0		8.1	Active	M
DPO01	Condemned Pole Replacements	217	0		9.7	Closed 2/2011	M
DPO02	Purchase Voltage Regulators	242	0	44.7	0	Closed 8/2011	I
DPO03	Circuit 1H6 Reconductoring along 374 ROW	225	0	246.6	4.4	Completed 5/2011	I
DPO04	Birchdale Rd, Bow-Replace recls coils - Cir 22W3	233	0		0	Closed 1/2011	M
DPO05	Horse Hill Rd., Pen-Add 2 Ph, Upgrade reg	231	0		0	Closed 2/2011	I
DPO06	Replace Recloser	9042	0		5.5	Closed 3/2011	M
DRB00	Reliability Projects (REP)		77.2		70.3	Active	R
DRB08	Sewalls Falls Rd., Concord - Install (3) Reclosers	1077	0		29.6	Closed 11/2011	
DRB14	N Main St, Penacook Cir 4X1 Extension-Reliability Improvement	1069	0		40.7	Closed 11/2011	
DRC00	Reliabilty Projects, Carryover		0			Completed 5/2011	R
DRO01	Install three-phase recl	9055	0		4	Closed 11/2011	R
		Sub-Totals:	1,657.30	3,801.40	1692.6		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAE01	Purchase and Replace Hot Line Tools	1022	2.5	2.5	0.6	Active	O
EAE03	Tools, Shop & Garage - Normal Additions and Replacements	1020	12	12	14.8	Active	O
EAE04	Purchase and Replace Rubber Goods	1021	3.5	3.5	3.9	Active	O
EAE05	Normal additions & replacement - tools & equipment EM&C	1023	7	7	8.7	Active	O
EAE06	Replace Battery Operated crimping tool	1019	1.8	1.8	2.8	Closed 9/2011	O
EAE07	Purchase Burndy PAT750CXT18VBattery Operated crimping tool	1026	3.5	3.5	3.2	Completed 5/2011	O
EAE16	Replace Laptop - Substation	1024	4	4	2.3	Closed 9/2011	O
EEO02	CAPITAL - AMI AUGMENTATION	8010	0		0	Closed 2/2011	O
		Sub-Totals:	34.3	34.3	36.3		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAN01	Manhole Barricade and Hoist	1076	0	5	4.3	Completed 9/2011	O
EAO01	Purchase and replace Hot Line tools	218	0		0	Closed 2/2011	O
EAO02	Purchace and Replace rubber goods	219	0		0	Closed 2/2011	O
EAO03	Normal Add and Replace Tools and Equip EM&C	213	0		0	Closed 2/2011	O
EAO04	Purchase 6 sets of Overhead grounds	222	0		0	Closed 2/2011	O
EAO05	Tools,shop & garage normal adds and replace	220	0		-1.7	Closed 2/2011	O
		Sub-Totals:	0	5	2.6		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBB01	Lab Equipment - Normal Additions and Replacements	1025	7	7	5.8	Active	O
EBO01	Lab Equip Normal Add and Replace EM&C	214	0		0	Closed 2/2011	O
		Sub-Totals:	7	7	5.8		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDE01	Office Furniture & Equipment-Normal Additions and Replacements	1012	3.5	3.5	3.8	Active	O
		Sub-Totals:	3.5	3.5	3.8		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDO02	Office Furniture and Equipment	221	0		0	Closed 2/2011	O
		Sub-Totals:	0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPB01	Normal Improvements to Capital Facility	1010	12	12	12.4	Active	O
GPB03	Replace Room Dividers in Dng/Mtg Room	1016	12	12	9.9	Completed 8/2011	O
GPB04	Install fire strobe lights at designated rooms	1017	5	5	0	Cancelled 12/2011	O
GPO01	Normal Improvements to Captial DOC facility	223	0		0	Closed 2/2011	O
GPO02	Install Backup A/C Unit in Data/Tel Room	232	0		0	Closed 1/2011	O
		Sub-Totals:	29	29	22.3		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	

Electric Category	2011

Budget Category

CONSTRUCTION BUDGET 2011 Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	SUBSTATION ELECTRIC						
SPB01	Bow Junction S/S - 7W4 Circuit Position	1011	613.7		649.5	Closed 11/2011	I
SPB14	Bow Junction S/S - Install 5th TCU		122.9			Cancelled 10/2011	O
SPB16	Hollis S/S - Upgrade Underfrequency Relaying	1067	21.4	21.4	3.1	Active	O
SPC01	Build 34.4-13.8 kV Mobile Substation	251	25.7	131.2	19.9	Completed 8/2011	O
SPC02	Iron Works Road - Install Capacitor Banks	243	50.5	125.4	50.8	Active	O
SPC03	Replace 1H3 Breaker	8073	26.2	53.3	0.1	Active	O
SPC04	15W2 West Portsmouth Street and 2H1 West Concord Breaker Changeouts	259	12.1		0	Closed 3/2011	O
SPC05	Replace Damaged Equip at Pleasant St S/S Concord	6066	32.7	67	3.9	Active	O
SPN01	13X4 Recloser	1028	0	68.4	3.2	Completed 11/2011	O
SPN02	Depot Street, Boscawen Substation	1072	0	54.8	46.7	Active	O
SPO01	Replace 33 Line Breaker	9044	0		0	Closed 1/2011	O
		Sub-Totals:	905.4	521.5	777.2		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
1-Feb	Replace Vehicle #6		0			Closed 9/2011	O
2-Feb	Replace pickup #48		0			Closed 11/2011	O
3-Feb	Replace pickup #55		0			Completed 6/2011	O
		Sub-Totals:	0	0	0		
		Grand Totals:	5,652.20	10,693.30	6,289.00		

Electric Category	2011

Budget Category

CONSTRUCTION BUDGET 2011 Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	?? ??						
BABE12	Transformer PCB Removal	2000	0		0	Active	M
BBBE12	Overhead Services	2001	0		0	Active	M
BCBE12	replace 50whps P99/15	2002	0		0	Active	M
BDBE12	Emergency & Storm Restoration	2003	0		0	Active	M
BEBE12	Billable Work	2004	0		0	Active	M
DPBE12	Condemned Poles	2110	0		0	Active	M
		Sub-Totals:	0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	BLANKETS ELECTRIC						
BAB11	T&D Improvements	1000	960.9	908.7	852.3	Active	M
BAC11	T&D Improvements, Carryover	200	69.5	1,149.00	82.1	Active	M
BAO09	T&D	9000	0		-10.1	Closed 3/2011	M
BBB11	New Customer Additions	1001	403.2	401.5	362.7	Active	C
BBC11	New Customer Additions, Carryover	201	17.2	475	31.3	Active	C
BCB11	Outdoor Lighting	1002	213.3	249.5	261.1	Active	M
BCC11	Outdoor Lighting, Carryover	202	4.7	280	15.3	Active	M
BDB11	Emergency & Storm Restoration	1003	523.7	573	506.6	Active	M
BDC11	Emergency & Storm Restoration, Carryover	203	13.3	584.4	-76.2	Active	M
BDO09	Emergency Restoration	9003	0		0	Closed 3/2011	M
BEB11	Billable Work	1004	322.2	323	205.8	Active	M
BEC11	Billable Work, Carryover	204	10.3	342.6	-24.3	Active	M
BEO09	Billable Jobs	9004	0		0	Closed 3/2011	M
BFB11	Transformer Company/Conversion	1005	116.2	116.2	127.5	Active	I
BFB12	Transformer Requirements - Co/Conversions 2012	2005	0		0	Active	I
BFC11	Transformers Company/Conversion Carryover	205	0		2.4	Active	I
BGB11	Transformers Customer Requirements	1006	693.5	693.3	801.1	Active	C
BGB12	Transformer Requirements - Customer 2012	2006	0		0	Active	C
BGC11	Transformer Customer Requirements, Carryover	206	13.9	1,018.60	22.2	Active	C
BHB11	Meter Blanket Company Requirements	1008	226.4	226.4	45.2	Active	M
BHB12	Meter Requirements - Company/AMR 2012	2008	0		0	Active	M
BHO10	Meter Requirements - Company/AMR	208	0		0	Closed 2/2011	M
BIB11	Meter Blanket Customer Requirements	1007	152.2	152.2	108.3	Active	C
BIB12	Meter Requirements - Customer 2012	2007	0		0	Active	C
BIO10	Meter Requirements Customer	207	0	161.2	37.9	Closed 8/2011	C
		Sub-Totals:	3,740.70	7,654.60	3,351.20		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECE01	AMI Equipment, Unanticipated Replacement	1047	43.3	43.3	12.4	Active	O
ECE02	Two Way Radio Replacements	1029	5	5	1.6	Active	O
		Sub-Totals:	48.3	48.3	14		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECC01	Outage Management System (OMS)	9086	100	1,012.00	188.7	Active	O
ECN02	Bill Print redesign & outsource	1049	0	6.4	1.6	Active	O
ECN03	Website Phase 2	1050	0	51.8	60.9	Active	O
ECN04	Infrastructure	1051	0	86.6	28.7	Active	O
ECN05	Call Center	1052	0	8.1	1	Active	O
ECN06	MDS Fitchburg Rollout	1053	0	45.8	37.6	Active	O
ECN07	Power Plant	1054	0	157.4	171.8	Active	O
ECN10	CIS Enhancement Project	1057	0	22.6	47.4	Active	O
ECN11	April Fools Day Storm	1063	0		0	Closed 8/2011	M
ECN12	2010 Telecom, Network and Systems Infrastr Upgrade	1089	0		189.5	Closed 11/2011	O
ECN13	Oct 29th Storm Event #111029-SYS-4-11-106	1092	0		2,087.70	Active	M
ECN14	Gis Upgrade to 9.3	1093	0	4.3	2.8	Active	O
ECN15	EMIS Enhancements	1094	0	0.9	0.2	Active	O
ECN16	Capital Budget System Enhancements	1095	0	0.4	0	Active	O
ECN17	Cash System Enhancements	1096	0	1.6	0.5	Active	O
ECN18	EDI Data Transfer	1097	0	10.6	2.1	Active	O
ECN19	CIS Enhancements for Retail Choice	1098	0	22.1	0	Active	O
ECO01	AMI Equipment, Unanticipated Replacement	214	0		8.4	Closed 2/2011	O
ECO02	Two Way Radio Replacements	232	0		0	Closed 2/2011	O
ECO03	Purchase SCADA Terminal	219	0		0	Closed 1/2011	O
ECO04	Sungard 2010 Projects	246	0		11.4	Closed 3/2011	O
ECO05	Unitil Website	252	0		-1.2	Closed 2/2011	O
ECO06	Wind Turbine	8090	0	50	0	Active	O
		Sub-Totals:	100	1,480.60	2,839.10		

Electric Category	2011
Growth	
Customer Additions (C)	1,812,100
Subtotal Growth	1,812,100
Non-Growth	
Reliability (R)	241,700
Maintenance Replacement (M)	4,782,000
Mandated (H)	595,200
System Improvement (I)	1,706,900
Other (O)	1,113,900
Subtotal Non-Growth	8,439,700
Total	10,251,800
	10,251,800
	0

Budget Category	
Annual Requirements Blankets	**2011**
T&D Improvements	924,300
New Customer Additions	394,000
Outdoor Lighting	276,400
Emergency & Storm Restoration	430,400
Billable work	181,500
Transformers	953,200
Meters	191,400
Sub-Totals:	**3,351,200**
Distribution	
Overhead Line Extensions over $20,000	160,300
Underground Line Extensions over $20,000	288,300
Street Light Projects	28,000
Telephone Company Requests	-
Highway Projects	595,200
Distribution Pole Replacements	203,600
Specific Projects: Distribution	1,666,900
Sub-Totals:	**2,942,300**
Substation	
Specific Projects: Substation	950,200
Sub-Totals:	**950,200**
Communications	**2,853,100**
Tools, Shop, Garage	**56,000**
Laboratory	**19,400**
Office	**3,400**
Structures	**76,200**
Distribution Totals:	**10,251,800**

CONSTRUCTION BUDGET 2011 Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DAB00	Overhead Line Extensions - New Projects		62.1		148.9	Active	C
DAB01	Single Phase, O/H Line Ext, 102 Locke Rd, Hampton	1013	0	4.1	6.7	Closed 8/2011	
DAB02	Three Phase, Overhead Line Ext., 106 Ledge Rd., Seabrook	1067	0	12.5	9.8	Closed 8/2011	
DAB03	Three Phase, Overhead Line Ext., 375 Ocean Blvd., Hampton	1068	0	22.4	21.3	Closed 12/2011	
DAB04	Three Phase, Overhead Line Ext., Exeter Rd., South Hampton	1078	0	37.7	108.6	Active	
DAB05	Remove O/H Service, Install Service Pole and URD Service, 12 Main St., Atkinson	1083	0	1.8	0.4	Active	
DAB06	Single Phase, Overhead Line Ext, off Forrest St, Plaistow	1090	0	14.5	2.1	Active	
DAC00	Overhead Line Extensions, Carryover		35.3		11.4	Active	C
DAC01	Overhead Line Ext., Pond St, Newton	275	0		6.3	Closed 12/2011	
DAC02	Added 2 phases, 80 State Rt 125, Kl	9075	0		0	Closed 1/2011	
DAC03	OH Line Ext, 99 Ledge Rd, SE	9090	0		5	Closed 5/2011	
DBB00	Underground Line Extensions - New Projects		173		202.5	Active	C
DBB01	URD Line Ext, Heron Way, Stratham	1011	0	10.8	6.7	Active	
DBB02	Three Phase, URD Line Ext., Pope Rd., Atkinson	1058	0		30.4	Closed 11/2011	
DBB03	Single Phase, URD Line Ext., Hickory Rd., Newton	1060	0	5	3.6	Closed 8/2011	
DBB04	Single Phase, URD Line Ext., Cheney Ln, Danville	1062	0	5.7	5.5	Closed 8/2011	
DBB05	Single Phase, URD Line Ext., LInden Rd., Exeter	1064	0	36.2	44.7	Closed 12/2011	
DBB06	3 ph, urd line ex, off Mill Ln, Seabrook	1069	0	57.1	-9.8	Active	
DBB07	URD Secondary, off Kings Highway, Hampton	1071	0	27.9	7	Active	
DBB08	Single Phase, URD LIne Ext., 84 Farm Ln, Seabrook	1074	0	24.6	14.7	Closed 12/2011	
DBB09	Single Phase, URD Line Ext., Cheney Lane, Lots 1 & 2, Danville	1075	0	8.9	9.2	Closed 12/2011	
DBB10	Three Phase, URD Line Ext., Greenough Rd., Plaistow	1077	0	26.5	34.1	Active	
DBB11	Three Phase, URD Line Ext., 29 Garden Rd., Plaistow	1079	0	17	3.8	Active	
DBB12	Single Phase, URD Line Ext., 434 High St., Hampton	1081	0	32.7	9.6	Active	
DBB13	Single Phase URD Line Ext, Linden Rd., Exeter - Phase 2	1088	0	42.5	43	Closed 12/2011	
DBC00	Underground Line Extensions, Carryovers		145.9		85.8	Active	C
DBC01	URD Line Ext, off Ashbrook Rd, EX	236	0		0	Closed 7/2011	
DBC02	Three Phase, URD Line Ext, Epping Rd., Exeter	242	0		6.8	Closed 4/2011	
DBC04	1 PH, Primary URD LIne Ext., 9 Deer Run, AT	269	0		1.2	Closed 6/2011	
DBC05	3 PH, URD Line Ext, 31 Garden Rd, Plaistow	270	0		-4.3	Closed 6/2011	
DBC06	Three Phase, URD Line Ext, Rocks Rd/Dows Ln, Seabrook	271	0	33.1	9.4	Closed 8/2011	
DBC07	Single Phase, URD Line Ext, 56 Drakeside Rd., Hampton	272	0		17.9	Closed 9/2011	
DBC08	Three Phase, URD Line Ext., Ocean Blvd., Hampton	273	0	5.2	53.3	Closed 8/2011	
DBC09	3 ph, URD Line Ext, Riverwoods Dr, EX	9057	0		0	Closed 1/2011	
DBC10	URD Line Ext, Maple Ave, AT	9073	0		1.4	Closed 2/2011	
DBC11	URD line ext, 59 Portsmouth Ave, EX	9091	0		0	Closed 1/2011	
DBC12	Secondary URD Line, 201 Ocean Blvd, SE	9092	0		0	Closed 1/2011	
DCB00	Street Light Projects		51.6		1.9	Active	M
DCB01	Installation of Street Lights,Rt 111/West Rd/Islad Pond, Atkinson	1018	0		1.9	Closed 12/2011	
DCC00	Street Light Projects, Carryover		24		26.1	Active	M
DCC01	Installation of Street Lights,State Rt 125/Rt 121A, Plaistow	265	0	6.4	26.1	Active	
DDB00	Telephone Company Requests		166.3			Active	H
DDC00	Telephone Requests, Carryover		0			Active	H
DEB00	Highway Projects		95.5		97.9	Active	H
DEB03	State of NH, Relocate Poles, Rt 111/West Rd/Island Pond, Atkinson	1033	0	20	35.1	Closed 12/2011	
DEB04	Replacement of Poles, Ball Rd/Great Pond Rd., Kingston	1076	0	39	24.2	Active	
DEB05	Replacement and Changeover of Poles	1091	0	61.3	38.7	Active	
Dec-00	Highway Projects, Carryover		724.8		497.3	Active	H
DEC01	Relocation of Poles, Rt 125, Plaistow	274	0	701.1	497.3	Closed 12/2011	
DEO01	relocation of urd utilities, I-95 Toll, Hampton	9087	0		0	Closed 1/2011	H
DPB01	Condemned Pole Replacement (REP)	1036	549.7	544.7	487.9	Closed 12/2011	M
DPB02	Regulator Capital Improvements	1035	168	168	173.3	Closed 12/2011	I
DPB03	Create New Circuit 27X2	1059	620.4	475	413.9	Active	I
DPB04	13W1 Old County Road Conversion	1037	60.6		33.3	Closed 6/2011	I
DPB05	Create New Circuit 6W2	1061	62.1	62.1	38.6	Closed 12/2011	I
DPC01	Replace Guinea Road 47X1 Regulators	8046	32.8	70	21.4	Active	I
DPC02	3343/3354 Capacitor Banks	8065	15.7		1.1	Closed 3/2011	M
DPC03	18X1 Load Transfer to 2X2 - Carryover	249	105.9		120.8	Closed 11/2011	I
DPC04	Regulator Capital Improvements - Carryover	233	10.5		19	Closed 2/2011	I
DPC05	22X1 Install Capacitor Bank Kingston Road	234	18.1	43	20.3	Active	M
DPN01	Replace Broken Pole and transfer facilities State Rt 286, Seabrook	1017	0	20.4	20.4	Closed 8/2011	M
DPN03	Replace Broken Poles, Water Street, Exeter	1066	0	50	49.6	Completed 8/2011	M
DPN05	Hurricane Irene	1087	0		56.5	Active	M
DPN09	Emergency Repairs to Faulted URG Cable, Cusack St, Hampton	276	0		47.2	Closed 6/2011	M
DPO01	Condemned Pole Replacement - 2010 - Various Locations	222	0		30.3	Closed 3/2011	M
DPO02	Circuit 6W1 Convert a Portion of South Rd, KE	229	0		0	Closed 2/2011	I

Electric Category	2011

Budget Category

CONSTRUCTION BUDGET 2011 Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPO03	Circuit 21W1 Convert Salem Rd, AT	221	0		0	Closed 1/2011	I
DPO04	Wind Storm - March 14th, 2010	261	0		0	Closed 1/2011	M
DPO05	Replace the failed 51X1 recloser	268	0	40	44.2	Closed 12/2011	M
DPO06	3348 Transmission Line Repairs	247	0		46.6	Closed 11/2011	M
DPO07	Replace neutral - Correct Stray Voltage	260	0	110	4.4	Completed 8/2011	M
DPO08	RECL/REG CIRCUIT 56X1, KINGSTON	7021	0		0	Closed 1/2011	M
DRB00	Reliability Projects (REP)		422.5		64	Completed 12/2011	R
DRB14	15X1 Install Recloser Folly Mill Road	1046	0	75	64	Closed 12/2011	
DRC00	Reliability projects carry-over		213.8		177.7	Active	R
DRC01	Circuit 22X1 Install a Recloser on Danville Rd, Kingston	254	0		33.8	Closed 12/2011	
DRC02	Circuit 18X1 Install Recloser, Rt 27, Hampton	264	0	100.8	22.6	Closed 12/2011	
DRC03	Circuit 5H2 Install a Recloser on Sweet Hill Rd, Plaistow	255	0	100.1	22	Closed 12/2011	
DRC04	Replace 7X2 Recloser	259	0	100	81.5	Active	
DRC05	Circuit 23X1 Install a Recloser on Mill Lane, Hampton	256	0	101.4	17.9	Closed 12/2011	
DRO01	Pollard Rd, PL Circuit 58X1	9063	0		0	Closed 1/2011	R
		Sub-Totals:	3,758.50	3,314.30	2942.3		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAE01	Tools, Shop & Garage – Normal Additions and Replacements	1020	11	11	13.8	Active	O
EAE02	Purchase and Replace Rubber Goods	1021	3.2	3.2	3.2	Active	O
EAE03	Purchase and Replace Hot Line Tools	1022	2.2	2.2	3.4	Active	O
EAE04	Normal additions & replacement - tools & equipment EM&C	1044	10	10	10.1	Active	O
EAE05	Purchase tooling for new truck #2	1027	6.5	6.5	2.9	Active	O
EAE07	Purchase underground grounding equipment	1023	6	6	0	Cancelled 9/2011	O
EAE09	Purchase Hydraulic Compresson Tool	1025	3.5	3.5	3.3	Closed 8/2011	O
EAE14	Purchase Fire Retardent Safety Equipment	1026	15	15	6.9	Active	O
EAE15	Purchase tooling for new truck #5	1043	6.5	6.5	9.1	Active	O
EAE23	Replace Phasing tools	1041	5	5	3.3	Closed 8/2011	O
EEO01	AMI AUGMENTATION	8012	0		0	Closed 3/2011	O
		Sub-Totals:	68.9	68.9	56		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAO01	Tools, Shop & Garage - Normal Additions & Replacements	226	0		0	Closed 2/2011	O
EAO02	Purchase and Replace Rubber Goods	227	0		0	Closed 2/2011	O
EAO03	Purchase and Replace Hot Line Tools	228	0		0	Closed 2/2011	O
EAO04	Normal Add and Replace Tools and Equip EM&C	216	0		0	Closed 2/2011	O
		Sub-Totals:	0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBB01	Lab Equipment - Normal Additions and Replacements	1045	7	7	5	Active	O
EBB02	Phone Line Test Equipment	1042	5	5	4.9	Active	O
EBB04	Purchase RM17 Field Test Unit	1040	6	6	7.2	Closed 8/2011	O
EBB07	Purchase 2 EK disconnect devices	1038	5	5	2.3	Completed 10/2011	O
EBO01	Lab Equip Normal Add and Replace EM&C	215	0		0	Closed 2/2011	O
		Sub-Totals:	23	23	19.4		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDE01	Office Furniture & Equipment – Normal Additions and Replacements	1028	3.5	3.5	3.4	Active	O
		Sub-Totals:	3.5	3.5	3.4		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDO01	Office Furniture and Equipment	230	0		0	Closed 2/2011	O
		Sub-Totals:	0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPB01	Normal Improvements to Kensington Facility	1014	12	12	11	Active	O
GPB04	Replace Broken Pavement Seacoast DOC	1030	17	17	16.2	Completed 7/2011	O
GPB05	HVAC System Engineering Study - Seacoast	1073	35	35	46.4	Completed 10/2011	O
GPO01	Normal Improvements to Kensington Facility	231	0		2.6	Closed 2/2011	O
		Sub-Totals:	64	64	76.2		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPB01	East Kingston S/S - New 13.8 kV Circuit (S/S Construction)	1015	841.1		756.3	Closed 11/2011	I

Electric Category	2011

Budget Category

CONSTRUCTION BUDGET 2011 Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
SPB07	Exeter S/S - Replace LTC controls (REP)	1039	58.6	58.6	39.2	Active	O
SPC01	Kingston Substation - System Supply Additions	240	65	224.5	-5	Active	I
SPC02	Guinea Station relaying	7019	176.8	221	2.1	Closed 12/2011	O
SPC03	Replace Circuit 11W1 Recloser	8067	20.5	50.7	0	Closed 12/2011	O
SPC04	Install Capacitor Bank - Westville S/S	8069	10		4.7	Closed 2/2011	O
SPC05	Westville S/S Upgrade Circuit Voltage Regulators	9055	12.8		5.4	Closed 3/2011	I
SPN01	Replace Bushings Timberlane	1082	0	65	73.6	Completed 10/2011	O
SPN02	Portsmouth Avenue S/S Insulator Replacement	1085	0	30	30.4	Completed 11/2011	O
SPN03	Replace the 13X3 recloser	1086	0	70	42.6	Active	O
SPO01	2nd Guinea Capacitor Bank	8052	0		0.9	Closed 3/2011	O
SPO02	Install Cap Banks at E Kingston Sub	8068	0	39.3	0	Closed 8/2011	O
		Sub-Totals:	1,184.90	759.1	950.2		
BUDGET NUMBER	DESCRIPTION	AUTH. NUMBER	BUDGETED AMOUNT	AUTH. AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
1-Feb	Replace bucket truck #2		0			Completed 12/2011	O
2-Feb	Replace Truck #18		0			Closed 11/2011	O
3-Feb	Replace Van #5		0			Closed 11/2011	O
4-Feb	Replace Truck #22		0			Closed 11/2011	O
Feb-32	Pickup for new Forester position		0			Closed 11/2011	O
		Sub-Totals:	0	0	0		
		Grand Totals:	8,991.70	13,416.20	10,251.80		

Electric Category	2011

Budget Category

CONSTRUCTION BUDGET 2012 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	?? ??						
XXXC01	Allocation of 2011 OH Balance	2260	0		0	Closed 5/2012	M
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	BLANKETS ELECTRIC						
BABC12	Electric T&D Improvements	2100	911.9	910	959.7	Active	M
BABC13	Electric T&D Improvements	13100	0		0	Active	M
BACC12	Electric T&D Improvements	1000	29.2	820	97.3	Completed 6/2012	M
BAOC12	Electric T&D Improvements	200	0		-12.7	Closed 6/2012	M
BBBC12	New Customer Additions	2101	289.8	289.8	224.4	Active	C
BBBC13	New Customer Additions	13101	0		0	Active	C
BBCC12	New Customer Additions	1001	29	255	20.1	Completed 6/2012	C
BBOC12	New Customer Additions	201	0		0	Closed 1/2012	C
BCBC12	Outdoor Lighting	2102	118	118	94.6	Active	M
BCBC13	Replace/Remove St Lt Fixtures	13102	0		0	Active	M
BCCC12	Outdoor Lighting	1002	5	95	3.3	Completed 5/2012	M
BCOC12	Outdoor Lighting	202	0		0	Closed 6/2012	M
BDBC12	Emergency & Storm Restoration	2103	606.3	620	410.5	Active	M
BDBC13	Emergency & Storm Restoration	13103	0		0	Active	M
BDCC12	Emergency Restoration	1003	8.4	472.2	-61.7	Active	M
BDOC12	Emergency & Storm Restoration	203	0		0.8	Closed 6/2012	M
BEBC12	Billable Work	2104	192.5	192.5	-41.6	Active	M
BEBC13	Billable Work	13104	0		0	Active	M
BECC12	Billables	1004	4.3	175	268.8	Completed 6/2012	M
BEOC12	Billable Work	204	0		45.9	Completed 1/2012	M
BFBC12	Company Transformer Purchases 2012	2105	67.7	67.7	7.1	Active	I
BFBC13	Transformer Purchases - Company	13105	0		0	Active	I
BFCC12	COMPANY TRANSFORMER	1005	0		0.1	Closed 3/2012	I
BGBC12	Transformer Requirements - Customer 2012	2106	631.7	635	751.6	Active	C
BGBC13	Transformer Purchases - Customer	13106	0		0	Active	C
BGCC12	CUSTOMER TRANSFORMER	1006	13.3		52.5	Closed 3/2012	C
BGOC12	TRANSFORMER CUSTOMER	206	0		-31.9	Closed 4/2012	C
BHBC12	Meter Requirements - Company/AMR 2012	2108	66.8	66.8	68	Active	M
BHBC13	Meter Purchases - Company	13108	0		0	Active	M
BHOC11	Electric Meter Purchases - Company Requirements	1008	0		0	Closed 3/2012	M
BIBC12	Meter Requirements - Customer 2012	2107	112.5	112.5	80.5	Active	C
BIBC13	Meter Purchases - Customer	13107	0		0	Active	C
BIOC11	Electric Meter Purchases - Customer Requirements	1007	0		0.1	Closed 3/2012	C
	Sub-Totals:		3,086.20	4,829.40	2,937.40		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEC01	Two Way Radio Replacements	2221	3	11	1.4	Active	O
ECEC02	AMI Equipment, Normal Replacements EMC	2229	31.9	31.9	3.1	Active	O
	Sub-Totals:		34.9	42.9	4.5		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECBC02	Replace two 9000 Symbol handheld devices EMC	2228	11		7.6	Closed 10/2012	O
ECNC01	2012 Infrastructure	2232	0	162.9	38.3	Active	O
ECNC02	Operation System Enhance	2233	0	12	4.2	Active	O
ECNC03	CIS Investigation	2234	0	182.5	312.9	Active	O
ECNC04	Powel Vegetation Management Software	2235	0	98.6	56.7	Active	O
ECNC05	Vendor System Upgrade	2236	0	9	16	Active	O
ECNC06	Internal Systems Upgrade	2237	0	39.4	13.5	Active	O
ECNC07	Field Data Acq	2238	0	33.6	26	Active	O
ECNC08	EETS Historical Data	2239	0	31.9	0	Active	O
ECNC09	AMI / MDM R&D	2240	0	20.2	0	Active	O
ECNC10	Vegetation Mgt UPC	2241	0	47.1	56.2	Active	O
ECNC11	Accounting Sys Enhancements	2244	0	13.4	6	Active	O
ECNC12	Power Plan Property Tax and Asset Lease Module	2255	0	96	52.9	Active	O
ECNC14	MDS UES DEPLOYMENT	2269	0	55	26.2	Active	O
ECNC15	Oct 29th 2012 Storm Event - 121029-SYS-3-12-103	2274	0		0	Active	M
ECNC19	CIS Enhancements for Retail Choice	1103	0	15.1	18.4	Active	O
ECOC01	ABB OMS Purchase	9059	0	667.5	-580.5	Active	O
ECOC02	Two way Radio Replacements	1015	0		0	Closed 2/2012	O
ECOC03	AMI Equipment, Unanticipated Replacements	1014	0		0.1	Closed 2/2012	O
ECOC04	Outsource Payment Process to Kubra	1030	0		0	Cancelled 1/2012	O
ECOC05	Bill Print redesign & outsource	1031	0	4.2	0.5	Active	O

Electric Category	2012
Growth	
Customer Additions (C)	1,271,100
Subtotal Growth	1,271,100
Non-Growth	
Reliability (R)	680,300
Maintenance Replacement (M)	2,234,600
Mandated (H)	236,700
System Improvement (I)	171,700
Other (O)	663,600
Subtotal Non-Growth	3,986,900
Total	5,258,000
	5,258,000
	0

Budget Category	
Annual Requirements Blankets	**2012**
T&D Improvements	1,044,300
New Customer Additions	244,500
Outdoor Lighting	97,900
Emergency & Storm Restoration	349,600
Billable work	273,100
Transformers	779,400
Meters	148,600
Sub-Totals:	**2,937,400**
Distribution	
Overhead Line Extensions over $20,000	93,400
Underground Line Extensions over $20,000	80,400
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	236,700
Distribution Pole Replacements	401,900
Specific Projects: Distribution	922,600
Sub-Totals:	**1,735,000**
Substation	
Specific Projects: Substation	463,800
Sub-Totals:	**463,800**
Communications	**45,700**
Tools, Shop, Garage	**37,200**
Laboratory	**6,700**
Office	**100**
Structures	**32,100**
Distribution Totals:	**5,258,000**

CONSTRUCTION BUDGET 2012 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
ECOC06	Website Phase 2	1032	0		0	Closed 4/2012	O
ECOC07	Infrastructure	1034	0		11.6	Closed 11/2012	O
ECOC08	Call Center	1035	0		3.6	Closed 8/2012	O
ECOC09	MDS Rollout	1036	0	25.4	19.9	Active	O
ECOC10	Power Plant	1037	0		12.4	Closed 5/2012	O
ECOC11	CIS Enhancement Project	1040	0	36.9	5.2	Active	O
ECOC12	April Fools Day Storm 2011	1065	0		0	Cancelled 2/2012	M
ECOC13	Oct 29th Storm Event #111029-SYS-4-11-106	1097	0		-57.9	Closed 3/2012	M
ECOC14	GIS Upgrade to 9.3	1098	0	2.9	4.1	Active	O
ECOC15	EMIS Enhancements	1099	0	0.6	1	Active	O
ECOC16	Capital Budget System Enhancements	1100	0	0.3	0.6	Active	O
ECOC17	Cash Systems Enhancements	1101	0		0.5	Closed 11/2012	O
ECOC18	EDI Data Transfers	1102	0		5.3	Closed 11/2012	O
ECOC19	Thanksgiving Storm	1104	0		-20.1	Closed 7/2012	M
ECOC20	CIS 2010 Projects	238	0		0	Active	O
	Sub-Totals:		11	1,554.40	41.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABC00	Overhead Line Extensions		57		49.9	Active	C
DABC01	Guaranted line extension along a maintain town road	2251	0		36.9	Closed 10/2012	
DABC03	1 Pole Line Extension, 13 Dow Rd, Bow-Billable	2262	0	11.1	13	Completed 11/2012	
DACC00	Overhead Line Extensions - Carryover		14		43.5	Completed 9/2012	C
DACC01	Three Phase, Temp O/H Line Ext, 152 South Street, Concord	1018	0		7	Closed 9/2012	
DACC02	N Spring St & Rumford St, Concord-Kimball School	1075	0		6.1	Closed 10/2012	
DACC03	83 Appleton St, Concord-Customer	1079	0		3.4	Closed 1/2012	
DACC04	Old Suncook Rd, Concord-Customer	1080	0		-0.5	Closed 1/2012	
DACC05	Dame Eastman School, Curtisville Rd, Concord	1084	0		7.2	Closed 7/2012	
DACC06	Single Phase, O/H Line Ext to Primary URD, Silk Farm Rd, Nonbillable	1087	0		17.5	Closed 9/2012	
DACC07	St. Paul's School Pole Relocation-Pleasant St & Rectory Rd	1088	0		2.3	Closed 11/2012	
DACC08	16 Portsmouth St, Concord-relocate pole	1094	0		0.3	Closed 5/2012	
DACC09	Relocation of Poles, 45-49 S Main St, Concord	252	0		0	Completed 2/2012	
DBBC00	Underground Line Extensions		96.1		42.9	Active	C
DBBC01	152 South St,Concord-Conant Sch-3 ph primary urd ext	2212	0		8.1	Closed 10/2012	
DBBC02	N Spring St, Concord-Kimball Sch-3 ph primary urd line ext	2213	0		9.8	Closed 8/2012	
DBBC03	S Curtisville Rd, Concord-Dame Sch-3 ph primary urd line ext	2214	0	7.9	11.1	Completed 9/2012	
DBBC05	153 Loudon Rd, Concord-3 ph primary urd line extension	2243	0		9.9	Closed 10/2012	
DBBC06	urd line extension-4 Hardy Ln, Boscawen	2268	0	11.9	7.1	Active	
DBBC07	Outdoor Lighting-Jonathan Dr, Concord	2275	0		-3.1	Active	
DBCC00	Underground Line Extensions, Carryover		24.8		37.5	Completed 6/2012	C
DBCC01	Three Phase Ug Line Ext 45-49 South Main St Concord	1029	0	11.8	0.1	Completed 2/2012	
DBCC02	Three phase Ug line ext for 119 Hall St	1033	0		1.7	Closed 3/2012	
DBCC03	Primary Single Phase Underground Line Extension, 16 Nesbitt Dr, Bow	1044	0		1.3	Closed 10/2012	
DBCC04	River Rd, Bow-One Pole 3 phase OH Line Extension-single phase	1073	0		3.2	Closed 1/2012	
DBCC05	Route 3A, Bow 2 Pole 3 phase line extension-single phase	1074	0		4.8	Closed 7/2012	
DBCC06	15A Branch Londonderry Trpk, Bow-Customer	1082	0		0.6	Closed 3/2012	
DBCC07	Three ph urd line ext-Crescent St, Penacook-Customer	1083	0		-4.9	Closed 5/2012	
DBCC08	Three Phase Urd Ext-The Dollar Store-Loudon Rd	1085	0		-2.8	Closed 1/2012	
DBCC09	3 ph line ext-Felix Septic Serv-7-9 Ryan Rd, Bow	1086	0		-2.3	Closed 3/2012	
DBCC10	175 Manchester St-Concord Nissan 3 ph Primary Underground	1092	0		2.5	Closed 2/2012	
DBCC11	Scales Rd, Canterbury-line extension-billable	1095	0		15.8	Closed 8/2012	
DBCC12	Route 3A, Bow Water Tower Urd Primary Line Ext-Billable	1096	0		19.4	Closed 7/2012	
DBCC13	70 N Pembroke Rd, Concord urd line ext-billable	1105	0		-1.9	Closed 9/2012	

Electric Category	2012

Budget Category

CONSTRUCTION BUDGET 2012 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DCBC00	Street Light Projects		16.9			Active	M
DCCC00	Street Light Projects - Carryover		0			Completed 2/2012	M
DDBC00	Telephone Company Requests		44.5			Active	H
DDCC00	Telephone Company Request - Carryover		5.3			Completed 5/2012	H
DEBC00	Highway Projects		349.8		183.7	Active	H
DEBC01	Pole Relocations for Route 3, Concord Highway Improvements	2246	0	154.7	142.6	Active	
DEBC02	Broken Bridge Rd., Concord - Road Relocation	2242	0		27	Completed 7/2012	
DEBC03	Relocation of Aluminum Light Standards and Removal of Hi Mast	2254	0		5.7	Active	
DEBC04	Relocation of 9 poles along road way-Town of Epsom Request	2259	0		8.5	Closed 10/2012	
DECC00	Highway Projects, Carryover		15.4		53	Active	H
DECC01	Relocation of Street Lights at Rte 4 at Harris Hill Road, Boscawen	1070	0		-18.5	Closed 7/2012	
DECC02	N State St, Concord-pole relocations for Route 3 improvement	1041	0		-0.2	Closed 9/2012	
DECC03	Manchester St., Concord - Road Reconstruction	1090	0	185.7	71.7	Active	
DPBC01	Condemned Pole Replacements	2211	411.1	411.1	401.9	Active	M
DPBC06	Circuit 2H1: Extend Primary & Balance Load		20			Cancelled 11/2012	I
DPBC07	Cir 4X1 - Reconductor and Balance Load	2256	29.6		31.3	Closed 11/2012	I
DPBC08	Circuit 37X1: Install Voltage Regulator		60.6			Cancelled 10/2012	I
DPNC01	Extend Three Phase Along Dow Road - 2166'	2258	0	119.9	146.4	Active	I
DPNC02	Replace failed primary URD cable	2263	0		34.5	Closed 7/2012	M
DPNC04	Replacing Failed Underground - Memorial Field	2272	0		30.3	Closed 11/2012	M
DPOC01	Purchase regulators for 2011 load driven projects	1027	0		0.4	Closed 10/2012	I
DPOC02	Uprade stepdowns to 500kVA on pole 21 Village St., Penacook	1068	0		0.2	Closed 7/2012	I
DPOC04	Woodhill Road, Bow Circuit 18W2 Install (2) voltage regulators	1043	0		0.7	Closed 3/2012	I
DPOC05	New Circuit 7W4 from Bow Junction S/S	1045	0		0	Closed 2/2012	I
DPOC06	Theatre St., Concord - Extend Circuit 1H5	1078	0	155.7	1.8	Completed 2/2012	I
DPOC07	New 34.5 kV Line Garvins to Bow Junction	8066	0		-11.8	Closed 2/2012	I
DPOC08	Install new Remote Control Load Break Switch	9041	0	80	11.6	Active	M
DPOC09	Hall St., Concord - Circuit 7X1 Conversion	1064	0		0	Closed 2/2012	I
DPOC10	Broken Pole due to Wind Event on Hazen Dr, Concord	1071	0		0	Closed 2/2012	M
DPOC11	Hurricane Irene	1091	0		1.4	Closed 3/2012	M
DPOC12	Purchase Voltage Regulators	242	0		0	Closed 1/2012	I
DPOC13	Circuit 1H6 Reconductoring along 374 ROW	225	0	246.6	-4.5	Completed 2/2012	I
DRBC00	Reliability Projects		707		680.3	Active	R
DRBC05	Circuit 4X1 / 37 Line Automation	2264	0	247.2	300.1	Active	
DRBC06	Rebuild Boscawen Sub Station Get away	2267	0	603.1	380.2	Active	
DRCC00	Reliabilty Projects, Carryover		0			Completed 4/2012	R
		Sub-Totals:	1,852.00	2,246.80	1735		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEC01	Tools, Shop & Garage - Normal Additions and Replacements	2223	12.5	12.5	16.1	Active	O
EAEC02	Purchase and replace rubber goods	2224	5	5	5.2	Active	O
EAEC03	Purchase and replace Hot Line Tools	2225	3	3	1.4	Active	O
EAEC04	Normal Additions & replacement - tools & equipment EMC	2226	7	7	6.4	Active	O
EAEC07	Purchase Battery Operated Crimping Tools	2253	1.1		0.7	Closed 10/2012	O
		Sub-Totals:	28.6	27.5	29.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EABC01	Purchase URD Grounding and Cutting Equipment	2222	8	8	4.1	Active	O
EACC01	Purchase tools for new bucket truck # 22	2273	3.5	3.5	3.2	Active	O
EAOC01	Purchase and replace Hot Line Tools	1022	0		0	Closed 2/2012	O
EAOC02	Tools, Shop & Garage-Normal Additons and Replacements	1020	0		0.1	Closed 2/2012	O
EAOC03	Purchase and Replace Rubber Goods	1021	0		0	Closed 2/2012	O
EAOC04	Normal Additions and Replacement - tools & equipment EM&C	1023	0		0	Closed 2/2012	O
EAOC05	Replace Battery Operated Crimping Tool	1019	0		0	Closed 2/2012	O
EAOC07	Replace Laptop - Substation	1024	0		0	Closed 2/2012	O
EAOC08	Manhole Barricade and Hoist	1076	0		0	Closed 10/2012	O
		Sub-Totals:	11.5	11.5	7.4		
BUDGET		AUTH	BUDGETED	AUTH	PROJECTED	PROJECT	

Electric Category	2012

Budget Category

CONSTRUCTION BUDGET 2012 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	LABORATORY GENERAL						
EBBC01	Lab Equipment - Normal Additions and Replacement EMC	2227	7	7	6.7	Active	O
EBOC01	Lab Equipment - Normal Additions & replacements EM&C	1025	0		0	Closed 2/2012	O
	Sub-Totals:		7	7	6.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEC01	Office Furniture and Equipment-Capital	2219	3.5	3.5	0	Active	O
	Sub-Totals:		3.5	3.5	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOC01	Office Furniture & Equipment Normal Additions & Replace	1012	0		0.1	Closed 1/2012	O
	Sub-Totals:		0	0	0.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBC01	Capital - Electrical System/Life Safety Upgrades		38			Active	O
GPBC03	Normal Improvements to Capital Facility	2220	12	12	11.1	Active	O
GPBC04	Parking Lot/Pavement Improvements	2217	16		13.9	Closed 10/2012	O
GPBC05	Purchase Automatic External Defibrillator (AED)	2247	2.3		2.6	Closed 5/2012	O
GPNC01	Construct PCB Containment area	2252	0	5.7	4.5	Active	O
GPOC01	Normal improvements to Capital faciltiy	1010	0		0	Closed 2/2012	O
GPOC02	Replace Room Dividers in Dng/Mtg Room	1016	0		0	Closed 1/2012	O
	Sub-Totals:		68.3	17.7	32.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBC03	Upgrade Underfrequency Relaying - West Concord	2248	23.4		12.3	Closed 10/2012	O
SPBC04	Upgrade underfrequency Relaying - Gulf	2249	23.4	23.4	5.4	Completed 11/2012	O
SPBC07	Concord Steam Generator installation		0			Active	C
SPBC14	Replace 8X3, 8X5 Recloser Controls - Hollis	2250	61.5		45.7	Closed 10/2012	O
SPBC17	Replace Station Batteries - Bow Junction S/S EMC	2230	8.3	8.3	3.6	Completed 9/2012	O
SPCC01	Pleasant St S/S - Replace Damaged RTU	2266	118.4	118.4	82.9	Completed 11/2012	O
SPCC03	Replace 1H3 Breaker	8073	27.9	53.3	24.1	Completed 11/2012	O
SPNC01	Iron Works 22T1 Rewind	2231	0	269.6	204.8	Active	O
SPNC03	Hollis 8T1 LTC: replace contacts	2271	0	101	54.4	Active	O
SPOC01	Upgrade Underfrequency Relaying	1067	0		0	Closed 4/2012	O
SPOC03	Install Capacitor Bank	243	0	125.4	0.6	Active	O
SPOC04	13X4 Recloser	1028	0		30	Closed 10/2012	O
SPOC05	Depot Street, Boscawen Substation	1072	0	54.8	0	Active	O
SPOC06	REP DAMG PLEASANT ST S/S, CONCORD	6066	0		0	Closed 8/2012	O
	Sub-Totals:		263	754.3	463.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBC01	Replace pickup #44		0			Completed 4/2012	O
FEBC02	Replace bucket truck #22		0			Completed 12/2012	O
	Sub-Totals:		0	0	0		
	Grand Totals:		5,366.10	9,495.10	5,258.00		

Electric Category	2012

Budget Category

CONSTRUCTION BUDGET 2012 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABE12	Electric T&D Improvements	2000	1,131.90	1,065.70	1,119.00	Active	M
BABE13	Electric T&D Improvements	13000	0		0	Active	M
BACE12	Electric T&D Improvements	1000	97.3	908.7	77.8	Active	M
BAOE11	Electric T&D Improvements	200	0		0	Closed 6/2012	M
BBBE12	New Customer Additions	2001	438.8	360	439.6	Active	C
BBBE13	New Customer Additions	13001	0		0	Active	C
BBCE12	New Customer Additions	1001	34.9		7.7	Closed 10/2012	C
BCBE12	Outdoor Lighting	2002	337.9	335	262.9	Active	M
BCBE13	Outdoor Lighting	13002	0		0	Active	M
BCCE12	Outdoor Lighting	1002	12.8	249.5	-6.5	Closed 10/2012	M
BDBE12	Emergency & Storm Restoration	2003	667	587.4	361.1	Active	M
BDBE13	Emergency & Storm Restoration	13003	0		0	Active	M
BDCE12	Emergency Restoration	1003	17.5	573	18.2	Active	M
BEBE12	Billable Work	2004	365.7	362	374	Active	M
BEBE13	Billable Work	13004	0		0	Active	M
BECE12	Billables	1004	14.4	323	63.2	Active	M
BEOE11	Billable Work	204	0		-6	Closed 10/2012	M
BFBE12	Transformer Requirements - Co/Conversions 2012	2005	586	586	584.3	Active	I
BFBE13	Transformer Purchases - Company Conversions	13005	0		0	Active	I
BFCE12	COMPANY TRANSFORMER	1005	2.7		0.1	Closed 3/2012	I
BGBE12	Transformer Requirements - Customer 2012	2006	702.6	1,132.20	1,349.00	Active	C
BGBE13	Transformer Purchase - Customer	13006	0		0	Active	C
BGCE12	CUSTOMER TRANSFORMER	1006	18.3		23.9	Closed 3/2012	C
BHBE12	Meter Requirements - Company/AMR 2012	2008	164.3	164.3	135.7	Active	M
BHBE13	Electric Meter Purchases - Company	13008	0		0	Active	M
BHOE11	Electric Meter Purchases - Company Requirements	1008	0		15.7	Closed 5/2012	M
BIBE12	Meter Requirements - Customer 2012	2007	187	187	44.3	Active	C
BIBE13	Electric Meter Purchases - Customer	13007	0		0	Active	C
BIOE11	Electric Meter Purchases - Customer Requirements	1007	0		14.5	Closed 3/2012	C
		Sub-Totals:	4,779.30	6,833.90	4,878.50		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEE01	AMI Equipment, Unanticipated Replacement	2128	31.9	31.9	6.4	Active	O
ECEE02	Two Way Radio replacements	2131	5	5	1	Active	O
ECEE06	Seacoast Radio Deskset Replacement		1.2			Active	O
ECEE10	Add AMI Switching Group	2177	48	63	12.6	Active	O
ECEE11	UES Seacoast GIS Realignment	2133	55	55	112.1	Active	O
		Sub-Totals:	141.2	155	132.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNE01	Oct 29th 2012 Storm Event - 121029-SYS-3-12-103	2180	0		343.9	Active	M
ECOE01	ABB OMS Purchase	9086	0	1,012.00	939.4	Active	O
ECOE02	AMI Equipment, Unanticipated Replacement	1047	0		0	Closed 2/2012	O
ECOE03	Two Way Radio Replacements	1029	0		0	Closed 2/2012	O
ECOE04	Bill Print redesign & outsource	1049	0	6.4	0.8	Active	O
ECOE05	Website Phase 2	1050	0		0	Closed 4/2012	O
ECOE06	Infrastructure	1051	0		16.3	Closed 11/2012	O
ECOE07	Call Center	1052	0		6.1	Closed 8/2012	O
ECOE08	MDS Rollout	1053	0	45.8	35.3	Active	O
ECOE09	Power Plant	1054	0		18.1	Closed 5/2012	O
ECOE10	CIS Enhancement Project	1057	0	56.4	8.8	Active	O
ECOE11	April Fools Day Storm	1063	0		0	Cancelled 1/2012	M
ECOE12	Oct 29th Storm Event #111029-SYS-4-11-106	1092	0		-1,609.30	Closed 3/2012	M
ECOE13	Gis Upgrade to 9.3	1093	0	4.3	6.4	Active	O
ECOE14	EMIS Enhancements	1094	0	0.9	1.4	Active	O
ECOE15	Capital Budget System Enhancements	1095	0	0.4	0.3	Active	O
ECOE16	Cash System Enhancements	1096	0		0.7	Closed 11/2012	O
ECOE17	EDI Data Transfer	1097	0		7.8	Closed 11/2012	O
ECOE18	CIS Enhancements for Retail Choice	1098	0	22.1	27	Active	O
ECOE19	Wind Turbine	8090	0		0	Closed 2/2012	O
		Sub-Totals:	0	1,148.30	-197		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABE00	Overhead Line Extensions over $20,000		88.4		16.6	Active	C
DABE01	Three Phase Service, 6 Church St., Kingston	2113	0		8	Closed 5/2012	
DABE02	Relocation of Phases, 27 Atlantic Ave., Seabrook	2147	0		11.6	Closed 10/2012	
DABE03	Replacement of Three (3) Poles, Brentwood Rd., Exeter	2153	0	29.2	20.4	Completed 9/2012	
DABE04	Three Phase, OH Line Ext., 337 Lafayette Rd., Seabrook	2155	0		8.5	Closed 8/2012	
DABE05	Relocation of Poles, 380 Lafayette Rd., Seabrook	2160	0	24	16.9	Active	
DABE06	Install Primary Metering & Release Ownership of Infrastructure	2163	0		-48.8	Completed 10/2012	
DACE00	Overhead Line Extensions over $20,000, Carryover		38		10.9	Active	C
DACE01	Single Phase, O/H Line Ext, 102 Locke Rd, Hampton	1013	0		0	Closed 1/2012	
DACE02	Three Phase, Overhead Line Ext., 106 Ledge Rd., Seabrook	1067	0		0	Closed 1/2012	
DACE04	Three Phase, Overhead Line Ext., Exeter Rd., South Hampton	1078	0		0	Closed 1/2012	
DACE05	Remove O/H Service, Install Service Pole and URD Service, 12 Main St., Atkinson	1083	0	1.8	0	Completed 8/2012	
DACE06	Single Phase, Overhead Line Ext, off Forrest St, Plaistow	1090	0		10.9	Closed 2/2012	
DBBE00	Underground Line Extensions over $20,000		222.3		270.7	Active	C
DBBE01	Three Phase, URD Line Ext. White Oak Dr., Exeter	2112	0		17.5	Closed 7/2012	

Electric Category	2012
Growth	
Customer Additions (C)	2,328,500
Subtotal Growth	2,328,500
Non-Growth	
Reliability (R)	140,700
Maintenance Replacement (M)	1,725,800
Mandated (H)	173,000
System Improvement (I)	1,931,300
Other (O)	1,409,000
Subtotal Non-Growth	5,379,800
Total	7,708,300
	7,708,300
	0

Budget Category	
Annual Requirements Blankets	**2012**
T&D Improvements	1,196,800
New Customer Additions	447,300
Outdoor Lighting	256,400
Emergency & Storm Restoration	379,300
Billable work	431,200
Transformers	1,957,300
Meters	210,200
Sub-Totals:	**4,878,500**
Distribution	
Overhead Line Extensions over $20,000	27,500
Underground Line Extensions over $20,000	401,900
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	173,000
Distribution Pole Replacements	573,500
Specific Projects: Distribution	1,510,100
Sub-Totals:	**2,686,000**
Substation	
Specific Projects: Substation	114,400
Sub-Totals:	**114,400**
Communications	**(64,900)**
Tools, Shop, Garage	**52,400**
Laboratory	**7,500**
Office	**1,900**
Structures	**32,500**
Distribution Totals:	**7,708,300**

CONSTRUCTION BUDGET 2012 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DBBE02	Single Phase, URD Line Ext., off Witch Ln., Plaistow	2139	0		17.4	Closed 9/2012	
DBBE03	Three Phase, URD Line Ext., Epping Rd., Exeter, The Meeting Place	2140	0		27.3	Closed 8/2012	
DBBE04	Single Phase, URD Line Ext., Oak Hill Dr., Newton	2142	0		23.2	Completed 3/2012	
DBBE05	Single Phase, URD Line Ext., off Hunt Rd., Hampstead	2150	0		40.7	Closed 8/2012	
DBBE06	Single Phase, Underground Line Ext., 64 Drinkwater Rd, Hampton	2151	0		4.4	Closed 10/2012	
DBBE07	Three Phase, URD Line Ext., 96 Plaistow Rd., Plaistow	2157	0		34.6	Completed 8/2012	
DBBE08	Three Phase, URD Line Ext., 11 Continental Dr., Exeter	2158	0		25.6	Completed 11/2012	
DBBE09	Three Phase, URD Line Ext., 45 Portsmouth Ave., Stratham	2159	0		16.5	Closed 10/2012	
DBBE10	Three Phase, URD LIne Ext., Puzzle Ln, Newton	2162	0		23.6	Closed 9/2012	
DBBE11	Single Phase, URD Line Ext., off Rt 125, Kingston	2165	0	111.8	47.9	Active	
DBBE12	Single Phase, URD Line Ext, Sargent Woods, Newton - Phase 3	2171	0		53.9	Completed 11/2012	
DBBE13	Three Phase, URD Line Ext., 105 Towle Farm Rd., Hampton	2175	0	49.9	-31.3	Active	
DBBE14	Three Phase, URD Line Ext., Drakeside Rd., Hampton	2176	0	42.4	2.9	Active	
DBBE15	Three Phase, URD Line Ext, 83-91 Ocean Blvd., Hampton	2178	0	21.9	-13	Active	
DBBE16	Three Phase, URD Line Ext., 380 Lafayette Rd, Seabrook	2179	0		-20.7	Active	
DBCE00	Underground Line Extensions over $20,000, Carryover		191.7		131.2	Active	C
DBCE01	URD Line Ext, Heron Way, Stratham	1011	0		3	Closed 7/2012	
DBCE02	Single Phase, URD Line Ext., Hickory Rd., Newton	1060	0		0	Closed 1/2012	
DBCE03	Single Phase, URD Line Ext., Cheney Ln, Danville	1062	0		0	Closed 1/2012	
DBCE05	Single Phase, URD Line Ext., Scamman Ln, Stratham	1069	0		81.4	Closed 3/2012	
DBCE06	URD Secondary, off Kings Highway, Hampton	1071	0		16.4	Closed 5/2012	
DBCE09	Three Phase, URD Line Ext., Greenough Rd., Plaistow	1077	0		-5.1	Closed 1/2012	
DBCE10	Three Phase, URD Line Ext., 29 Garden Rd., Plaistow	1079	0		12.7	Closed 3/2012	
DBCE11	Single Phase, URD Line Ext., 434 High St., Hampton	1081	0		22.9	Closed 3/2012	
DBOE01	Three Phase, URD Line Ext, Rocks Rd/Dows Ln, Seabrook	271	0		0	Closed 1/2012	C
DBOE02	Three Phase, URD Line Ext., Ocean Blvd., Hampton	273	0		0	Closed 1/2012	C
DCBE00	Street Light Projects		70.5			Active	M
DCCE00	Street Light Projects, Carryover		13.1			Active	M
DCOE01	Installation of Street Lights,State Rt 125/Rt 121A, Plaistow	265	0		-9.7	Closed 6/2012	M
DDBE00	Telephone Company Requests		216.7			Active	H
DDCE00	Telephone Company Requests, Carryover		0			Active	H
DEBE00	Highway Projects		282.8		154.9	Active	H
DEBE01	Relocate Facilities, Rt. 107/Laf Rd., Seabrook		0			Cancelled 10/2012	
DEBE02	Replacement of Poles, Newfields Rd., Exeter	2121	0		26.6	Closed 5/2012	
DEBE03	Installation of Street Lights, Rt 107/I-95	2164	0		-1	Active	
DEBE04	Relocation of Poles, Epping Road, Exeter	2173	0	22.3	129.3	Active	
Dec-00	Highway Projects, Carryover		68.4		18.1	Active	H
DECE02	Replacement of Poles, Ball Rd/Great Pond Rd., Kingston	1076	0		16.7	Closed 11/2012	
DECE03	Replacement and Changeover of Poles	1091	0		1.4	Closed 3/2012	
DPBE01	Condemned Poles	2110	519	519	573.5	Active	M
DPBE03	Circuit 6W2 Rock Rimmon Road Conversion, Kingston	2132	489.1		279.3	Closed 10/2012	I
DPBE04	Circuit 2X2 Install Voltage Regulators on Landing Rd	2111	82.6		78	Closed 9/2012	I
DPBE05	Circuit 6W1 Relocate North Road East Kingston Voltage Regulator	2134	36.2		0	Cancelled 2/2012	I
DPBE06	Circuit 7X2 Install Voltage Regulator on Collins Street Seabrook	2136	55.7		51.6	Closed 8/2012	I
DPBE07	Convert Circuit 11W1 to Circuit 11X1 - 34.5 kV	2149	833	550	632	Active	I
DPBE14	Circuit 23X1 Install Voltage Regulators on True Road Seabrook	2137	113.4		89.4	Closed 8/2012	I
DPBE15	Circuit 58X1E Upgrade Forest Street Plaistow Stepdown	2135	28.7		20.9	Closed 11/2012	I
DPBE99	Condemned Poles 2011 carryover	1036	0		0.3	Closed 1/2012	M
DPCE01	Replace Guinea Rd 47X1 Regs	8046	35.4	70	0.9	Active	I
DPNE01	Overhead Line Ext., Hemlock St., Exeter	2148	0		20.1	Closed 7/2012	C
DPNE04	Reconductor and Convert, North Rd, East Kingston	2168	0	88.5	88.5	Completed 10/2012	I
DPNE05	Extend Primary and Secondaries, Chase St, Kingston	2169	0	38.2	34.1	Active	I
DPNE06	Installation of Regulator, Huckleberry Lane, Hampton	2170	0		38.7	Closed 11/2012	I
DPNE07	Reconductor Muddy Pond Rd, Kensington	2174	0	103.9	14.4	Active	I
DPOE03	Circuit 19X3 Load Transfer to Circuit 27X2, Court St., Exeter	1059	0	475	18.9	Active	I
DPOE05	Circuit 22X1 Install Capacitor Bank on Kingston Road	234	0	43	0.3	Active	M
DPOE06	Replace Broken Pole and transfer facilities State Rt 286, Seabrook	1017	0		0	Closed 1/2012	M
DPOE07	Replace Broken Poles, Water Street, Exeter	1066	0		0	Closed 1/2012	M
DPOE08	Hurricane Irene	1087	0		11.3	Closed 3/2012	M
DPOE10	Replace neutral - Correct Stray Voltage	260	0		0.4	Closed 2/2012	M
DRBE00	Reliabilty Projects		117.8		130.9	Active	R
DRBE08	Circuit 19X3 - Install Sectionalizers	2145	0		20.2	Closed 8/2012	
DRBE09	Circuit 3H2/3H3 - Increase Phase Spacing	2146	0		36.6	Closed 11/2012	
DRBE12	Install Reclosers, Main Street, Newton	2154	0		34.1	Closed 11/2012	
DRBE13	Install cutouts/fuses on unprotected main line laterals, Various Locations	2172	0		40	Completed 11/2012	
DRCE00	Reliabilty Projects, Carryover		0			Active	R
DROE04	Replace 7X2 Recloser	259	0	100	9.8	Completed 10/2012	R
		Sub-Totals:	3,502.70	2,291.00	2686		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEE01	Normal Additions and Replacements of Tools & Equipment	2114	12.5	12.5	15.1	Active	O
EAEE02	Purchase and Replace Rubber Goods	2115	5	5	4.7	Active	O
EAEE03	Purchase and Replace Hot Line Tools	2122	3	3	3.4	Active	O
EAEE04	Normal additions & replacement - tools & equipment Meter and Services	2127	7	7	5.6	Active	O
EAEE06	Replace 1 kV Meg-Ohm tester	2138	5		5.6	Closed 10/2012	O
EAEE10	Purchase Tooling for new Truck #25	2123	4	4	3	Active	O
EAEE11	Purchase Underground Grounding and Cutting Equipment	2124	8	8	4.3	Active	O
EAEE15	Purchase Battery Operated Crimping Tools	2125	5.5		6	Closed 10/2012	O
		Sub-Totals:	50	39.5	47.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						

Electric Category	2012

Budget Category

CONSTRUCTION BUDGET 2012 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
EACE01	Purchase/Replace Tooling for Truck #8		4			Cancelled 7/2012	O
EAOE01	Tools, Shop & Garage - Normal Additions and Replacements	1020	0		0.3	Closed 2/2012	O
EAOE02	Purchase and Replace Rubber Goods	1021	0		0	Closed 2/2012	O
EAOE03	Purchase and Replace Hot Line Tools	1022	0		0	Closed 2/2012	O
EAOE04	Normal additions & replacements - tools & equipment EM&C	1044	0		1	Closed 3/2012	O
EAOE05	Purchase tooling for new truck #2	1027	0		3.4	Closed 9/2012	O
EAOE06	Purchase underground grounding equipment	1023	0		0	Closed 1/2012	O
EAOE07	Purchase Hydraulic Compression Tool	1025	0		0	Closed 1/2012	O
EAOE08	Purchase Fire Retardent Safety Equipment	1026	0		0	Closed 2/2012	O
EAOE09	Purchase Tooling for new truck #5	1043	0		0	Closed 2/2012	O
		Sub-Totals:	4	0	4.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBE01	Lab Equipment - Normal Additions and Replacements	2129	7	7	7.5	Active	O
		Sub-Totals:	7	7	7.5		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEE01	Office Furniture and Equipment-Seacoast	2116	3.5	3.5	1.9	Active	O
		Sub-Totals:	3.5	3.5	1.9		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBE01	Normal improvements to Seacoast facility	2126	15	15	12.4	Active	O
GPBE02	Seacoast - Electrical System/Life Safety Upgrades		35			Active	O
GPBE03	HVAC Replacements	2118	11		11.4	Closed 10/2012	O
GPBE04	Purchase Automatic External Defibrillator (AED)	2141	2.3		1.9	Closed 5/2012	O
GPNE01	Construct PCB Containment Area	2152	0	7.5	5.9	Active	O
GPOE01	Normal improvements to Seacoast Facility	1014	0		0.9	Closed 2/2012	O
GPOE03	Boiler Replacement and MEP Work	1073	0		0	Closed 3/2012	O
		Sub-Totals:	63.3	22.5	32.5		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBE04	Westville - Upgrade Underfrequency Relaying	2144	23.4		23.5	Closed 9/2012	O
SPBE05	Mill Lane Tap - Upgrade Underfrequency Relaying	2143	30.8		29.8	Closed 10/2012	O
SPBE06	Replace the 54X1 recloser	2130	42.5	42.5	46.7	Active	O
SPCE01	Kingston - System Supply Addition	240	162.5	224.5	0.2	Active	I
SPOE01	Exeter S/S Replace LTC Controls (REP)	1039	0	58.6	4.4	Active	O
SPOE04	Replace Bushings Timberlane	1082	0		0.8	Closed 3/2012	O
SPOE05	Portsmouth Avenue S/S Insulator Replacement	1085	0		0.2	Closed 4/2012	O
SPOE06	Replace the 13X3 recloser	1086	0		8.8	Closed 9/2012	O
SPOE07	Install Cap Banks at E Kingston Sub	8068	0		0	Active	O
		Sub-Totals:	259.2	325.7	114.4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBE01	Replace Bucket Truck #25		0			Active	
FEBE05	Replace pickup #35		0			Completed 5/2012	
		Sub-Totals:	0	0	0		
		Grand Totals:	8,810.20	10,826.30	7,708.30		

Electric Category	2012

Budget Category

CONSTRUCTION BUDGET 2013 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	Electric Category
	BLANKETS ELECTRIC							
BABC13	Electric T&D Improvements	13100	799.2	820	737.3	Active	737.3	M
BABC14	T & D Improvements	140100	0		0	Active	0	M
BACC13	Electric T&D Improvements	2100	25.8	910	-18.6	Completed 5/2013	-18.6	M
BAOC13	Electric T&D Improvements	1000	0	820	-1.3	Closed 3/2013	-1.3	M
BBBC13	New Customer Additions	13101	235.2	235.2	242.5	Active	242.5	C
BBBC14	New Customer Additions	140101	0		0	Active	0	C
BBCC13	New Customer Additions	2101	23.9	289.8	-0.6	Closed 12/2013	-0.6	C
BBOC13	New Customer Additions	1001	0		-0.7	Closed 2/2013	-0.7	C
BCBC13	Replace/Remove St Lt Fixtures	13102	87.4	90.7	87.2	Active	87.2	M
BCCC13	Outdoor Lighting	2102	4.1	118	12.9	Completed 2/2013	12.9	M
BCOC13	Outdoor Lighting	1002	0	95	-1.2	Completed 2/2013	-1.2	M
BDBC13	Emergency & Storm Restoration	13103	561.2	561.2	471.1	Active	471.1	M
BDBC14	Ice Storm Dec 22	140103	0		0.1	Active	0.1	M
BDCC13	Emergency & Storm Restoration	2103	7.5	620	-3.8	Completed 10/2013	-3.8	M
BDOC13	Emergency Restoration	1003	0	472.2	0.6	Closed 2/2013	0.6	M
BEBC13	Billable Work	13104	241.5	271.7	312.5	Active	312.5	M
BEBC14	Dec 22 Ice Storm	140104	0		0	Active	0	M
BECC13	Billable Work	2104	7.7	192.5	256.8	Cancelled 10/2013	256.8	M
BEOC13	Billables	1004	0	175	-38.6	Completed 2/2013	-38.6	M
BFBC13	Transformer Purchases - Company	13105	65.9	65.9	54.7	Active	54.7	I
BFBC14	Transformer Purchase-Company	140105	0		0	Active	0	I
BFCC13	Company Transformer Purchases 2012	2105	0		0	Closed 2/2013	0	I
BGBC13	Transformer Purchases - Customer	13106	605.4	685	762.7	Active	762.7	C
BGBC14	URG TRANSF CUSTOMER PURCHASE	140106	0		0	Active	0	C
BGCC13	Transformer Requirements - Customer 2012	2106	12.6		-21.9	Closed 3/2013	-21.9	C
BHBC13	Meter Purchases - Company	13108	65.5	65.5	60.8	Active	60.8	M
BHBC14	Meter Purchase-Company	140108	0		0	Active	0	M
BHOC13	Meter Requirements - Customer 2012	2107	0		0	Closed 2/2013	0	C
BIBC13	Meter Purchases - Customer	13107	113.5	113.5	131.3	Active	131.3	C
BIBC14	Meter Purchase-Customer	140107	0		0	Active	0	C
BIOC13	Meter Requirements - Company/AMR 2012	2108	0	66.8	0	Closed 2/2013	0	M
		Sub-Totals:	2,856.50	6,668.00	3,043.80			

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	COMMUNICATIONS ELECTRIC							
ECEC01	AMI Equipment, Normal Replacements	13214	15.5	15.5	1.6	Active	1.6	O
ECEC02	Two Way Radio Replacements	13246	3	3	1.3	Active	1.3	O
ECEC03	NH ESCC RTU Replacement	13293	42	42	14.5	Active	14.5	O
ECEC06	UES Capital Radio Upgrade Project	13241	261.8	261.8	1.4	Active	1.4	O
		Sub-Totals:	322.3	322.3	18.8			

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	COMMUNICATIONS GENERAL							
ECNC02	Upgrade Power Plan v10.2.1 to v10.3	13225	0	93.8	80.8	Active	80.8	O
ECNC03	2013 IT Infrastructure	13228	0	119.5	29.5	Active	29.5	O
ECNC04	Company website development	13229	0	32.4	32	Active	32	O
ECNC05	OMS Web Map Improvements	13230	0	10	2.9	Active	2.9	O
ECNC06	Systems Enhancements	13231	0	32.4	13.2	Active	13.2	O
ECNC07	Rate Case Work Flow	13232	0	25.5	19.6	Active	19.6	O
ECNC08	Electric Mobile Data Aquisation	13233	0	51	36.2	Active	36.2	O
ECNC09	OMS Regulatory Reporting	13258	0	27.9	11.7	Active	11.7	O
ECNC10	CIS Replacement	13262	0	1,828.80	0	Active	0	O
ECNC11	Access Control System Upgrades (ACUs)- Enterprise	13280	0	19	18	Active	18	O
ECNC16	MDS UES Deployment	2276	0		0	Active	0	O
ECOC01	ABB OMS Purchase	9059	0		0	Completed 8/2013	0	O
ECOC02	AMI Equipment, Normal Replacements EMC	2229	0		0	Closed 2/2013	0	O
ECOC03	2012 Infrastructure	2232	0		7.1	Closed 6/2013	7.1	O
ECOC04	Operation System Enhance	2233	0		6.6	Closed 4/2013	6.6	O
ECOC05	CIS Investigation	2234	0		-312.9	Cancelled 9/2013	-312.9	O
ECOC06	Powel Vegetation Management Software	2235	0		-56.7	Cancelled 1/2013	-56.7	O
ECOC07	Vendor System Upgrade	2236	0		2.2	Closed 5/2013	2.2	O
ECOC08	Internal Systems Upgrade	2237	0		0.3	Closed 3/2013	0.3	O
ECOC09	Field Data Acq	2238	0		0.5	Closed 3/2013	0.5	O
ECOC10	EETS Historical Data	2239	0		0	Cancelled 8/2013	0	O
ECOC11	AMI / MDM R&D	2240	0		0	Cancelled 9/2013	0	O
ECOC12	Vegetation Mgt UPC	2241	0		-56.2	Cancelled 1/2013	-56.2	O
ECOC13	Accounting Sys Enhancements	2244	0	13.4	5.1	Active	5.1	O
ECOC14	Power Plan Property Tax and Asset Lease Module	2255	0		3.8	Closed 5/2013	3.8	O
ECOC15	MDS UES DEPLOYMENT	2269	0	55	18.2	Active	18.2	O
ECOC16	Oct 29th 2012 Storm Event - 121029-SYS-3-12-103	2274	0		0	Completed 9/2013	0	M

Electric Category	2013
Growth	
Customer Additions (C)	1,155,100
Subtotal Growth	1,155,100
Non-Growth	
Reliability (R)	14,600
Maintenance Replacement (M)	3,059,300
Mandated (H)	47,700
System Improvement (I)	154,800
Other (O)	428,800
Subtotal Non-Growth	3,705,200
Total	4,860,300
	4,860,300
	0

Budget Category	2013
Annual Requirements Blankets	
T&D Improvements	717,400
New Customer Additions	241,200
Outdoor Lighting	98,900
Emergency & Storm Restoration	468,000
Billable work	530,700
Transformers	795,500
Meters	192,100
Sub-Totals:	**3,043,800**
Distribution	
Overhead Line Extensions over $20,000	51,500
Underground Line Extensions over $20,000	(9,700)
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	47,700
Distribution Pole Replacements	562,100
Specific Projects: Distribution	736,100
Sub-Totals:	**1,387,700**
Substation	
Specific Projects: Substation	401,100
Sub-Totals:	**401,100**
Communications	**(97,800)**
Tools, Shop, Garage	**40,200**
Laboratory	**10,900**
Office	**600**
Structures	**73,800**
Distribution Totals:	**4,860,300**

CONSTRUCTION BUDGET 2013 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	Electric Category
ECOC17	CIS Enhancements for Retail Choice	1103	0		0.2	Closed 3/2013	0.2	O
ECOC18	Bill Print redesign & outsource	1031	0	6.6	4.9	Active	4.9	O
ECOC19	MDS Rollout	1036	0		5.9	Closed 3/2013	5.9	O
ECOC21	GIS Upgrade to 9.3	1098	0		0.8	Closed 4/2013	0.8	O
ECOC22	EMIS Enhancements	1099	0		0	Closed 4/2013	0	O
ECOC23	Capital Budget System Enhancements	1100	0		-0.3	Closed 4/2013	-0.3	O
ECOC24	Two Way Radio Replacements	2221	0		10	Closed 2/2013	10	O
		Sub-Totals:	0	2,315.30	-116.6			

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	DISTRIBUTION ELECTRIC							
DABC00	Overhead Line Extensions		50.2		51.5	Active	51.5	C
DABC01	N Pembroke Rd-two pole 3 ph line ext	13212	0	15.7	7.8	Closed 12/2013	7.8	
DABC02	One pole OH Line Extension	13259	0		0.2	Closed 12/2013	0.2	
DABC03	Two additional phases OH then primary urd line extension-Billable	13265	0	31.8	25	Active	25	
DABC04	Three Phase Line Ext - Additional Two Phases - Customer Portion	13272	0	3.2	3.7	Active	3.7	
DABC05	one pole 3 ph OH Line Extension	13277	0	9.8	13.1	Active	13.1	
DABC06	Line extension for OL's	13282	0		2.2	Completed 11/2013	2.2	
DABC08	Relocate Pole for Customer	13287	0		-0.6	Active	-0.6	
DACC00	Overhead Line Extensions - Carryover		10.2		0	Closed 9/2013	0	C
DACC01	1 Pole Line Extension, 13 Dow Rd, Bow-Billable	2262	0	11.1	0	Closed 9/2013	0	
DBBC00	Underground Line Extensions		82.9		-9.8	Active	-9.8	C
DBBC01	Primary underground line extension-45 S Fruit St	13245	0	10.3	2.1	Completed 10/2013	2.1	
DBBC02	Single ph urd line ext for ph 2 for Oxbow Bluff Development	13249	0	30.1	16.5	Completed 10/2013	16.5	
DBBC03	S Curtisville Rd, Concord-Dame Sch-3 ph primary urd line ext	2214	0	7.9	1.5	Closed 2/2013	1.5	
DBBC04	primary 3 ph urd line ext	13260	0		0	Cancelled 5/2013	0	
DBBC05	3 Ph Primary Underground Line Ext	13261	0	14.7	11.3	Closed 12/2013	11.3	
DBBC06	Single ph urd ext for ph 2 for Peaslee Hill Estates	13263	0	37.2	0	Completed 10/2013	0	
DBBC07	Single ph urd line extension for ph 4 Beechwood Estates	13264	0	23.2	17.2	Closed 12/2013	17.2	
DBBC08	Prim urd line ext to a new pad mount transf	13266	0		9.2	Closed 12/2013	9.2	
DBBC09	remove primary OH line ext and replace with primary urd line ext	13268	0		2.2	Active	2.2	
DBBC10	Single ph urd line ext	13269	0	5.3	5.3	Closed 11/2013	5.3	
DBBC11	3 ph primary urd line extension	13274	0	3.3	-4.8	Active	-4.8	
DBBC12	replacing old primary urd with new	13276	0		-50.2	Active	-50.2	
DBBC13	Replacing OH with new urd	13281	0		-1.2	Active	-1.2	
DBBC14	primary urd line ext	13283	0	6.3	-7.7	Active	-7.7	
DBBC15	3ph line ext to a 500KVA pad for service upgrade	13288	0	7.9	3.4	Active	3.4	
DBBC16	Primary urd line extention	13289	0	14.5	-14.5	Active	-14.5	
DBCC00	Underground Line Extensions, Carryover		10.7		0.1	Completed 3/2013	0.1	C
DBCC01	Three Phase Ug Line Ext 45-49 South Main St Concord	1029	0		-1.6	Closed 6/2013	-1.6	
DBCC02	urd line extension-4 Hardy Ln, Boscawen	2268	0		-2	Closed 6/2013	-2	
DBCC03	Outdoor Lighting-Jonathan Dr, Concord	2275	0		3.7	Closed 7/2013	3.7	
DCBC00	Street Light Projects		14.5			Active	0	M
DCCC00	Street Light Projects - Carryover		0			Completed 1/2013	0	M
DDBC00	Telephone Company Requests		38			Active	0	H
DDCC00	Telephone Company Request - Carryover		4.3			Completed 3/2013	0	H
DEBC00	Highway Projects		89.7		37.1	Active	37.1	H
DEBC02	CIP 35 - Corridor Improvements - Village St., Penacook	13237	0	48.4	14.2	Active	14.2	
DEBC03	Reroute Overhead Main Line 4X1 Around Village of Penacook	13273	0		22.9	Active	22.9	
DECC00	Highway Projects, Carryover		0		10.6	Active	10.6	H
DECC01	Pole Relocations for Route 3, Concord Highway Improvements	2246	0	154.7	0.1	Closed 2/2013	0.1	
DECC03	Relocation of Aluminum Light Standards and Removal of Hi Mast	2254	0		0	Active	0	
DECC04	Manchester St., Concord - Road Reconstruction	1090	0	185.7	10.5	Closed 12/2013	10.5	
DPBC01	Distribution Pole Replacement	140109	348.4		562.1	Closed 11/2013	562.1	M
DPBC02	Purchase Voltage Regulators	13227	75.7	75.7	28.7	Active	28.7	I
DPBC04	Replace Grey Spacer cable	13244	457.9	467.4	236.1	Active	236.1	M
DPBC05	Install New Underground Switch, 211P, MH25	13218	51.6	51.6	20.9	Active	20.9	M
DPBC06	4X1: Install Regulator	13236	36.5	36.5	21.8	Closed 10/2013	21.8	I
DPBC07	Recloser Upgrade and Load Balance - Main St., Chichester	13253	11.2	11.2	4.5	Closed 10/2013	4.5	M
DPBC08	Replace Cap Bank on 33 Line - Pleasant St. S/S, Concord	13251	34.6	34.6	27.5	Closed 12/2013	27.5	M
DPBC09	Replace Cap Bank - Hazen Dr., Concord - Pole 39	13252	32	32	42.6	Completed 12/2013	42.6	M
DPBC10	Cir 2H2 - Install regulators and load transfers	13234	44.4	50	49.5	Closed 11/2013	49.5	I
DPBC11	Relocate 33 line and 21W1 along Turkey River	13285	232.3	232.3	126.1	Active	126.1	M
DPBC12	Removal OH Primary Line-683 Route 3A, Bow	13235	0		0.2	Closed 12/2013	0.2	M
DPNC01	MV Accident - Shopping Center Rd., Concord	13255	0	31.6	31.5	Closed 5/2013	31.5	M
DPNC02	Replace failed underground - Fort Eddy Rd., Concord	13278	0	30.6	30.5	Closed 12/2013	30.5	M
DPNC03	Replace Failed UG Cable - Hazen Drive S/S, Concord	13290	0	22.7	22.7	Closed 12/2013	22.7	M
DPNC04	Motor Vehicle Accident - Pole 12X-7 Fort Eddy Rd., Concord	13291	0	26.2	26.2	Closed 12/2013	26.2	M
DPNC05	Replace Primary UG - Pole 6-A - Old Suncook Rd., Concord	13295	0	29.2	29.2	Active	29.2	M
DPNC06	Replaced Failed UG - Morgan Dr., Bow - Pad 1	13299	0	23.3	22.6	Active	22.6	M
DPOC02	Extend Three Phase Along Dow Road - 2166'	2258	0	147.7	0.1	Closed 11/2013	0.1	I

Electric Category	2013

Budget Category

CONSTRUCTION BUDGET 2013 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	Electric Category
DPOC04	Install new Remote Control Load Break Switch	9041	0		0.8	Closed 11/2013	0.8	M
DRBC00	Reliability Projects		10.6		14.6	Active	14.6	R
DRBC06	Install Hydraulic Recloser - Pole 1 - Lake View Rd., Concord	13267	0	10.6	14.6	Closed 11/2013	14.6	
DRCC00	Reliabilty Projects, Carryover		0			Completed 1/2013	0	R
		Sub-Totals:	1,635.70	1,934.40	1387.7			
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	TOOLS, SHOP, GARAGE ELECTRIC							
EAEC01	Tools, Shop & Garage - Normal Additions and Replacements Line Dept.	13222	13	13	17	Active	17	O
EAEC02	Purchase Rubber Goods Line Dept.	13224	5	5	5.4	Active	5.4	O
EAEC03	Purchase Hot Line Tools Line Dept.	13223	5	5	5.6	Active	5.6	O
EAEC07	Normal Additions & Replacement - Tools & Equipment EM&C	13216	7	7	6.8	Active	6.8	O
		Sub-Totals:	30	30	34.8			
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	TOOLS, SHOP, GARAGE GENERAL							
EACC01	Purchase tools for new truck 21	13300	3.5	3.5	1.1	Closed 5/2013	1.1	O
EANC01	Replace failed voltage recorder	13284	0	3.3	3.3	Active	3.3	O
EAOC01	Purchase URD Grounding and Cutting Equipment	2222	0		1	Closed 10/2013	1	O
EAOC03	Tools, Shop & Garage - Normal Additions and Replacements	2223	0		0	Closed 2/2013	0	O
EAOC04	Purchase and replace rubber goods	2224	0		0	Closed 2/2013	0	O
EAOC05	Purchase and replace Hot Line Tools	2225	0		0	Closed 2/2013	0	O
EAOC06	Normal Additions & replacement - tools & equipment EMC	2226	0		0	Closed 2/2013	0	O
		Sub-Totals:	3.5	6.8	5.4			
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	LABORATORY GENERAL							
EBBC01	Lab Equipment - Normal Additions and Replacements EM&C	13215	7		10.9	Closed 10/2013	10.9	O
EBOC01	Lab Equipment - Normal Additions and Replacement EMC	2227	0		0	Closed 2/2013	0	O
		Sub-Totals:	7	0	10.9			
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	OFFICE ELECTRIC							
EDEC01	Office Furniture and Equipment	13226	3.5	3.5	0.6	Active	0.6	O
		Sub-Totals:	3.5	3.5	0.6			
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	OFFICE GENERAL							
EDOC01	Office Furniture and Equipment-Capital	2219	0		0	Closed 2/2013	0	O
		Sub-Totals:	0	0	0			
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	STRUCTURES GENERAL							
GPBC01	Normal Improvements to Capital Facility	13213	12.5	12.5	8.2	Active	8.2	O
GPBC02	Physical Security Additions	13240	41.9	46.1	42.9	Active	42.9	O
GPBC03	CAPITAL - Relocate SCADA Equipment	13248	7.5	10.5	2	Active	2	O
GPBC04	Door Replacements	13242	16	16	11.9	Active	11.9	O
GPCC05	Electrical systems and life safety upgrades	13243	38	38	8.8	Active	8.8	O
GPOC01	Normal Improvements to Capital Facility	2220	0		0	Closed 2/2013	0	O
GPOC02	Construct PCB Containment area	2252	0		0	Closed 2/2013	0	O
		Sub-Totals:	115.9	123.1	73.8			
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	SUBSTATION ELECTRIC							
SPBC01	Bridge Street - 35 Breaker Sync-Check Modifications	13270	67.3	10	13.4	Closed 12/2013	13.4	O
SPBC02	Penacook Substation: Replace Control Wiring	13275	66.3	118.3	1.1	Active	1.1	O
SPBC03	Langdon St. Cap and Pin Insulators	13219	44.6	60.6	2.5	Active	2.5	O
SPBC05	Bow Junction Cap and Pin Insulators	13220	9	9	3.3	Active	3.3	O
SPBC06	Bridge Street Substation Install Overvoltage Protection	13254	53.3		64.7	Closed 8/2013	64.7	O
SPBC07	Terrill Park S/S, Replace Station Batteries	13221	11	11	3.9	Completed 9/2013	3.9	O
SPBC08	Penacook S/S - 036 Load Shed Scheme	13271	70.6	70.6	32	Active	32	O
SPCC01	Replace 1H3 Breaker		11.1			Completed 1/2013	0	O

Electric Category	2013

Budget Category

CONSTRUCTION BUDGET 2013 UES Capital
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BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	Electric Category
SPCC02	Install Capacitor Bank	243	26.3	125.4	13.9	Active	13.9	O
SPNC01	Install returned 22T1 and new equipment	13256	0	239.6	234.9	Closed 12/2013	234.9	O
SPOC01	Upgrade underfrequency Relaying - Gulf	2249	0		11.3	Closed 3/2013	11.3	O
SPOC02	Replace Station Batteries - Bow Junction S/S EMC	2230	0		0	Closed 2/2013	0	O
SPOC03	Pleasant St S/S - Replace Damaged RTU	2266	0		0	Closed 4/2013	0	O
SPOC05	Hollis 8T1 LTC: replace contacts	2271	0		20.1	Closed 5/2013	20.1	O
SPOC06	Depot Street, Boscawen Substation	1072	0		0	Closed 3/2013	0	O
		Sub-Totals:	359.4	644.4	401.1			
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Totals	
	TRANSPORTATION ELECTRIC							
FEBC01	replace bucket 25		0			Active	0	O
FEBC02	Replace plow truck		0			Completed 2/2013	0	O
		Sub-Totals:	0	0	0			
		Grand Totals:	5,333.90	12,047.90	4,860.30			

Electric Category	2013

Budget Category

CONSTRUCTION BUDGET 2013 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABE13	Electric T&D Improvements	13000	988.9	1,213.40	1,330.20	Active	M
BABE14	Electric T & D	141000	0		0	Active	M
BACE13	Electric T&D Improvements	2000	92.6	1,065.70	-9.8	Active	M
BAOE13	Electric T&D Improvements	1000	0	908.7	0	Closed 2/2013	M
BBBE13	New Customer Additions	13001	299.4	420.5	445	Active	C
BBBE14	New Customer Overhead Services	141001	0		0	Active	C
BBCE13	New Customer Additions	2001	14.3	439.6	8.4	Active	C
BCBE13	Outdoor Lighting	13002	262.8	262.8	251.8	Active	M
BCBE14	To correct pl rec lighting State Rt -sub	141002	0		0	Active	M
BCCE13	Outdoor Lighting	2002	11.7	335	2.8	Closed 9/2013	M
BDBE13	Emergency & Storm Restoration	13003	472.6	495	453.4	Active	M
BDBE14	Emergency & Storm Prep	141003	0		0	Active	M
BDCE13	Emergency & Storm Restoration	2003	16.2	587.4	-12.7	Closed 9/2013	M
BDOE13	Emergency Restoration	1003	0		0	Closed 2/2013	M
BEBE13	Billable Work	13004	374.3	376.4	300	Active	M
BEBE14	Mutual Aid	141004	0		0	Active	M
BECE13	Billable Work	2004	180.5	362	-13.1	Closed 9/2013	M
BEOE13	Billables	1004	0	323	1.6	Closed 12/2013	M
BFBE13	Transformer Purchases - Company Conversions	13005	522.8	522.8	273.7	Active	I
BFBE14	Transformer Purchase-Company	141005	0		0	Active	I
BFCE13	Transformer Requirements - Co/Conversions 2012	2005	16.8	586	0	Closed 3/2013	I
BGBE13	Transformer Purchase - Customer	13006	812.3	1,009.30	1,072.00	Active	C
BGBE14	Transformer Purchase-Cust Req-URD	141006	0		0	Active	C
BGCE13	Transformer Requirements - Customer 2012	2006	22.7		31.1	Closed 3/2013	C
BHBE13	Electric Meter Purchases - Company	13008	118	118	137.6	Active	M
BHBE14	Meter Purchase-Company	141008	0		0	Active	M
BHOE13	Meter Requirements - Company/AMR 2012	2008	0	164.3	3.9	Closed 3/2013	C
BIBE13	Electric Meter Purchases - Customer	13007	174.1	174.1	207.2	Active	C
BIBE14	Meter Purchase-Customer	141007	0		0	Active	C
BIOE13	Meter Requirements - Customer 2012	2007	0		26.3	Closed 3/2013	C
	Sub-Totals:		4,380.00	9,364.00	4,509.40		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEE01	Two Way Radio Replacements	13149	4	4	2.1	Active	O
ECEE02	AMI Equipment, Unanticipated Replacement	13121	32	32	1.9	Active	O
ECEE03	Replace Seabrook Marsh RTU	13193	20.4	20.4	0	Active	O
ECEE04	UES Radio Upgrade Seacoast	13143	195.8	195.8	1.4	Active	O
	Sub-Totals:		252.2	252.2	5.4		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNE01	Purchase Lab Equipment for Line Evaluation	13190	0	9	6.7	Active	O
ECOE01	Bill Print redesign & outsource	1049	0	10.1	7.6	Active	O
ECOE02	MDS Rollout	1053	0		8.4	Closed 3/2013	O
ECOE04	Gis Upgrade to 9.3	1093	0		1.2	Closed 4/2013	O
ECOE05	EMIS Enhancements	1094	0		0	Closed 4/2013	O
ECOE06	Capital Budget System Enhancements	1095	0		0.2	Closed 4/2013	O
ECOE07	CIS Enhancements for Retail Choice	1098	0		0.3	Closed 3/2013	O
ECOE08	AMI Equipment, Unanticipated Replacement	2128	0		0	Closed 5/2013	O
ECOE09	Two Way Radio replacements	2131	0		0	Closed 2/2013	O
ECOE10	UES Seacoast GIS Realignment	2133	0		-50.6	Closed 10/2013	O
ECOE11	Add AMI Switching Group	2177	0	63	55.3	Completed 11/2013	O
ECOE12	Oct 29th 2012 Storm Event - 121029-SYS-3-12-103	2180	0		5.7	Closed 12/2013	M
	Sub-Totals:		0	82.1	34.8		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABE00	Overhead Line Extensions - New Projects		74.9		180.3	Active	C
DABE01	Three Phase, O/H Line Ext., Kelly St., Plaistow	13117	0	34	27.9	Closed 11/2013	
DABE02	Single Phase, O/H Line Ext, 41 Union Rd., Stratham	13140	0	13.7	13.7	Closed 9/2013	
DABE03	Replace and Changeover Two Poles, Extend Primary	13156	0	20	13.1	Closed 7/2013	
DABE04	Temporary O/H Line Ext, 700 Lafayette Rd., Seabrook	13159	0		1.4	Closed 9/2013	
DABE05	Relocation of Pole, 37 Mill Ln	13163	0		-0.6	Closed 10/2013	
DABE06	Three Phase, O/H Line Ext., 119 Brown Ave., Hampton	13164	0	5.5	8.9	Closed 10/2013	

Electric Category	2013
Growth	
Customer Additions (C)	2,599,000
Subtotal Growth	2,599,000
Non-Growth	
Reliability (R)	580,200
Maintenance Replacement (M)	3,431,700
Mandated (H)	-16,800
System Improvement (I)	4,354,300
Other (O)	363,100
Subtotal Non-Growth	8,712,500
Total	11,311,500
	11,311,500
	0

Budget Category	2013
Annual Requirements Blankets	**2013**
T&D Improvements	1,320,400
New Customer Additions	453,400
Outdoor Lighting	254,600
Emergency & Storm Restoration	440,700
Billable work	288,500
Transformers	1,376,800
Meters	375,000
Sub-Totals:	**4,509,400**
Distribution	
Overhead Line Extensions over $20,000	204,300
Underground Line Extensions over $20,000	600,800
Street Light Projects	4,300
Telephone Company Requests	-
Highway Projects	(16,800)
Distribution Pole Replacements	606,400
Specific Projects: Distribution	3,592,300
Sub-Totals:	**4,991,300**
Substation	
Specific Projects: Substation	1,643,300
Sub-Totals:	**1,643,300**
Communications	**40,200**
Tools, Shop, Garage	**41,300**
Laboratory	**6,800**
Office	**1,600**
Structures	**77,600**
Distribution Totals:	**11,311,500**

CONSTRUCTION BUDGET 2013 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DABE07	Replacement & Changeover of Poles, 40 Hampton Rd., Exeter	13165	0	39.4	36.1	Closed 9/2013	
DABE08	Single Phase, O/H Line Ext., 55 Heath St	13171	0	6.2	3.5	Completed 9/2013	
DABE09	Three Phase, O/H Line Ext., 17 Spring St, Exeter	13174	0	25.2	23.1	Closed 11/2013	
DABE10	Single Phase, O/H Line Ext, 13 Old Town Farm Rd	13176	0	16.1	17.8	Closed 11/2013	
DABE11	Three Phase Service, 22 Exeter Rd., South Hampton	13177	0	8.9	10.8	Closed 12/2013	
DABE12	Single Phase, O/H Line Ext., 71 North Rd, Kingston	13180	0	13	10.8	Active	
DABE13	Three Phase O/H Line Ext., 4 Plaistow Rd, Plaistow	13185	0	20.1	13.7	Active	
DACE00	Overhead Line Extensions, Carryover		29.9		24	Active	C
DACE01	Replacement of Three (3) Poles, Brentwood Rd., Exeter	2153	0	29.2	0	Closed 8/2013	
DACE02	Relocation of Poles, 380 Lafayette Rd., Seabrook	2160	0	24	0.7	Closed 2/2013	
DACE03	Install Primary Metering & Release Ownership of Infrastructure	2163	0		22.4	Closed 2/2013	
DACE04	Remove O/H Service, Install Service Pole and URD Service, 12 Main St., Atkinson	1083	0		0.8	Closed 2/2013	
DBBE00	Underground Line Extensions - New Projects		196.4		424.8	Active	C
DBBE01	Three Phase, URD Line Ext., 5-9 Plaistow Rd., Plaistow	13118	0	12	15.9	Closed 10/2013	
DBBE02	Single Phase, URD Line Ext., Bunker Hill Avenue, Stratham	13141	0	55.2	68.9	Completed 10/2013	
DBBE03	Three Phase, URD Line Ext., 700 Lafayette Rd, Seabrook	13151	0	194.2	123.1	Active	
DBBE04	Single Phase, URD Line Ext., Hemlock & Cedar Dr, Newton	13157	0	36.6	39.5	Closed 10/2013	
DBBE05	Single Phase, URD Line Ext., French's Ln, Kensington	13160	0	7.4	7.9	Active	
DBBE06	Single Phase, URD Line Ext., 10 Columbus Ave., Exeter	13167	0	28.7	37.3	Active	
DBBE07	Three Phase, URD Line Ext., 311 Winnacunnet Rd., Hampton	13169	0	9	11	Closed 11/2013	
DBBE08	Single Phase, URD Line Ext., Huntington Hill Rd, Danville	13178	0		3.2	Closed 11/2013	
DBBE09	Three Phase, URD LIne Ext., Sterling Hill, Exeter - Building 6	13181	0	36	53.3	Active	
DBBE10	Single Phase, URD Line Ext., Keefe Ave., Hampton	13186	0	41.4	44	Active	
DBBE11	Single Phase, URD Line Ext., Sargent Woods, Newton - PH 4A	13188	0	27.5	8.8	Active	
DBBE12	Three Phase, URD Line Ext., 339 Ocean Blvd., Hampton	13189	0	43.9	24	Active	
DBBE13	Single Phase, URD Line Ext., Juniper Ln, Hampton	13191	0	30.6	-12.3	Active	
DBCE00	Underground Line Extensions, Carryovers		122.4		176	Active	C
DBCE02	Single Phase, URD Line Ext., off Rt 125, Kingston	2165	0	100.6	-12.3	Active	
DBCE04	Three Phase, URD Line Ext., 105 Towle Farm Rd., Hampton	2175	0		84.1	Closed 9/2013	
DBCE05	Three Phase, URD Line Ext., Drakeside Rd., Hampton	2176	0	42.4	27.5	Closed 10/2013	
DBCE06	Three Phase, URD Line Ext, 83-91 Ocean Blvd., Hampton	2178	0	21.9	32	Closed 9/2013	
DBCE07	Three Phase, URD Line Ext., 380 Lafayette Rd, Seabrook	2179	0	24.7	44.8	Closed 9/2013	
DCBE00	Street Light Projects		53.1			Active	M
DCCE00	Street Light Projects, Carryover		12.3		4.3	Active	M
DCCE01	Installation of Street Lights, Rt 107/I-95	2164	0		4.3	Closed 12/2013	
DDBE00	Telephone Company Requests		93.8			Active	H
DDCE00	Telephone Requests, Carryover		0			Cancelled 1/2013	H
DEBE00	Highway Projects		108.9		0	Active	H
DEBE01	Relocation of Poles, Westside Dr., Atkinson	13162	0	110.8	0	Active	
Dec-00	Highway Projects, Carryover		0			Cancelled 1/2013	H
DEOE02	Relocation of Poles, Epping Road, Exeter	2173	0	112.5	-16.8	Closed 7/2013	H
DPBE01	Distribution Pole Replacement	141010	501.6		606.4	Closed 12/2013	M
DPBE02	Purchase Regulators for Various Distribution Projects	13116	454	454	445	Completed 11/2013	I
DPBE03	Circuit 23X1 Convert Amesbury Rd and Transfer to 27X1 Kensington	13110	577.5		558.2	Closed 10/2013	I
DPBE04	Circuit 19X3 - Reconductor Newfields Road, Exeter	13111	314.6	314.6	173.2	Closed 9/2013	I
DPBE05	Circuit 3W4 - Reconductor Ocean Blvd, Hampton Beach	13131	82	82	62.8	Closed 5/2013	I
DPBE06	Circuit 28X1 - Rebuild Wakeda Campground Lateral, Hampton Falls	13112	142.7	142.7	124.2	Closed 7/2013	M
DPBE07	Circuit 56X1 - Convert Hunt Road, Kingston to 34.5 kV	13113	140.5	140.5	108.2	Closed 10/2013	I
DPBE08	Circuit 43X1 - Convert Route 111/Kingston Rd., Exeter to 34.5 kV	13114	607.8	607.8	495	Completed 9/2013	I
DPBE09	Circuit 21W1 - Reconductor East Road, Atkinson	13115	348.9	348.9	216	Closed 10/2013	I
DPBE10	Install Regulators, Hampton Falls Rd (Rt. 88), Exeter	13133	56.4	56.4	41.7	Closed 11/2013	I
DPBE11	Circuit 5H1 Transfer to 21W1, Plaistow	13132	84.1	92.1	76.2	Completed 11/2013	I
DPBE12	Reconductor 3360 and 3371 Lines - Timber Swamp to Guinea	13155	428.1	428.1	146	Active	I
DPBE13	Install Regulators, Sweet Hill Rd., Plaistow	13134	35.8	35.8	21.7	Closed 7/2013	I
DPBE14	Install Regulators, Exeter Rd. (Rt 111), Kingston	13135	46.2	46.2	22	Closed 7/2013	I
DPBE15	Install Regulators, Various Locations, Atkinson	13136	70.1		44.5	Closed 10/2013	I
DPBE16	Install Regulators, Various Locations, Newton	13137	112.8	111.8	88.2	Closed 7/2013	I
DPBE17	Install Regulator, Forest St, Plaistow	13138	34.9	34.9	10.9	Closed 7/2013	I
DPBE18	Replace the 03341 and the 3352 Reclosers at Wolf Hill	13161	154.6	154.6	90.6	Active	M
DPBE98	Cir. 58X1 Install Regulator, Goodwin Rd	141013	0		0	Active	I
DPCE01	Extend Primary and Secondaries, Chase St, Kingston	2169	19.5	38.2	0.6	Closed 3/2013	M
DPCE02	Reconductor Muddy Pond Rd, Kensington	2174	52.5	103.9	41.7	Closed 3/2013	I
DPCE03	Circuit 19X3 Load Transfer to Circuit 27X2, Court St., Exeter	1059	12.1	475	28	Active	I
DPNE01	Replace and Changeover Damaged Pole - Motor Vehicle Accident	13123	0	28.8	28.7	Closed 4/2013	I
DPNE02	removal of Static wire conductor	13142	0	48	36	Closed 6/2013	M
DPNE03	Circuit 51X1 - Convert Portion of High Street, Stratham	13147	0	65	39.7	Completed 10/2013	M
DPNE04	Structure Replacement on 3342 Sub Transmission Line	13158	0	45	30.6	Closed 12/2013	M
DPNE06	Circuit 58X1 - Convert Newton Road to 34.5 kV	13173	0	228.1	27.7	Active	I
DPNE07	Replacement and Changeover of Poles, Maple Ave, Newton	13187	0	32.6	29	Closed 12/2013	M
DPNE08	Replace and Changeover Pole 141/15	13194	0	22.8	22.8	Active	M

Electric Category	2013

Budget Category

CONSTRUCTION BUDGET 2013 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPOE02	Convert Circuit 11W1 to Circuit 11X1 - 34.5 kV	2149	0		0	Closed 3/2013	I
DPOE03	Replace Guinea Rd 47X1 Regs	8046	0	70	0	Active	M
DPOE04	Reconductor and Convert, North Rd, East Kingston	2168	0	88.5	0	Closed 2/2013	I
DPOE05	Circuit 22X1 Install Capacitor Bank on Kingston Road	234	0		2.9	Closed 7/2013	I
DRBE00	Reliability Projects		913.7		580.2	Active	R
DRBE01	Fuse Changes to Address Mainline Unfused Laterals & Sensitivity Concerns	13154	0	30	28	Closed 12/2013	
DRBE16	Hampton S/S - Install Protective Devices on 3342, 3353 and 3348	13170	0	645.1	329.7	Active	
DRBE17	Portsmouth Ave S/S - Install Reclosers	13166	0	280.6	222.5	Active	
DRCE00	Reliabilty Projects, Carryover		0			Cancelled 1/2013	R
	Sub-Totals:		5,882.00	6,442.40	4991.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEE01	Normal Additions and Replacements of Tools & Equipment	13127	12.5	17.5	19.8	Active	O
EAEE02	Purchase and Replace Rubber Goods	13128	5	5	4.4	Active	O
EAEE03	Purchase and Replace Hot Line Tools	13129	3	3	4.1	Active	O
EAEE04	Normal additions & replacement - tools & equipment Meter and Services	13120	7		10.5	Closed 9/2013	O
	Sub-Totals:		27.5	25.5	38.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOE01	Normal Additions and Replacements of Tools & Equipment	2114	0		0	Closed 2/2013	O
EAOE02	Purchase and Replace Rubber Goods	2115	0		0	Closed 2/2013	O
EAOE03	Purchase and Replace Hot Line Tools	2122	0		0.1	Closed 2/2013	O
EAOE04	Normal additions & replacement - tools & equipment Meter and Services	2127	0		-0.2	Closed 5/2013	O
EAOE05	Purchase Tooling for new Truck #25	2123	0		2.6	Closed 6/2013	O
EAOE06	Purchase Underground Grounding and Cutting Equipment	2124	0		0	Closed 2/2013	O
	Sub-Totals:		0	0	2.5		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBE01	Lab Equipment - Normal Additions and Replacements	13119	7		8.7	Closed 10/2013	O
EBOE01	Lab Equipment - Normal Additions and Replacements	2129	0		-1.9	Closed 4/2013	O
	Sub-Totals:		7	0	6.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEE01	Office Furniture and Equipment	13139	3.5	3.5	1.6	Active	O
	Sub-Totals:		3.5	3.5	1.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOE01	Office Furniture and Equipment-Seacoast	2116	0		0	Closed 2/2013	O
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBE01	Normal Improvements to Kensington Facility	13124	15	15	5.9	Active	O
GPBE02	Physical security upgrades	13144	45.6	50.2	50.6	Active	O
GPBE03	Door Replacements	13145	15	15	14.6	Active	O
GPCE01	Electric system/life safety upgrades	13146	35	35	7.9	Active	O
GPOE01	Normal improvements to Seacoast facility	2126	0		0	Closed 2/2013	O
GPOE02	Construct PCB Containment Area	2152	0		-1.4	Closed 2/2013	O
	Sub-Totals:		110.6	115.2	77.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBE01	Kingston - Site Evaluation, Permitting and Other Preliminary Survey	13184	168.1	12,705.60	107	Active	I
SPBE02	Westville S/S Add Second Transformer	13125	1,328.30	1,328.30	1,200.90	Completed 10/2013	I

Electric Category	2013

Budget Category

CONSTRUCTION BUDGET 2013 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
SPBE03	Replace 3360 and 3371 Breakers at Guinea Sw/S	13148	345.8	345.8	191.8	Active	I
SPBE04	Exeter Sw/S - Raise Motor Operators	13122	22.3	54.9	46.4	Active	O
SPBE05	Hampton Beach S/S - Replace 4 kV Transformer	13175	115.6	135.2	139.3	Active	O
SPOE01	Replace the 54X1 recloser	2130	0	61.3	14	Closed 7/2013	O
SPOE02	Kingston - System Supply Addition	240	0		-57.7	Cancelled 9/2013	I
SPOE03	Exeter S/S Replace LTC Controls (REP)	1039	0	58.6	1.6	Closed 12/2013	O
	Sub-Totals:		1,980.20	14,689.70	1,643.30		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBE01	Replace truck #14		0			Closed 12/2013	O
FEBE02	Replace truck #12		0			Closed 12/2013	O
FEBE03	Replace truck #31		0			Closed 11/2013	O
FEBE04	Replace Wire Trailer		0			Closed 12/2013	O
FEBE05	Replace pole Trailer		6			Closed 12/2013	O
	Sub-Totals:		6	0	0		
	Grand Totals:		12,649.00	30,974.50	11,311.50		

Electric Category	2013

Budget Category

CONSTRUCTION BUDGET 2014 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABC14	T & D Improvements	140100	1,051.00	1,032.70	1,083.00	Active	M
BABC15	Electric T & D	150100	0		0	Active	M
BACC14	Electric T&D Improvements	13100	28.9		11	Closed 10/2014	M
BAOC12	Electric T&D Improvements	2100	0		-0.7	Closed 1/2014	M
BAOC13	Electric T&D Improvements	1000	0		0	Closed 3/2014	M
BBBC14	New Customer Additions	140101	255.7	282.7	432.1	Active	C
BBBC15	NewCustomer Additions	150101	0		0	Active	C
BBCC14	New Customer Additions	13101	26.9		1.9	Closed 10/2014	C
BBOC12	New Customer Additions	201	0		0	Closed 2/2014	C
BCBC14	Outdoor Lighting	140102	97.7	97.7	74.5	Active	M
BCCC14	Replace/Remove St Lt Fixtures	13102	3.8		-0.1	Closed 10/2014	M
BCOC12	Outdoor Lighting	202	0		0	Closed 1/2014	M
BCOC13	Outdoor Lighting	1002	0		0	Closed 4/2014	M
BDBC14	Emergency & Storm	140103	610.4	622.3	562.8	Active	M
BDBC15	Replace Broken Cutout - Pole 91 - Route 3A, Bow	150103	0		0	Active	M
BDCC14	Emergency & Storm	13103	7.9		-92	Closed 10/2014	M
BDOC12	Emergency & Storm Restoration	2103	0		-2.3	Closed 2/2014	M
BDOC13	Emergency Restoration	1003	0		0	Closed 4/2014	M
BEBC14	Billable Work	140104	190	191.6	186.7	Active	M
BEBC15	MV Accident	150104	0		0	Active	M
BECC14	Billable Work	13104	13.1		-17.1	Closed 10/2014	M
BEOC05	BILLABLE WORK 2005	5004	0		0	Closed 4/2014	M
BEOC11	Billables	1004	0		0	Closed 1/2014	M
BEOC12	Billable Work	2104	0		0	Closed 3/2014	M
BFBC14	Transformer Purchase-Company	140105	75.7	38.9	3.9	Active	I
BFBC15	2015 Transformer Purchases-Company	150105	0		0	Active	I
BFCC14	Transformer Purchases - Company	13105	2.7		0	Closed 4/2014	I
BGBC14	URG TRANSF CUSTOMER PURCHASE	140106	753.9	547.7	589.8	Active	C
BGBC15	2015 Transformer Purchases-Customer	150106	0		0	Active	C
BGCC14	Transformer Purchases - Customer	13106	14.1		17.9	Closed 4/2014	C
BHBC14	Meter Purchase-Company	140108	77.5	77.5	74.5	Active	M
BHBC15	2015 Meter Purchases-Company	150108	0		0	Active	M
BHOC14	Meter Purchases - Company	13108	0		6.2	Closed 4/2014	C
BIBC14	Meter Purchase-Customer	140107	129.8	129.8	99.4	Active	C
BIBC15	2015 Meter Purchases-Customer	150107	0		0	Active	C
BIOC14	Meter Purchases - Customer	13107	0		-6.2	Closed 4/2014	C
		Sub-Totals:	3,338.90	3,020.90	3,025.30		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEC01	Two Way Radio Replacements	140114	3	3	4.7	Active	O
EECC01	UES Capital Radio Upgrade Project	13241	11		0	Closed 12/2014	O
EECC02	NH ESCC RTU Replacement	13293	11.1	42	23.9	Active	O
		Sub-Totals:	25.1	45	28.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNC01	2014 INFRASTRUCTURE	140126	0	130.4	32.7	Active	O
ECNC03	2014 AMI/SCADA Cyber Project	140128	0	42.8	33.3	Active	O
ECNC04	AMI Version Update and PLX Functionality	140129	0	27	19.7	Active	O
ECNC05	OMS Web Map Improvements	140130	0	4.9	2.7	Active	O
ECNC06	Desktop Client Management	140131	0	22.6	2.1	Active	O
ECNC07	Upgrade Generator Interconnection Database	140141	0	19.6	47.7	Active	O
ECNC08	Electric Inspections	140145	0	60.7	67.1	Active	O
ECNC09	24 Hour Damage Assessment/Field Restoration	140146	0	60.1	18.4	Active	O
ECNC10	General Liability True up to plant assets	140149	0		242.7	Closed 9/2014	O
ECNC11	To move acct 105 to 360 Broken Ground Land	140150	0		762.9	Closed 9/2014	O
ECNC12	General Software Enhancements	140152	0	17.5	9.3	Active	O
ECNC13	Vehicle GIS/Garmin Overlay	140177	0	12.7	5.5	Active	O
ECNC14	Enhancemements to Critical Financial Control Systems	140178	0	49.8	38.9	Active	O
ECNC15	EETS Enhancements	140179	0	8.2	1.2	Active	O
ECOC01	AMI Equipment, Normal Replacements	13214	0		11.7	Closed 2/2014	O
ECOC02	Two Way Radio Replacements	13246	0		0.6	Closed 2/2014	O
ECOC03	Upgrade Power Plan v10.2.1 to v10.3	13225	0		0	Closed 1/2014	O
ECOC04	2013 IT Infrastructure	13228	0		1.5	Closed 5/2014	O
ECOC05	Company website development	13229	0		1.4	Closed 6/2014	O
ECOC06	OMS Web Map Improvements	13230	0		0	Closed 5/2014	O
ECOC07	Systems Enhancements	13231	0		0.3	Closed 7/2014	O
ECOC08	Rate Case Work Flow	13232	0	25.5	1.8	Closed 12/2014	O
ECOC09	Electric Mobile Data Aquisation	13233	0		15.7	Closed 5/2014	O

Electric Category	2014
Growth	
Customer Additions (C)	1,319,300
Subtotal Growth	1,319,300
Non-Growth	
Reliability (R)	11,900
Maintenance Replacement (M)	3,309,900
Mandated (H)	141,200
System Improvement (I)	978,000
Other (O)	1,814,300
Subtotal Non-Growth	6,255,300
Total	7,574,600
	7,574,600
	0

Budget Category	
Annual Requirements Blankets	**2014**
T&D Improvements	1,093,300
New Customer Additions	434,000
Outdoor Lighting	74,400
Emergency & Storm Restoration	468,500
Billable work	169,600
Transformers	611,600
Meters	173,900
Sub-Totals:	**3,025,300**
Distribution	
Overhead Line Extensions over $20,000	16,900
Underground Line Extensions over $20,000	18,400
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	141,200
Distribution Pole Replacements	863,900
Specific Projects: Distribution	795,900
Sub-Totals:	**1,836,300**
Substation	
Specific Projects: Substation	1,268,900
Sub-Totals:	**1,268,900**
Communications	**1,353,100**
Tools, Shop, Garage	**59,100**
Laboratory	**4,000**
Office	**2,700**
Structures	**25,200**
Distribution Totals:	**7,574,600**

CONSTRUCTION BUDGET 2014 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
ECOC10	OMS Regulatory Reporting	13258	0		0	Closed 5/2014	O
ECOC11	CIS Replacement	13262	0		0	Closed 9/2014	O
ECOC12	Access Control System Upgrades (ACUs)- Enterprise	13280	0		0	Closed 8/2014	O
ECOC13	Accounting Sys Enhancements	2244	0		2.5	Closed 1/2014	O
ECOC19	MDS Rollout	1036	0		4.8	Closed 9/2014	O
ECOC99	MDS UES DEPLOYMENT	2269	0		0	Closed 1/2014	O
		Sub-Totals:	0	481.8	1,324.50		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABC00	Overhead Line Extensions		57.4		8.9	Active	C
DABC01	Relocate 3 ph Primary -Robinson Rd Bow	140143	0		-0.2	Closed 9/2014	
DABC02	158 Canterbury Rd Chichester-OH & URD Line Ext-Billable	140160	0	14.7	11.1	Active	
DABC03	42 Little Pond Rd 2 p line extension -Billable	140163	0	10.2	7.3	Closed 12/2014	
DABC04	170 South Rd Salisbury, Four Pole OH Line Extension-Billable	140174	0	9.9	-20	Active	
DABC05	34 Boyce Rd Canterbury, OH to URD Line Extension-Billable	140175	0		4.2	Active	
DABC98	Replace Transf-Penacook St Concord -Billable	140158	0		0	Cancelled 10/2014	
DABC99	Repl Transf Penacook St Concord-Billable	140162	0		6.6	Closed 10/2014	
DACC00	Overhead Line Extensions - Carryover		11.1		8	Completed 3/2014	C
DACC02	Two additional phases OH then primary urd line extension-Billable	13265	0		6.8	Closed 10/2014	
DACC03	Three Phase Line Ext - Additional Two Phases - Customer Portion	13272	0		-2.5	Closed 3/2014	
DACC04	one pole 3 ph OH Line Extension	13277	0		4.3	Closed 9/2014	
DACC05	Line extension for OL's	13282	0		-1.6	Closed 4/2014	
DACC06	Relocate Pole for Customer	13287	0		1	Closed 4/2014	
DBBC00	Underground Line Extensions		95.8		10.4	Active	C
DBBC02	22 S Meadow St Conc-Single Ph Urd Line Ext	140117	0		4.3	Closed 4/2014	
DBBC03	341 Mountain Rd Concord-Primary Underground Line Ext	140137	0	8.4	7.1	Active	
DBBC04	69 Dover Rd -3 ph upgrade	140151	0	15.2	5.7	Completed 11/2014	
DBBC05	urd line ext-7 Goldenrod Ln Concord	140165	0	3.7	5.4	Closed 12/2014	
DBBC07	8 Sterling Lane Bow-Single Phase URD Line Extension	140173	0		-0.6	Closed 12/2014	
DBBC08	Nickerson Dr-Oxbow Bluff Sub Divi Ph 2B Line Extension	140181	0		-11.6	Active	
DBCC00	Underground Line Extensions, Carryover		13.5		150.9	Active	C
DBCC01	Primary underground line extension-45 S Fruit St	13245	0		7.2	Closed 5/2014	
DBCC02	Single ph urd line ext for ph 2 for Oxbow Bluff Development	13249	0		9.7	Closed 10/2014	
DBCC04	Single ph urd ext for ph 2 for Peaslee Hill Estates	13263	0		0	Cancelled 1/2014	
DBCC06	remove primary OH line ext and replace with primary urd line ext	13268	0		-0.8	Closed 1/2014	
DBCC07	3 ph primary urd line extension	13274	0	3.3	7.5	Closed 12/2014	
DBCC08	replacing old primary urd with new	13276	0		91	Active	
DBCC09	Replacing OH with new urd	13281	0		1.3	Closed 4/2014	
DBCC10	primary urd line ext	13283	0		18	Closed 7/2014	
DBCC11	Scales Rd, Canterbury-line extension-billable	1095	0		2.7	Closed 3/2014	
DBCC12	Primary urd line extention	13289	0		14.4	Closed 4/2014	
DCBC00	Street Light Projects		7.9			Active	M
DCCC00	Street Light Projects, Carryover		0			Completed 3/2014	M
DDBC00	Telephone Company Requests		30.7			Active	H
DDCC00	Telephone Company Requests, Carryover		0			Completed 3/2014	H
DEBC00	Highway Projects		96.2		59.7	Active	H
DEBC01	Relocating Poles for City of Concord - S Main St., Concord	140142	0	30.7	22.3	Closed 12/2014	
DEBC02	Pole Replacements for Road Reconstruction - Franklin Rd., Salis	140156	0		36.4	Closed 10/2014	
DEBC03	Pole Relocation for Bridge Replacement - State of NH	140168	0		1.1	Active	
DECC00	Highway Projects, Carryover		21.1		81.5	Active	H
DECC01	Relocation of Aluminum Light Standards and Removal of Hi Mast	2254	0		32.5	Active	
DECC02	Manchester St., Concord - Road Reconstruction	1090	0		0	Closed 1/2014	
DECC03	CIP 35 - Corridor Improvements - Village St., Penacook	13237	0	48.4	39.8	Closed 12/2014	
DECC04	Reroute Overhead Main Line 4X1 Around Village of Penacook	13273	0	29.7	9.1	Active	
DPBC01	Distribution Pole Replacement	140109	686.4	810.7	863.9	Closed 12/2014	M
DPBC02	Goboro Rd., Epsom - Recloser Coil Replacement	140134	7.3		7.5	Closed 6/2014	M
DPBC03	Perley St., Concord - Load Transfer 3H1 to 3H2	140135	69.7	71	75.4	Closed 12/2014	I
DPBC12	Removal OH Primary Line-683 Route 3A, Bow	13235	0		0	Cancelled 1/2014	M
DPCC01	Relocate 33 line and 21W1 along Turkey River	13285	17.1	232.3	130.7	Closed 12/2014	M
DPNC01	Replace Primary UG and Install Pullbox - Tower Hill Rd., Bow	140132	0		59	Closed 4/2014	M
DPNC02	Replaced Failed UG Cable - Pad 3-4 Brookwood Dr., Concord	140147	0		38.8	Closed 10/2014	M
DPNC07	November 24 Wind Storm	13301	0		26.1	Closed 4/2014	M
DPNC08	374 Line Tie to 318 Line - Garvins 115kV Project	140169	0	96.5	57.7	Completed 10/2014	M
DPOC01	Purchase Voltage Regulators	13227	0		0	Closed 2/2014	I
DPOC02	Replace Grey Spacer cable	13244	0		251.9	Closed 5/2014	M
DPOC03	Install New Underground Switch, 211P, MH25	13218	0	51.6	4.9	Active	M
DPOC04	Recloser Upgrade and Load Balance - Main St., Chichester	13253	0		-6.2	Closed 1/2014	M
DPOC05	Replace Cap Bank on 33 Line - Pleasant St. S/S, Concord	13251	0		0	Closed 10/2014	M
DPOC06	Replace Cap Bank - Hazen Dr., Concord - Pole 39	13252	0		-4.7	Closed 2/2014	M
DPOC09	Replace Primary UG - Pole 6-A - Old Suncook Rd., Concord	13295	0		0	Closed 1/2014	M
DRBC00	Reliability Projects		22.1		11.9	Active	R
DRBC02	33 Line Remote Fault Indication at Pleasant Street	140148	22.1	24.5	11.9	Completed 12/2014	

Electric Category	2014

Budget Category

CONSTRUCTION BUDGET 2014 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DRCC00	Reliabilty Projects, Carryover		0			Completed 3/2014	R
		Sub-Totals:	1,158.40	1,460.90	1836.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEC01	Tools, Shop & Garage - Normal Additions and Replacements	140122	7	21	14.5	Active	O
EAEC02	Purchase and Replace Rubber Goods	140123	5	5	3	Active	O
EAEC03	Purchase and Replace Hot Line Tools	140124	4.5	4.5	4.5	Active	O
EAEC04	Normal additions & replacement - tools & equipment Metering	140119	5		9.8	Closed 10/2014	O
EAEC05	Replace the FC200 handheld readers	140118	8.9		7.7	Closed 10/2014	O
EAEC99	Normal Addtions and Replacement Tools Substation	140121	7		10.4	Closed 10/2014	O
		Sub-Totals:	37.4	30.5	49.9		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EACC01	Purchase tools for new bucket truck # 25	140176	5	5	8.2	Closed 8/2014	O
EAOC01	Tools, Shop & Garage - Normal Additions and Replacements Line Dept.	13222	0		0.5	Closed 2/2014	O
EAOC02	Purchase Rubber Goods Line Dept.	13224	0		0	Closed 2/2014	O
EAOC03	Purchase Hot Line Tools Line Dept.	13223	0		0	Closed 2/2014	O
EAOC04	Normal Additions & Replacement - Tools & Equipment EM&C	13216	0		0.5	Closed 2/2014	O
EAOC05	Replace failed voltage recorder	13284	0		0	Closed 5/2014	O
		Sub-Totals:	5	5	9.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBC01	Lab Equipment - Normal Additions and Replacements	140120	7	7	4	Active	O
		Sub-Totals:	7	7	4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEC01	Office Furniture & Equipment-Normal Additions and Replacements	140116	7	7	2.7	Active	O
		Sub-Totals:	7	7	2.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOC01	Office Furniture and Equipment	13226	0		0	Closed 2/2014	O
		Sub-Totals:	0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBC01	Nomal Improvemnts to Capital facility	140113	12	17	14.1	Active	O
GPBC02	Physical Security Facility Upgrades & Additions - Capital		22			Active	O
GPCC01	CAPITAL - Relocate SCADA Equipment	13248	13	10.5	5.6	Active	O
GPCC02	Electrical systems and life safety upgrades	13243	26	38	5.5	Active	O
GPOC01	Normal Improvements to Capital Facility	13213	0		0	Closed 2/2014	O
GPOC02	Physical Security Additions	13240	0		0	Closed 11/2014	O
GPOC03	Door Replacements	13242	0		0	Closed 8/2014	O
		Sub-Totals:	73	65.5	25.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBC01	Broken Ground - Site Evaluation, Permitting, Preliminary Survey	140144	652	11,297.70	898.7	Active	I
SPCC01	Penacook Substation: Replace Control Wiring	13275	39.7	118.3	103.6	Closed 11/2014	O
SPNC01	Replace Failed Cap Bank, RTU and Regulators due to a Fault	140133	0	72.1	87.5	Active	O
SPNC03	Deenergize Bus # 1 at Penacook to replace broken insulator	140155	0		35	Closed 10/2014	O
SPNC05	Transformer 7T1 Replacement at Bow Junction and Purchase Spare Transformer	140161	0	398.7	118.5	Active	O
SPNC06	Purchase SPU for failed Bow Junction Unit	140164	0	14	0	Active	O
SPNC07	Purchase SPU for Failed Bridge Street Collector	140166	0	12	10	Closed 11/2014	O
SPNC09	Replace Faulted 396J2 Switch Lightning Arresters	140180	0	22.8	0	Active	O
SPOC01	Langdon St. Cap and Pin Insulators	13219	0	60.6	10.4	Active	O
SPOC03	Penacook S/S - 036 Load Shed Scheme	13271	0		5.2	Closed 10/2014	O
SPOC04	Install Capacitor Bank	243	0		0	Closed 1/2014	O

Electric Category	2014		Budget Category

CONSTRUCTION BUDGET 2014 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	Sub-Totals:		691.7	11,996.10	1,268.90		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBC01	Replace Vehicle #11		0			Closed 10/2014	O
FEBC02	Replace Vehicle #15		0			Closed 10/2014	O
FEBC03	Replace bucket truck #25		0			Completed 11/2014	O
FEBC04	Replace Flat bed Trailer		0			Closed 10/2014	O
	Sub-Totals:		0	0	0		
	Grand Totals:		5,343.50	17,119.70	7,574.60		

Electric Category	2014

Budget Category

CONSTRUCTION BUDGET 2014 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABE14	Electric T & D	141000	1,594.70	1,581.40	1,522.10	Active	M
BABE15	Electric T&D	151000	0		0	Active	M
BACE14	Electric T&D Improvements	13000	95.4		81.1	Closed 10/2014	M
BAOE11	Electric T&D Improvements	200	0		0	Closed 1/2014	M
BAOE12	Electric T&D Improvements	2000	0		-0.9	Closed 5/2014	M
BAOE13	Electric T&D Improvements	1000	0		0	Closed 5/2014	M
BBBE14	New Customer Additions	141001	377.8	416.1	442.3	Active	C
BBBE15	NewCustomer Additions	151001	0		0	Active	C
BBCE14	New Customer Additions	13001	13		44.1	Closed 10/2014	C
BBOE12	New Customer Additions	2001	0		0	Closed 5/2014	C
BCBE14	Outdoor Lighting	141002	292.8	292.8	230	Active	M
BCBE15	Outdoor Lighting	151002	0		0	Active	M
BCCE13	Outdoor Lighting	2002	0		0	Closed 5/2014	M
BCCE14	Outdoor Lighting	13002	5		4.9	Closed 10/2014	M
BCOE13	Outdoor Lighting	1002	0		0	Closed 5/2014	M
BDBE14	Emergency & Storm	141003	413.6	400.8	434.2	Active	M
BDBE15	Emergency & Storm	151003	0		0	Active	M
BDCE13	Emergency & Storm Restoration	2003	0		0	Closed 5/2014	M
BDCE14	Emergency & Storm	13003	18.2		-2.5	Closed 10/2014	M
BDOE13	Emergency Restoration	1003	0		0	Closed 5/2014	M
BEBE14	Billable Work	141004	404.8	400.1	421	Active	M
BEBE15	Make Ready for Apllication HFA-14-601	151004	0		0	Active	M
BECE13	Billable Work	2004	0		0	Closed 5/2014	M
BECE14	Billable Work	13004	101		21	Closed 10/2014	M
BEOE11	Billables	1004	0		0	Closed 5/2014	M
BFBE14	Transformer Purchase-Company	141005	0		0	Active	I
BFBE15	2015 Transformer Purchases-Company	151005	0		0	Active	I
BFCE14	Transformer Purchases - Company Conversions	13005	4.6		4.7	Closed 7/2014	I
BGBE14	Transformer Purchase-Cust Req-URD	141006	971.7	1,281.20	1,548.60	Active	C
BGBE15	2015 Transformer Purchases-Customer	151006	0		0	Active	C
BGCE14	Transformer Purchase - Customer	13006	31.3		21.5	Closed 7/2014	C
BHBE14	Meter Purchase-Company	141008	153	153	137.8	Active	M
BHBE15	2015 Meter Purchases-Company	151008	0		0	Active	M
BHOE13	Electric Meter Purchases - Company	13008	0		16.4	Closed 4/2014	M
BIBE14	Meter Purchase-Customer	141007	172.1	172.1	191.5	Active	C
BIBE15	2015 Meter Purchases-Customer	151007	0		0	Active	C
BIOE13	Electric Meter Purchases - Customer	13007	0		-16.4	Closed 4/2014	C
	Sub-Totals:		4,649.10	4,697.50	5,101.40		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEE01	AMI - Guinea Switching PLX Permanent	141035	94.6	94.6	87.7	Active	O
ECEE02	Two Way Radio Replacements	141018	5	5	1	Active	O
EECE01	UES Radio Upgrade Seacoast	13143	11		0	Closed 9/2014	O
	Sub-Totals:		110.6	99.6	88.7		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNE01	Replace AMI SPU and Cell Modem	141034	0	9.3	2	Active	O
ECOE01	Two Way Radio Replacements	13149	0		0	Closed 2/2014	O
ECOE02	AMI Equipment, Unanticipated Replacement	13121	0		0	Closed 2/2014	O
ECOE03	Replace Seabrook Marsh RTU	13193	0	20.4	3.8	Active	O
ECOE05	Purchase Lab Equipment for Line Evaluation	13190	0		0	Closed 5/2014	O
ECOE07	Add AMI Switching Group	2177	0		2.2	Closed 2/2014	O
	Sub-Totals:		0	29.7	8		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABE00	Overhead Line Extensions - New Projects		123.3		21.6	Active	C
DABE01	Single Phase, Overhead Line Ext., 5 South Rd, Brentwood	141044	0		14	Closed 8/2014	
DABE02	Single Phase, Overhead Line Ext., 4 Merrimac Rd., Newton	141057	0		8.2	Closed 9/2014	
DABE03	Three Phase, Temporary O/H Line Ext. 21 Chevy Chase Rd., Seabrook	141062	0		-0.6	Closed 12/2014	
DACE00	Overhead Line Extensions, Carryover		34.4		1.2	Active	C
DACE01	Single Phase, O/H Line Ext., 55 Heath St	13171	0		0	Closed 1/2014	
DACE02	Single Phase, O/H Line Ext, 13 Old Town Farm Rd	13176	0		0	Closed 2/2014	
DACE03	Three Phase Service, 22 Exeter Rd., South Hampton	13177	0		0	Closed 10/2014	
DACE04	Single Phase, O/H Line Ext., 71 North Rd, Kingston	13180	0		0.1	Closed 4/2014	
DACE05	Three Phase O/H Line Ext., 4 Plaistow Rd, Plaistow	13185	0		1.1	Closed 2/2014	

Electric Category	2014
Growth	
Customer Additions (C)	2,907,700
Subtotal Growth	2,907,700
Non-Growth	
Reliability (R)	125,400
Maintenance Replacement (M)	3,753,300
Mandated (H)	110,600
System Improvement (I)	4,648,700
Other (O)	409,900
Subtotal Non-Growth	9,047,900
Total	11,955,600
	11,955,600
	0

Budget Category	
Annual Requirements Blankets	**2014**
T&D Improvements	1,602,300
New Customer Additions	486,400
Outdoor Lighting	234,900
Emergency & Storm Restoration	431,700
Billable work	442,000
Transformers	1,574,800
Meters	329,300
Sub-Totals:	**5,101,400**
Distribution	
Overhead Line Extensions over $20,000	22,800
Underground Line Extensions over $20,000	653,300
Street Light Projects	-
Telephone Company Requests	81,800
Highway Projects	28,800
Distribution Pole Replacements	714,000
Specific Projects: Distribution	1,197,600
Sub-Totals:	**2,698,300**
Substation	
Specific Projects: Substation	3,908,400
Sub-Totals:	**3,908,400**
Communications	**96,700**
Tools, Shop, Garage	**110,800**
Laboratory	**7,300**
Office	**2,300**
Structures	**30,400**
Distribution Totals:	**11,955,600**

CONSTRUCTION BUDGET 2014 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DBBE00	Underground Line Extensions - New Projects		223.3		367.5	Active	C
DBBE01	Single Phase, URD Line Ext., 22 Winslow Dr, Atkinson	141014	0		0.2	Closed 10/2014	
DBBE02	Three Phase, URD Line Ext, 580 Winnacunnet Rd, Hampton	141036	0	29.9	33.6	Active	
DBBE03	Three Phase, URD Line Ext., 5-9 Plaistow Rd, Plaistow	141037	0	26.2	31.6	Active	
DBBE04	Single Phase, URD Line Ext, Phase 5 of Sargent Woods	141038	0	43.7	61	Closed 11/2014	
DBBE05	Single Phase, URD Line Ext., Rocks Rd, Seabrook	141040	0		58.4	Closed 11/2014	
DBBE06	Three Phase, URD Line Ext., 600 Lafayette Rd., Seabrook	141042	0	122.9	128	Active	
DBBE07	Three Phase, URD Line Ext., 3 Portsmouth Ave., Stratham	141043	0		9.8	Closed 7/2014	
DBBE08	Three Phase, URD Line Ext., 275 Ocean Blvd., Hampton	141045	0		-6.1	Active	
DBBE09	Three Phase, URD Line Ext., 169 Ocean Blvd., Hampton	141046	0		24.3	Closed 8/2014	
DBBE10	Single Phase, URD Line Ext., off Hillcrest Dr., Plaistow	141048	0	82.9	73	Closed 12/2014	
DBBE11	Three Phase, URD Line Ext., off Kelley Road, Plaistow	141059	0	33.1	5.3	Active	
DBBE12	Single Phase, URD Line Ext., Jean Dr., off Gove Rd., Seabrook	141060	0		-6.6	Active	
DBBE13	Three Phase, URD Line Ext., 100 Ledge Rd., Seabrook	141061	0		10	Active	
DBBE14	Three Phase, URD Line Ext., One Meeting Place, Exeter	141063	0		-30.1	Active	
DBBE15	Three Phase, URD Line Ext., 133 Exeter Rd., Hampton Falls	141064	0	24.5	31.5	Closed 12/2014	
DBBE16	Three Phase, URD Line Ext., 10 Puzzle Ln., Newton	141067	0	13.5	0.3	Active	
DBBE17	Single Phase, URD Line Ext., 22 Cottage Rd., Kensington	141070	0	24.2	-22.7	Active	
DBBE18	Single Phase, URD Line Ext. Sargent Woods, Newton, Phase 6	141072	0	25	-9.5	Active	
DBBE19	Three Phase, URD Line Ext., Sterling Hill, Bldg 7, Exeter	141075	0		-4.3	Active	
DBBE20	Three Phase, URD Line Ext., 7 Puzzle Ln., Newton	141076	0	19.5	-10	Active	
DBBE21	Single Phase, URD Line Ext., 7 State Rt 125, Phase 2	141077	0		-10	Active	
DBCE00	Underground Line Extensions, Carryovers		163.9		285.8	Active	C
DBCE01	Single Phase, URD Line Ext., Bunker Hill Avenue, Stratham	13141	0		0	Closed 10/2014	
DBCE02	Three Phase, URD Line Ext., 700 Lafayette Rd, Seabrook	13151	0	194.2	141.8	Active	
DBCE04	Single Phase, URD Line Ext., 10 Columbus Ave., Exeter	13167	0		-1.1	Closed 4/2014	
DBCE05	Three Phase, URD LIne Ext., Sterling Hill, Exeter - Building 6	13181	0		5.7	Closed 3/2014	
DBCE06	Single Phase, URD Line Ext., Keefe Ave., Hampton	13186	0		1.1	Closed 10/2014	
DBCE07	Single Phase, URD Line Ext., Sargent Woods, Newton - PH 4A	13188	0		23.8	Closed 10/2014	
DBCE08	Three Phase, URD Line Ext., 339 Ocean Blvd., Hampton	13189	0		30.7	Closed 9/2014	
DBCE09	Single Phase, URD Line Ext., Juniper Ln, Hampton	13191	0		42.6	Closed 4/2014	
DBCE10	Single Phase, URD Line Ext., off Rt 125, Kingston	2165	0	122.6	41.3	Completed 11/2014	
DCBE00	Street Light Projects		59.2			Active	M
DCCE00	Street Light Projects, Carryover		0			Active	M
DDBE00	Telephone Company Requests		1,026.80		81.8	Active	H
DDBE01	Replacement and Changeover of Poles, Great Pond Rd.	141030	0		34.2	Closed 7/2014	
DDBE02	3353 Line Relocation, State Rt. 101, Hampton	141047	0	300	47.6	Active	
DDCE00	Telephone Company Requests, Carryover		0			Active	H
DEBE00	Highway Projects		159.5		0	Active	H
DEBE02	Relocation of Highway Light	141079	0		0	Active	
Dec-00	Highway Projects, Carryover		88.7		28.8	Active	H
DECE01	Relocation of Poles, Westside Dr., Atkinson	13162	0		28.8	Closed 12/2014	
DPBE01	Distribution Pole Replacements (REP)	151009	683.5		714	Closed 12/2014	M
DPBE02	Circuit 59X1 - Reconductor Exeter Road	141022	195.6		116.4	Closed 7/2014	I
DPBE03	Cir. 59X1 Install Regulator, Goodwin Rd	141013	48.4		39.4	Closed 8/2014	I
DPBE04	Winnacunnet Road Tap - Install Regulation	141021	386.1	386.1	170.1	Active	I
DPBE05	Reconductor Portions of 2X3, 23X1 and 15X1	151010	0		0	Active	I
DPCE01	Circuit 58X1 - Convert Newton Road to 34.5 kV	13173	215.7		224.4	Closed 7/2014	I
DPCE02	Reconductor 3360 and 3371 Lines - Timber Swamp to Guinea	13155	64.9		319.2	Closed 8/2014	I
DPNE02	Replace Direct Buried Underground Facilities, 32 Industrial Dr., Exeter	141055	0	52.6	47.1	Completed 12/2014	M
DPNE03	Reconductor Fourteen (14) Pole Line Sections Along New Zealand Rd., Seabrook	141073	0	131.5	10	Active	I
DPNE04	Replace Neutral along Country Pond Rd & Concannon Rd., Kingston/Newton	141074	0		115	Completed 12/2014	M
DPOE01	Purchase Regulators for Various Distribution Projects	13116	0		0	Closed 5/2014	I
DPOE02	Circuit 43X1 - Convert Route 111/Kingston Rd., Exeter to 34.5 kV	13114	0		0	Closed 1/2014	I
DPOE03	Circuit 5H1 Transfer to 21W1, Plaistow	13132	0		0	Closed 1/2014	I
DPOE04	Replace the 03341 and the 3352 Reclosers at Wolf Hill	13161	0	154.6	1.3	Active	M
DPOE05	Circuit 19X3 Load Transfer to Circuit 27X2, Court St., Exeter	1059	0		18.5	Closed 11/2014	I
DPOE06	Circuit 51X1 - Convert Portion of High Street, Stratham	13147	0		0	Closed 2/2014	I
DPOE08	Replace and Changeover Pole 141/15	13194	0		0	Closed 1/2014	M
DPOE09	Replace Guinea Rd 47X1 Regs	8046	0		1.7	Closed 7/2014	M
DRBE00	Reliabilty Projects		192.6		125.4	Active	R
DRBE01	Replace Stard Road Recloser	141041	75.9	75.9	67	Completed 12/2014	
DRBE02	3359 Line Remote Fault Indication at Stard Rd Tap		0			Cancelled 9/2014	
DRBE03	Circuit 13W1 - Install Recloser and Sectionalizer	141020	0		16.3	Closed 7/2014	
DRBE07	Installing Cutouts on Various Circuits to Address Unprotected Laterals (REP)	141051	0		34.4	Closed 11/2014	
DRBE08	3341 Line and 3352 Line Remote Fault Indication at Exeter Switching	141066	0	24.5	7.8	Completed 11/2014	
DRCE00	Reliabilty Projects, Carryover		0			Active	R
DROE01	Hampton S/S - Install Protective Devices on 3342, 3353 and 3348	13170	0	645.1	5.2	Active	M
DROE02	Portsmouth Ave S/S - Install Reclosers	13166	0		3.9	Closed 4/2014	M
		Sub-Totals:	3,741.80	2,532.60	2698.3		

BUDGET		AUTH	BUDGETED	AUTH	PROJECTED	PROJECT	

Electric Category	2014

Budget Category

CONSTRUCTION BUDGET 2014 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEE01	Normal Additions and Replacements of Tools & Equipment	141016	7	17	12.2	Active	O
EAEE02	Purchase and Replace Rubber Goods	141017	5	5	4.8	Active	O
EAEE03	Purchase and Replace Hot Line Tools	141019	3.5	3.5	3	Active	O
EAEE04	Normal additions & replacement - tools & equipment Meter Department	141024	3	3	2.9	Active	O
EAEE05	Normal Tools Purcahase and Replacement Substation	141028	7	7	7.7	Active	O
EAEE06	Purchase Oil Filtration Unit	141029	57	57	58.6	Closed 12/2014	O
EAEE07	Replacement of Symbol Hand helds	141026	14		13.8	Closed 10/2014	O
EAEE08	Replace the FC200 handheld readers	141027	8.9		7.7	Closed 10/2014	O
	Sub-Totals:		105.4	92.5	110.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOE01	Normal Additions and Replacements of Tools & Equipment	13127	0		-0.4	Closed 2/2014	O
EAOE02	Purchase and Replace Rubber Goods	13128	0		0.2	Closed 2/2014	O
EAOE03	Purchase and Replace Hot Line Tools	13129	0		0.3	Closed 2/2014	O
	Sub-Totals:		0	0	0.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBE01	Lab Equipment - Normal Additions and Replacements	141025	7	7	7.3	Active	O
	Sub-Totals:		7	7	7.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEE01	Office Furniture and Equipment	141023	3.5	3.5	2.3	Active	O
	Sub-Totals:		3.5	3.5	2.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOE01	Office Furniture and Equipment	13139	0		0	Closed 2/2014	O
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBE01	Normal improvements to Seacoast Facility	141015	15	15	10.5	Active	O
GPBE02	Physical Security Facility Upgrades & Additions		28			Active	O
GPCE01	Electric system/life safety upgrades	13146	40	35	2.2	Active	O
GPOE01	Normal Improvements to Kensington Facility	13124	0		0	Closed 2/2014	O
GPOE02	Physical security upgrades	13144	0	68.3	17.7	Closed 12/2014	O
GPOE03	Door Replacements	13145	0		0	Closed 8/2014	O
	Sub-Totals:		83	118.3	30.4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBE02	Guinea 18C2 and 18C3 - Replace Switches and Unground	151011	0		0	Active	O
SPCE01	Kingston Substation-System Supply	13184	4,225.00	12,705.60	3,568.40	Active	I
SPCE02	Replace 3360 and 3371 Breakers at Guinea Sw/S	13148	72.1	345.8	177.6	Closed 12/2014	I
SPNE01	Replace Transformer Oil in 22T1	141058	0	56.2	42.4	Closed 12/2014	O
SPNE02	Replace Failed SPU Unit at 3347 Tap	141065	0	12.5	12.4	Closed 12/2014	O
SPNE03	Replace Dows Hill Recloser and Regulator due to fault.	141068	0		48.5	Completed 11/2014	O
SPNE04	Replace Failed SPU at Timberlane Substation	141069	0	12	10	Closed 12/2014	O
SPNE05	Replace SPU Collector at Guinea Switch on Bus A	141071	0	12	0	Active	O
SPOE01	Westville S/S Add Second Transformer	13125	0		0	Closed 1/2014	O
SPOE02	Exeter Sw/S - Raise Motor Operators	13122	0		0	Closed 7/2014	O
SPOE03	Hampton Beach S/S - Replace 4 kV Transformer	13175	0		49.1	Closed 9/2014	O
	Sub-Totals:		4,297.10	13,144.00	3,908.40		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBE01	Replace truck #26		0			Closed 10/2014	O

Electric Category	2014

Budget Category

CONSTRUCTION BUDGET 2014 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
FEBE02	Replace truck #30		0			Closed 10/2014	O
		Sub-Totals:	0	0	0		
		Grand Totals:	12,997.50	20,724.70	11,955.60		

Electric Category	2014

Budget Category

CONSTRUCTION BUDGET 2015 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABC15	2015 Electric T & D	150100	866.5	1,225.00	1,279.80	Active	M
BABC16	Electric T&D Improvements	160100	0		0	Active	M
BACC15	T & D Improvements	140100	30.2	1,032.70	48.8	Completed 5/2015	M
BBBC15	2015 New Customer Additions	150101	279	475	441.2	Active	M
BBBC16	New Customer Additions	160101	0		0	Active	C
BBCC15	New Customer Additions	140101	27.3	282.7	49.7	Completed 6/2015	C
BCBC01	106 Airport Rd-NewOL's Banks Chevorlete	150172	0		-25.2	Active	C
BCBC15	2015 Outdoor Lighting	150102	101.7	132	133.7	Active	M
BCBC16	Outdoor Lighting	160102	0		0	Active	M
BCCC15	Outdoor Lighting	140102	4.1	97.7	-0.5	Closed 12/2015	M
BDBC15	2015 Emergency & Storm	150103	574.3	574.3	534.6	Active	M
BDBC16	Emergency & Storm Restoration	160103	0		0.8	Active	M
BDCC15	Emergency & Storm	140103	11.7	622.3	8.6	Active	M
BEBC01	195 N Main St Boscawen -install 3 25kVA transf for 3 ph serv	150175	0		0	Active	M
BEBC15	2015 Billable Work	150104	204.8	237.2	345.1	Active	M
BEBC16	Billable Work	160104	0		0	Active	M
BECC15	Billable Work	140104	8.8	191.6	-30.8	Completed 6/2015	M
BFBC15	2015 Transformer Purchases-Company	150105	21.2	20.1	11.6	Active	I
BFBC16	2016 Transformer Purchases-Company	160105	0		0	Active	I
BFOC15	Transformer Purchase-Company	140105	0		15.3	Closed 3/2015	I
BGBC15	2015 Transformer Purchases-Customer	150106	743.3	647.8	590.4	Active	C
BGBC16	2016 Transformer Purchases-Customer	160106	0		0	Active	C
BGCC15	URG TRANSF CUSTOMER PURCHASE	140106	13.6		30.7	Closed 3/2015	C
BHBC15	2015 Meter Purchases-Company	150108	83.5	83.5	79	Active	M
BHBC16	2016 Meter Purchases-Company	160108	0		0	Active	M
BIBC15	2015 Meter Purchases-Customer	150107	146	146	149.8	Active	C
BIBC16	2016 Meter Purchases-Customer	160107	0		0	Active	C
BICC15	Meter Purchase-Customer	140107	0		0	Completed 1/2015	C
		Sub-Totals:	3,116.00	5,768.00	3,662.60		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEC01	Two Way Radio Replacements	150114	4	4	2.8	Active	O
ECEC02	AMI Equipment, Unanticipated Replacements	150120	10.1	10.1	41	Active	O
ECEC03	Replace and Upgrade Electric SCADA Master	150133	147.9		100.8	Active	O
		Sub-Totals:	162.1	14.1	144.6		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNC01	2015 Infrastructure	150127	0	200.3	39.9	Active	O
ECNC02	Electric Inspections	150128	0	52	32.9	Active	O
ECNC03	GIS Version Upgrade & Data Model Consolidation	150129	0	94.4	7	Active	O
ECNC04	Municipal Maps and Reports	150134	0	30.6	31.7	Active	O
ECNC05	Milsoft IVR Upgrade	150135	0	10.9	1.8	Closed 12/2015	O
ECNC06	Enhancements for Third Party Attachments-ODI Plant Records	150136	0	17	0	Active	O
ECNC07	MV90xi Upgrade From v2.0 SP1 to v5.0	150137	0	31.2	24	Active	O
ECNC08	CIS, MDMS and Interfaces Internal Control - 2015	150139	0	231	0	Active	O
ECNC09	General Software Enhancements	150143	0	9.9	10.7	Active	O
ECNC10	EETS Enhancements 2015	150169	0	82.8	8.6	Active	O
ECNC11	2015 Cyber Security Enhancements	150170	0	17.2	0	Active	O
ECOC01	Two Way Radio Replacements	140114	0		0	Closed 2/2015	O
ECOC02	2014 INFRASTRUCTURE	140126	0		1.5	Closed 3/2015	O
ECOC03	2014 AMI/SCADA Cyber Project	140128	0	42.8	1	Closed 12/2015	O
ECOC04	AMI Version Update and PLX Functionality	140129	0	27	-0.2	Closed 12/2015	O
ECOC05	OMS Web Map Improvements	140130	0		0	Closed 2/2015	O
ECOC06	Desktop Client Management	140131	0	22.6	2.4	Closed 3/2015	O
ECOC07	Upgrade Generator Interconnection Database	140141	0	19.6	-16.2	Active	O
ECOC09	24 Hour Damage Assessment/Field Restoration	140146	0	60.1	36.6	Active	O
ECOC10	General Software Enhancements	140152	0	17.5	0	Closed 3/2015	O
ECOC11	Vehicle GIS/Garmin Overlay	140177	0	12.7	0.3	Active	O
ECOC12	Enhancemements to Critical Financial Control Systems	140178	0		4.6	Closed 3/2015	O
ECOC13	EETS Enhancements	140179	0		2.2	Closed 3/2015	O
ECOC99	Electric Inspections	140145	0		2.4	Closed 10/2015	O
		Sub-Totals:	0	979.7	191.2		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABC00	Overhead Line Extensions		66.4		-2	Active	C

Electric Category	2015
Growth	
Customer Additions (C)	880,200
Subtotal Growth	880,200
Non-Growth	
Reliability (R)	69,000
Maintenance Replacement (M)	4,036,800
Mandated (H)	15,300
System Improvement (I)	2,525,100
Other (O)	934,800
Subtotal Non-Growth	7,581,000
Total	8,461,200
	8,461,200
	0

Budget Category	
Annual Requirements Blankets	**2015**
T&D Improvements	1,328,600
New Customer Additions	490,900
Outdoor Lighting	108,000
Emergency & Storm Restoration	544,000
Billable work	314,300
Transformers	648,000
Meters	228,800
Sub-Totals:	**3,662,600**
Distribution	
Overhead Line Extensions over $20,000	30,100
Underground Line Extensions over $20,000	54,700
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	15,300
Distribution Pole Replacements	674,100
Specific Projects: Distribution	591,400
Sub-Totals:	**1,365,600**
Substation	
Specific Projects: Substation	2,976,700
Sub-Totals:	**2,976,700**
Communications	**335,800**
Tools, Shop, Garage	**52,800**
Laboratory	**48,400**
Office	**600**
Structures	**18,700**
Distribution Totals:	**8,461,200**

CONSTRUCTION BUDGET 2015 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DABC02	250 Pleasant St-Concord Hospital-relocate pole	150162	0		-2	Active	
DACC00	Overhead Line Extensions - Carryover		8.1		32.1	Completed 9/2015	C
DACC01	158 Canterbury Rd Chichester-OH & URD Line Ext-Billable	140160	0	14.7	-0.5	Closed 12/2015	
DACC03	170 South Rd Salisbury, Four Pole OH Line Extension-Billable	140174	0	9.9	31.3	Closed 12/2015	
DACC04	34 Boyce Rd Canterbury, OH to URD Line Extension-Billable	140175	0		1.4	Closed 4/2015	
DBBC00	Underground Line Extensions		108.7		59.6	Active	C
DBBC01	Stonesled Farms Ph 2 Lewis Ln Bow-urd line ext	150150	0	33.6	28.6	Active	
DBBC02	273 Old Loudon Rd 3 ph primary urd line ext	150151	0	18	24.5	Active	
DBBC03	Triangle Park Dr 3 ph primary urd line ext	150152	0	31.7	20.6	Active	
DBBC04	4 Thibeault Dr Bow3 ph line primary urd line ext	150153	0	52.6	19.1	Active	
DBBC05	12 Cross St Penacook Sing Ph Urd Line Ext-Billable	150154	0	13	-3.6	Active	
DBBC06	The Woods of BowDev-Parson's Way Ph2 urd line ext	150155	0	13	-5.3	Active	
DBBC07	115 Appleton St Concord-OH to Urd-Billable	150158	0	3.9	-2.3	Active	
DBBC08	121 Water St-OH to Urd-Non-billable	150164	0	5	0	Cancelled 11/2015	
DBBC09	121 Water St Boscawen-OH to Urd-Billable	150163	0	5	-27.8	Active	
DBBC10	121 Water ST Boscawe-OH to Urd Billable	150167	0	46.4	11.9	Cancelled 10/2015	
DBBC11	34 Reserve Pl-Sing Ph Urd Line Ext	150174	0	5.4	-5.9	Active	
DBCC00	Underground Line Extensions, Carryover		13.6		-4.9	Completed 9/2015	C
DBCC01	341 Mountain Rd Concord-Primary Underground Line Ext	140137	0		6.2	Closed 1/2015	
DBCC02	69 Dover Rd -3 ph upgrade	140151	0		1.4	Completed 1/2015	
DBCC04	Nickerson Dr-Oxbow Bluff Sub Divi Ph 2B Line Extension	140181	0	15	24.9	Closed 9/2015	
DBCC06	replacing old primary urd with new	13276	0		-37.4	Closed 3/2015	
DBCC11	3ph line ext to a 500KVA pad for service upgrade	13288	0		0	Completed 1/2015	
DCBC00	Street Light Projects		8.5			Active	M
DCCC00	Street Light Projects - Carryover		0.6			Completed 3/2015	M
DDBC00	Telephone Company Requests		33.8			Active	H
DDCC00	Telephone Company Request - Carryover		3.4			Completed 2/2015	H
DEBC00	Highway Projects		106.5		63.8	Active	H
DEBC01	CIP 35 Phase 6 Road Reconstruction - Village St., Penacook	150140	0	53.7	59.7	Closed 12/2015	
DEBC02	Relocate Luminaires for Road Widening - Route 106, Loudon	150144	0		-0.3	Closed 12/2015	
DEBC03	Install Push Brace, Relocate Quad, Remove Pole 18-1A	150160	0		4.4	Active	
DEBC04	Relocate Pole 70 for Hospital Entrance Widening - Pleasant St., Concord	150161	0		0	Active	
DEBC05	Sewalls Falls Bridge-Relocate Pole Line	150173	0		0	Active	
DECC00	Highway Projects, Carryover		6.2		-48.5	Active	H
DECC02	Pole Relocation for Bridge Replacement - State of NH	140168	0		1.3	Active	
DECC03	CIP 35 - Corridor Improvements - Village St., Penacook	13237	0		0.4	Closed 1/2015	
DECC04	Reroute Overhead Main Line 4X1 Around Village of Penacook	13273	0		-11.4	Closed 2/2015	
DECC05	Relocation of Aluminum Light Standards and Removal of Hi Mast	2254	0		-38.7	Active	
DPBC01	Distribution Pole Replacements	150126	603.9	694.2	674.1	Closed 12/2015	M
DPBC02	Install Regulator C37X1 - Hannah Dustin Dr., Concord	150142	47.6	47.6	40	Closed 12/2015	M
DPBC03	Relocate 396X1 tap	150148	167	51.5	132.6	Active	M
DPNC01	Replace Failed Pri UG - Pads 2-3 - Broken Ground Dr., Concord	150131	0	76.4	0	Completed 10/2015	M
DPNC03	November 26 Snow Storm	140183	0		349.8	Closed 5/2015	M
DPOC02	374 Line Tie to 318 Line - Garvins 115kV Project	140169	0		0	Closed 10/2015	M
DPOC03	Install New Underground Switch, 211P, MH25	13218	0	51.6	0	Completed 2/2015	M
DRBC00	Install Fusesaver device on pole # 130 Bow Bog Rd and P# 28 New Orchard Rd. Epsom	150157	267.9		68.9	Active	R
DRBC07	Reliability Improvements on 34.5 KV main lines and Sub Trans lines	150168	0	91.8	68.9	Active	
DRCC00	Reliabilty Projects, Carryover		0			Completed 2/2015	R
DROC01	33 Line Remote Fault Indication at Pleasant Street	140148	0	24.5	0.1	Closed 12/2015	R
		Sub-Totals:	1,442.60	1,358.60	1365.6		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEC01	Electric Tools, Shop & Garage normal replacements	150115	13.5	13.5	18.2	Active	O
EAEC02	Purchase and replace Rubber Goods	150122	5	5	3	Closed 12/2015	O
EAEC03	Purchase and Replace Hot Line Tools	150123	4	4	3.4	Active	O
EAEC04	Normal additions & replacement - tools & equipment Metering	150110	7	7	8.2	Active	O
EAEC05	Normal Replacement and Additions Substation Tools	150119	7	7	7.3	Active	O
EAEC06	Purchase Bierer ST800 Service Tester	150124	2.4	2.4	2.7	Completed 4/2015	O
EEOC01	NH ESCC RTU Replacement	13293	0	42	0	Active	O
		Sub-Totals:	38.9	81	42.8		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOC01	Purchase tools for new bucket truck # 25	140176	0	5	0	Closed 12/2015	O
EAOC02	Tools, Shop & Garage - Normal Additions and Replacements	140122	0	21	7.2	Closed 12/2015	O
EAOC03	Purchase and Replace Rubber Goods	140123	0	5	2.2	Completed 2/2015	O
EAOC04	Purchase and Replace Hot Line Tools	140124	0		0.6	Closed 2/2015	O
		Sub-Totals:	0	31	10		

Electric Category	2015

Budget Category

CONSTRUCTION BUDGET 2015 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBC01	Lab Equipment - Normal Additions and Replacements	150111	7	7	6.6	Active	O
EBBC02	Purchase Meter Shop Test Station	150112	38	38	39.4	Closed 12/2015	O
EBOC01	Lab Equipment - Normal Additions and Replacements	140120	0		2.4	Closed 2/2015	O
	Sub-Totals:		45	45	48.4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEC01	Office Furniture and Equipment	150125	6	6	0.6	Active	O
	Sub-Totals:		6	6	0.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOC01	Office Furniture & Equipment-Normal Additions and Replacements	140116	0		0	Closed 2/2015	O
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBC01	Normal Improvements to Capital Facility	150113	15	15	18.7	Active	O
GPCC01	CAPITAL - Relocate SCADA Equipment	13248	13	20.6	0	Active	O
GPCC02	Electrical systems and life safety upgrades	13243	32	46.3	0	Active	O
GPOC01	Nomal Improvemnts to Capital facility	140113	0		0	Closed 2/2015	O
	Sub-Totals:		60	81.9	18.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBC01	West Concord 2H1 & 2H2 - Eliminate AC Tripping	150138	23.2	23.2	0	Active	O
SPBC02	Purchase- Maintenance Reporting Database for Substations	150130	31.2	31.2	22.3	Completed 11/2015	O
SPBC03	Crushed Stone in Substations	150121	23.6	23.6	7.3	Completed 11/2015	O
SPBC04	Replace Bridge Street Transfer Trip - PSNH Garvins Rebuild		77.5			Active	O
SPCC01	Broken Ground - Site Evaluation, Permitting, Preliminary Survey	140144	1,300.00	11,297.70	2,498.20	Active	I
SPCC02	Transformer 7T1 Replacement at Bow Junction and Purchase Spare Transformer	140161	372.3	518.7	332.1	Active	O
SPNC02	Replace Regulator on 1H3 Phase B	150146	0	25.2	13	Active	O
SPNC03	Replace Regulator on 3H2 Phase B	150147	0	26.2	11.6	Active	O
SPNC04	Replace Failed Recloser at Substation	150149	0	36.2	17.4	Active	O
SPNC05	Replace Failed Motor Operator on the 374J4 Switch	150156	0	17.8	0	Active	O
SPNC06	Replace Failed 1H1 and 2H2 Regulators	150166	0	46.4	0	Active	O
SPNC07	Replace Failed Regulator on Dover Rd Chichester	150171	0	40.2	0	Active	O
SPNC10	SPU 3000 Failures during Snowstorm	140184	0	30	10.1	Completed 5/2015	O
SPOC02	Replace Failed Cap Bank, RTU and Regulators due to a Fault	140133	0	123.5	35.4	Active	O
SPOC03	Purchase SPU for failed Bow Junction Unit	140164	0	14	10	Completed 2/2015	O
SPOC04	Purchase SPU for Failed Bridge Street Collector	140166	0		0	Closed 1/2015	O
SPOC05	Replace Faulted 396J2 Switch Lightning Arresters	140180	0	22.8	0	Completed 1/2015	O
SPOC06	Langdon St. Cap and Pin Insulators	13219	0		19.3	Closed 4/2015	O
	Sub-Totals:		1,827.70	12,276.50	2,976.70		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBC01	Replace pickup #54		0			Completed 6/2015	O
FEBC02	Replace Electric Manager pickup #14		0			Completed 4/2015	O
FEBC03	Replace plow/stockroom vehicle #52		0			Completed 5/2015	O
	Sub-Totals:		0	0	0		
	Grand Totals:		6,698.40	20,641.80	8,461.20		

Electric Category	2015

Budget Category

CONSTRUCTION BUDGET 2015 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABE15	2015 Electric T&D	151000	1,558.50	1,507.20	1,220.90	Active	M
BABE16	Electric T&D Improvements	161000	0		1.2	Active	M
BACE15	Electric T & D	141000	94.3	1,581.40	39.3	Closed 12/2015	M
BBBE15	2015 New Customer Additions	151001	469.9	469.6	541.6	Active	C
BBBE16	New Customer Additons	161001	0		0	Active	C
BBCE15	New Customer Additions	141001	17.5	416.1	8.6	Active	C
BCBE15	2015 Outdoor Lighting	151002	136.7	162.7	212.5	Active	M
BCBE16	Outdoor Lighting	161002	0		0.2	Active	M
BCCE15	Outdoor Lighting	141002	5.2	292.8	8.5	Closed 12/2015	M
BDBE15	2015 Emergency & Storm	151003	454.1	484.5	456.8	Active	M
BDBE16	Billable Work	161004	0		0	Active	M
BDCE15	Emergency & Storm	141003	15.7	400.8	-51.1	Active	M
BEBE15	2015 Billable Work	151004	455.6	390.1	311.3	Active	M
BECE15	Billable Work	141004	24.7	400.1	-104.3	Active	M
BFBE15	2015 Transformer Purchases-Company	151005	55.5	201.1	185.2	Active	I
BFBE16	2016 Transformer Purchases-Company	161005	0		0	Active	I
BFCE15	Transformer Purchase-Company	141005	0		0	Active	I
BGBE15	2015 Transformer Purchases-Customer	151006	1,171.80	1,171.30	1,177.20	Active	C
BGBE16	2016 Transformer Purchases-Customer	161006	0		0	Active	C
BGCE15	Transformer Purchase-Cust Req-URD	141006	29.7		51.4	Active	C
BHBE15	2015 Meter Purchases-Company	151008	151.8	151.8	141.7	Active	M
BHBE16	2016 Meter Purchases-Company	161008	0		0	Active	M
BHCE15	Meter Purchase-Company	141008	0		0.3	Completed 1/2015	C
BIBE15	2015 Meter Purchases-Customer	151007	178.4	178.4	208.3	Completed 12/2015	C
BIBE16	2016 Meter Purchases-Customer	161007	0		0	Active	C
	Sub-Totals:		4,819.60	7,807.90	4,409.60		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEE01	AMI Equipment, Normal Replacements	151037	10.3	12.8	23.2	Active	O
ECEE02	Two Way Radio Replacements	151018	3	3	0	Active	O
ECEE03	Replace and Upgrade Electric SCADA Master		147.9			Cancelled 3/2015	O
EECE01	Replace Seabrook Marsh RTU	13193	31	20.4	0	Active	O
	Sub-Totals:		192.3	36.1	23.2		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECOE01	AMI - Guinea Switching PLX Permanent	141035	0	94.6	1.3	Completed 11/2015	O
ECOE02	Two Way Radio Replacements	141018	0		0	Closed 3/2015	O
ECOE04	Replace AMI SPU and Cell Modem	141034	0	9.3	0	Completed 11/2015	O
	Sub-Totals:		0	103.9	1.3		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABE00	Overhead Line Extensions - New Projects		93.6		33.5	Active	C
DABE01	Single Phase, Overhead Line Ext., Hunt Rd., Kingston	151034	0		24	Closed 10/2015	
DABE02	Three Phase, O/H Line Ext., 31-33 Ocean Blvd., Hampton	151053	0	22.1	17.9	Closed 8/2015	
DABE03	Single Phase, Overhead Line Ext., 218 Haverhill Rd, East Kingston	151099	0	8.5	-8.4	Active	
DACE00	Overhead Line Extensions, Carryover		17.7		0	Active	C
DBBE00	Underground Line Extensions - New Projects		272.2		456.9	Active	C
DBBE01	Single Phase, URD Line Ext., 376 Winnacunnet Rd.	151033	0		39.7	Closed 8/2015	
DBBE02	Three Phase, URD Line Ext., 27 Chestnut St.	151044	0	44.1	-12.7	Active	
DBBE03	Three Phase, URD Line Ext., Mill Rd., Kingston	151048	0	5.3	54.7	Active	
DBBE04	Upgrade Three Phase Service, 44 Greenough Rd.	151051	0		2.1	Closed 10/2015	
DBBE05	Three Phase, URD Line Ext., 56 Linden St., Exeter	151052	0		33.1	Closed 8/2015	
DBBE06	Three Phase, URD Line Ext., 712 Lafayette Rd., Seabrook	151054	0	8.2	11.5	Closed 12/2015	
DBBE07	Three Phase, URD Line Ext., 14-26 N St., Hampton	151055	0	58.8	85	Active	
DBBE08	Single Phase, URD Line Ext., 22 Marshall Rd., Kingston	151057	0	87.7	54.9	Active	
DBBE09	Single Phase, URD Line Ext., 382 Exeter Rd., Hampton	151059	0		13.2	Closed 10/2015	
DBBE10	Three Phase, URD Line Ext., 128 Ashworth Ave., Hampton	151062	0	53.7	44	Closed 12/2015	
DBBE11	Single Phase, URD LIne Ext., 2 Hampton Rd., Exeter	151063	0	76	18.8	Active	
DBBE12	Single Phase, URD Line Ext., 94 Black Snake Rd., Seabrook	151068	0	30	1.8	Active	
DBBE13	Three Phase, URD Line Ext., 172 Main St., Atkinson, Phase 1	151069	0	69.8	92	Active	
DBBE14	Single Phase, URD Line Ext., off Hall Place, Exeter - Charron Circle	151070	0	28.5	25.1	Closed 12/2015	

Electric Category	2015
Growth	
Customer Additions (C)	2,732,100
Subtotal Growth	2,732,100
Non-Growth	
Reliability (R)	539,900
Maintenance Replacement (M)	3,270,600
Mandated (H)	999,300
System Improvement (I)	7,070,600
Other (O)	332,100
Subtotal Non-Growth	12,212,500
Total	14,944,600
	14,944,600
	0

Budget Category	2015
Annual Requirements Blankets	**2015**
T&D Improvements	1,261,400
New Customer Additions	550,200
Outdoor Lighting	221,200
Emergency & Storm Restoration	405,700
Billable work	207,000
Transformers	1,413,800
Meters	350,300
Sub-Totals:	**4,409,600**
Distribution	
Overhead Line Extensions over $20,000	33,500
Underground Line Extensions over $20,000	711,200
Street Light Projects	3,500
Telephone Company Requests	1,003,100
Highway Projects	(3,800)
Distribution Pole Replacements	635,900
Specific Projects: Distribution	2,249,700
Sub-Totals:	**4,633,100**
Substation	
Specific Projects: Substation	5,797,900
Sub-Totals:	**5,797,900**
Communications	**24,500**
Tools, Shop, Garage	**58,400**
Laboratory	**6,800**
Office	**100**
Structures	**14,200**
Distribution Totals:	**14,944,600**

CONSTRUCTION BUDGET 2015 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DBBE15	Relocate Three Phase Primary Underground, 7 Alumni Dr, Exeter	151077	0		1.6	Closed 10/2015	
DBBE16	Single Phase, URD Line Ext., 86 Woodland Rd., Hampton	151078	0	26.9	-10.3	Active	
DBBE17	Single Phase, URD Line Ext., off Hillcrest Ave., Plaistow - Snow's Brook, PH 2	151082	0	7.7	8.3	Closed 12/2015	
DBBE18	Three Phase, URD Line Ext., 15 Industrial Way, Atkinson	151085	0	22.1	4.6	Active	
DBBE19	Three Phase, URD Line Ext., London Ln, Seabrook	151086	0	11.3	7.5	Closed 12/2015	
DBBE20	Three Phase, URD Line Ext., 377 Ocean Blvd, Hampton	151087	0	35.8	40.9	Active	
DBBE21	Single Phase, URD Line Ext., off Patriots Rd., Strahtam	151088	0	30.1	8.7	Active	
DBBE22	Single Phase, URD Line Ext., off Smith Corner Rd., Plaistow	151089	0	37.9	22.6	Active	
DBBE23	Three Phase, URD Line Ext, Sterling Hill, Exeter - Building 8	151090	0	7	-9.8	Active	
DBBE24	Single Phase, URD Line Ext., Wild Pasture Rd., Kensington	151091	0	19.9	-2.4	Active	
DBBE25	Three Phase, URD Line Ext., 146 Main St., Plaistow	151092	0		-63.6	Active	
DBBE26	Single Phase, URD Line Ext., off North Main St., Newton	151093	0	31.1	-1.3	Active	
DBBE27	Single Phase, URD Line Ext., 109 High St., Stratham	151094	0	32.4	-8.6	Active	
DBBE28	Single Phase, URD Line Ext., 372 Exeter Rd., Hampton	151096	0	11.5	0.1	Active	
DBBE29	Single Phase, URD Line Ext., off Sweet Hill Rd., Plaistow	151098	0		-4.9	Active	
DBCE00	Underground Line Extensions, Carryovers		206.1		254.3	Active	C
DBCE01	Three Phase, URD Line Ext, 580 Winnacunnet Rd, Hampton	141036	0	46.9	5.4	Closed 10/2015	
DBCE02	Three Phase, URD Line Ext., 5-9 Plaistow Rd, Plaistow	141037	0	26.2	-1.2	Closed 2/2015	
DBCE03	Single Phase, URD Line Ext, Phase 5 of Sargent Woods	141038	0		0	Completed 10/2015	
DBCE04	Three Phase, URD Line Ext., 600 Lafayette Rd., Seabrook	141042	0	122.9	-3.9	Completed 8/2015	
DBCE05	Three Phase, URD Line Ext., 275 Ocean Blvd., Hampton	141045	0		30.1	Closed 3/2015	
DBCE06	Single Phase, URD Line Ext., off Hillcrest Dr., Plaistow	141048	0		0	Active	
DBCE07	Three Phase, URD Line Ext., off Kelley Road, Plaistow	141059	0		11.3	Closed 7/2015	
DBCE08	Single Phase, URD Line Ext., Jean Dr., off Gove Rd., Seabrook	141060	0	18.1	18.4	Closed 7/2015	
DBCE09	Three Phase, URD Line Ext., 100 Ledge Rd., Seabrook	141061	0		11.7	Closed 7/2015	
DBCE10	Three Phase, URD Line Ext., One Meeting Place, Exeter	141063	0		52.2	Closed 7/2015	
DBCE12	Three Phase, URD Line Ext., 10 Puzzle Ln., Newton	141067	0		6	Closed 3/2015	
DBCE13	Single Phase, URD Line Ext., 22 Cottage Rd., Kensington	141070	0	24.2	44.6	Closed 12/2015	
DBCE14	Single Phase, URD Line Ext. Sargent Woods, Newton, Phase 6	141072	0		21	Closed 3/2015	
DBCE15	Three Phase, URD Line Ext., Sterling Hill, Bldg 7, Exeter	141075	0	3.6	7.7	Closed 12/2015	
DBCE16	Three Phase, URD Line Ext., 7 Puzzle Ln., Newton	141076	0	19.5	17	Active	
DBCE17	Single Phase, URD Line Ext., 7 State Rt 125, Phase 2	141077	0		39.9	Closed 10/2015	
DBCE18	Three Phase, URD Line Ext., 700 Lafayette Rd, Seabrook	13151	0	194.2	5.2	Closed 12/2015	
DBCE19	Single Phase, URD Line Ext., off Rt 125, Kingston	2165	0		-11.3	Closed 2/2015	
DCBE00	Street Light Projects		44.6		3.5	Active	M
DCBE01	Installation of Street Lighting, Provident Way, Lafayette Rd, Seabrook	151060	0		0.1	Closed 12/2015	
DCBE02	Installation of Street Lighting, Beckman Woods, Seabrook	151079	0	3.1	3.4	Closed 12/2015	
DCBE03	Installation of URD Secondary & Street Light, State Rt 125, Plaistow - 10044G	151084	0	0.6	0	Active	
DCCE00	Street Light Projects, Carryover		0			Active	M
DDBE00	Telephone Company Requests		0		0	Active	H
DDCE00	Telephone Requests, Carryover		876.2		1,003.10	Active	H
DDCE01	3353 Line Relocation, State Rt. 101, Hampton	141047	0	1,080.00	1,003.10	Active	
DEBE00	Highway Projects		124.3		-2.1	Active	H
DEBE03	Relocation of Poles, Lafayette Rd., Seabrook	151081	0		-2.1	Active	
Dec-00	Highway Projects, Carryover		0		-1.7	Active	H
DECE01	Relocation of Highway Light	141079	0		-1.7	Active	
DPBE01	Distribution Pole Replacements (REP)	151009	635.3	635.3	635.9	Closed 12/2015	M
DPBE02	Upgrade Stard Road Tap	151066	341.7	230	151.6	Active	M
DPBE03	Rebuild Country Pond Road to Three-Phase	151035	363.7	363.7	274.2	Closed 9/2015	I
DPBE04	Reconductor Portsmouth Ave, Seabrook Beach	151030	215.8	310	306.1	Closed 9/2015	I
DPBE05	Reconductor Portions of 2X3, 23X1 and 15X1	151010	399.5	399.5	210.9	Closed 6/2015	I
DPCE01	Winnacunnet Road Tap - Install Regulation	141021	245.1	386.1	0	Active	I
DPCE02	Replace the 03341 and the 3352 Reclosers at Wolf Hill	13161	64.4	154.6	43.1	Active	M
DPNE01	Convert Marshall Road, Kingston to 7.97 kV	151036	0	116.8	76.1	Closed 7/2015	I
DPNE02	Convert Ashworth Ave to 8 kV, Circuit 3W4	151041	0	170	119.9	Active	I
DPNE05	Relocate Green Hill Road Stepdowns and Conversion , Exeter	151065	0	70	59.8	Closed 12/2015	I
DPNE06	Replace Three Phase Failed Primary Underground Cable, Chase's Way, Seabrook	151071	0	50.9	51	Completed 9/2015	M
DPNE07	Rebuild and Convert Maple Ave and Main Street, Plaistow - Circuits 5H1/5X3 (new)	151072	0	376.2	156.7	Active	I
DPNE08	Replace Three Phase Failed Primary Underground Cable, 340 Lafayette Rd, Hampton	151073	0	55	54.8	Closed 12/2015	M
DPNE09	Improve Voltage along Wentworth Street, Exeter	151074	0	75	53.6	Completed 9/2015	M
DPNE11	Reconstruct Overhead Pole Line, Highland Ave., Hampton	151097	0	85	16	Active	M
DPNE25	SnowStorm - November 26	141081	0		24.1	Completed 10/2015	M
DPOE01	Distribution Pole Replacement	141010	0		0	Completed 1/2015	M

Electric Category	2015

Budget Category

CONSTRUCTION BUDGET 2015 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPOE02	Replace Direct Buried Underground Facilities, 32 Industrial Dr., Exeter	141055	0	52.6	0	Completed 1/2015	M
DPOE03	Reconductor Fourteen (14) Pole Line Sections Along New Zealand Rd., Seabrook	141073	0	131.5	111.9	Closed 2/2015	I
DRBE00	Reliability Projects		502.9		530.9	Active	R
DRBE04	New Boston Road Tap - Install Reclosers	151043	0	302	214.6	Active	
DRBE05	Replace manually operated switches with automated switches, 3343 and 3354 Lines	151056	0	285	174.1	Active	
DRBE07	Install Motor Operated Air Breaks on 3362 & 3351 lines, RTU and SCADA	151058	0	150	142.3	Active	
DRCE00	Hampton S/S - Install Breakers 3342, 3353 and 3348 Lines		59.7		9	Active	R
DRCE01	Hampton S/S - Install Protective Devices on 3342, 3353 and 3348	13170	0	645.1	9	Active	
DROE02	3341 Line and 3352 Line Remote Fault Indication at Exeter Switching	141066	0	24.5	0	Closed 3/2015	R
	Sub-Totals:		4,462.90	7,374.90	4633.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEE01	Tools, Shop & Garage - Normal Additions and Replacements	151023	13.5	13.5	14	Active	O
EAEE02	Purchase and Replace Rubber Goods	151024	5	5	4.4	Active	O
EAEE03	Purchase and Replace Hot Line Tools	151025	3.5	3.5	3.6	Active	O
EAEE04	Normal additions & replacement - tools & equipment Metering	151012	7	7	8.2	Active	O
EAEE05	Normal Additional Substation Tools	151026	7	7	6.4	Active	O
EAEE06	Purchase/Replace Tooling for New Bucket Truck #8	151031	7	7	8.6	Active	O
EAEE07	Purchase/Replace Tooling for New Digger Truck #17	151032	3.5	3.5	0.4	Active	O
	Sub-Totals:		46.5	46.5	45.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOE01	Normal Additions and Replacements of Tools & Equipment	141016	0	17	8.6	Closed 9/2015	O
EAOE02	Purchase and Replace Rubber Goods	141017	0		1.5	Closed 2/2015	O
EAOE03	Purchase and Replace Hot Line Tools	141019	0		0	Closed 2/2015	O
EAOE04	Normal additions & replacement - tools & equipment Meter Department	141024	0		0.9	Closed 2/2015	O
EAOE05	Normal Tools Purcahase and Replacement Substation	141028	0		0	Closed 2/2015	O
EAOE06	Purchase Oil Filtration Unit	141029	0		1.8	Closed 1/2015	O
	Sub-Totals:		0	17	12.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBE01	Lab Equipment - Normal Additions and Replacements	151013	7	7	6.6	Active	O
EBOE01	Lab Equipment - Normal Additions and Replacements	141025	0		0.2	Closed 2/2015	O
	Sub-Totals:		7	7	6.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEE01	Office Furniture and Equipment	151021	6	6	0.1	Active	O
	Sub-Totals:		6	6	0.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOE01	Office Furniture and Equipment	141023	0		0	Closed 2/2015	O
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBE01	Normal Improvements to Seacoast Facility	151016	15	15	12.6	Active	O
GPBE02	Physical Security Facility Upgrades & Additions	151019	35	35	0	Active	O
GPCE01	Electric system/life safety upgrades	13146	40	51.6	1.6	Active	O
GPOE01	Normal improvements to Seacoast Facility	141015	0		0	Closed 3/2015	O
	Sub-Totals:		90	101.6	14.2		

Electric Category	2015		Budget Category

CONSTRUCTION BUDGET 2015 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBE01	Crushed Stone in Substations	151027	24.5	24.5	13.2	Active	O
SPBE02	Guinea 18C2 and 18C3 - Replace Switches and Unground	151011	141.8	188.8	87.4	Active	O
SPCE01	Kingston Substation-System Supply	13184	5,135.00	12,705.60	5,569.80	Active	I
SPNE01	Replace Gasket on 13.8KV Low Side Bushing	151015	0		31.3	Closed 3/2015	O
SPNE02	Replace Regulator on 7X2 Phase C	151067	0	33.6	16	Active	O
SPNE03	Build New 5X3 Distribution Circuit Position in Plaistow Substation	151076	0	556.1	60.1	Active	O
SPOE01	Replace 3360 and 3371 Breakers at Guinea Sw/S	13148	0		0	Closed 1/2015	O
SPOE02	Replace Transformer Oil in 22T1	141058	0		0	Closed 1/2015	O
SPOE03	Replace Failed SPU Unit at 3347 Tap	141065	0		0	Closed 1/2015	O
SPOE04	Replace Failed SPU at Timberlane Substation	141069	0		0	Closed 1/2015	O
SPOE05	Replace SPU Collector at Guinea Switch on Bus A	141071	0		10	Closed 3/2015	O
SPOE06	SPU 3000 Failure at Seabrook Substation	141080	0		10.1	Closed 3/2015	O
		Sub-Totals:	5,301.30	13,508.50	5,797.90		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBE01	Replace Bucket Truck #8		0			Completed 12/2015	O
FEBE02	Replace Digger Truck #17		0			Completed 12/2015	O
FEBE03	Replace Pickup Truck #24		0			Completed 10/2015	O
		Sub-Totals:	0	0			
		Grand Totals:	14,925.50	29,009.50	14,944.60		

Electric Category	2015		Budget Category

CONSTRUCTION BUDGET 2016 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABC16	Electric T&D Improvements	160100	976.6	1,138.20	1,106.80	Active	M
BABC17	Electric T & D Improvements	170100	0		0	Active	M
BACC16	2015 Electric T & D	150100	30	1,225.00	44.5	Completed 12/2016	M
BAOC16	T & D Improvements	140100	0	1,032.70	-7.9	Closed 3/2016	M
BBBC16	New Customer Additions	160101	286.7	294.9	337.2	Active	C
BBBC17	New Customer Additions	170101	0		0	Active	C
BBCC16	2015 New Customer Additions	150101	29.5	475	43.1	Closed 7/2016	C
BCBC01	Best Ave Boscawen Elementary School-Install Pole & OL	160144	0		2.5	Completed 12/2016	C
BCBC16	Outdoor Lighting	160102	101.3	143.6	145.6	Active	M
BCBC17	Outdoor Lighting	170102	0		0	Active	M
BCBC19	Outdoor Lighting 2017	17002	0			Active	M
BCCC15	Outdoor Lighting	140102	0		0	Closed 3/2016	M
BCCC16	2015 Outdoor Lighting	150102	4	132	2.7	Closed 4/2016	M
BDBC16	Emergency & Storm Restoration	160103	573.4	500	467.6	Active	M
BDBC17	Emergency & Storm Restoration	170103	0		0	Active	M
BDCC16	2015 Emergency & Storm	150103	11.8	574.3	-70.6	Completed 5/2016	M
BDOC16	Emergency & Storm	140103	0	622.3	0	Closed 3/2016	M
BEBC16	Billable Work	160104	210.5	285	315.4	Active	M
BEBC17	Billable Work	170104	0		0	Active	M
BECC16	2015 Billable Work	150104	8.9	281.8	-65.9	Completed 7/2016	M
BEOC16	Billable Work	140104	0	191.6	13.3	Closed 3/2016	M
BFBC16	2016 Transformer Purchases-Company	160105	106.6	60	29.4	Active	I
BFBC17	2017 Transformer Purchases - Company	170105	0		0	Active	I
BFCC16	2015 Transformer Purchases-Company	150105	0		0	Closed 5/2016	I
BGBC16	2016 Transformer Purchases-Customer	160106	620.6	619.2	551.4	Active	C
BGBC17	2017 Transformer Purchases - Customer	170106	0		0	Active	C
BGCC16	2015 Transformer Purchases-Customer	150106	13.7	647.8	30.5	Closed 8/2016	C
BHBC16	2016 Meter Purchases-Company	160108	83.1	133	107.2	Active	M
BHBC17	2017 Meter Purchases - Company	170108	0		0	Active	M
BHOC16	2015 Meter Purchases-Company	150108	0		0	Closed 2/2016	M
BIBC16	2016 Meter Purchases-Customer	160107	141.7	208	195.2	Active	C
BIBC17	2017 Meter Purchases - Customer	170107	0		0	Active	C
BIOC16	2015 Meter Purchases-Customer	150107	0		0	Closed 2/2016	C
		Sub-Totals:	3,198.50	8,564.40	3,248.00		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEC01	Two way radio replacements	160115	5	5	2.7	Active	O
ECEC02	AMI Equipment - Unanticipated Replacements	160123	21.5	21.4	29.6	Active	O
EECC02	Replace and Upgrade Electric SCADA Master	150133	17.4	221.5	16.3	Completed 3/2016	O
		Sub-Totals:	43.9	247.9	48.6		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNC01	2016 IT Infrastructure	160124	0	145.9	50.7	Active	O
ECNC02	GPS OMS - Interface	160126	0	3.5	3.5	Active	O
ECNC03	First Responder - Municipal Trouble Reporting App	160133	0	17.2	18.2	Active	O
ECNC04	2016 Cyber Security Enhancements	160137	0	9.7	0.6	Active	O
ECNC05	Unify Workforce Management System	160142	0	18.5	15.9	Active	O
ECNC06	ITRON MVRS Upgrade	160145	0	9.4	4.2	Active	O
ECNC08	General Software Enhancements	160150	0	16.5	3.3	Active	O
ECNC09	Upgrade Critical Integration/Interface Jobs	160164	0	7.9	0	Active	O
ECNC10	DPU ORP System	160171	0	25.5	24.2	Active	O
ECNC12	MV-90 xi TCIP Network Functionality and License	150176	0	11.5	11.5	Completed 8/2016	O
ECOC01	Two Way Radio Replacements	150114	0	4	0	Completed 4/2016	O
ECOC02	AMI Equipment, Unanticipated Replacements	150120	0	43.5	0	Completed 3/2016	O
ECOC04	2015 Infrastructure	150127	0		2.5	Closed 5/2016	O
ECOC05	Electric Inspections	150128	0	52	6.3	Active	O
ECOC06	GIS Version Upgrade & Data Model Consolidation	150129	0	94.4	44.1	Active	O
ECOC07	Upgrade Generator Interconnection Database	140141	0	19.6	14.1	Active	O
ECOC08	Municipal Maps and Reports	150134	0		0	Active	O
ECOC09	24 Hour Damage Assessment/Field Restoration	140146	0	60.1	7.3	Active	O
ECOC10	Enhancements for Third Party Attachments-ODI Plant Records	150136	0	17	0	Active	O
ECOC11	Vehicle GIS/Garmin Overlay	140177	0		0	Completed 8/2016	O
ECOC12	General Software Enhancements	150143	0	9.9	14.3	Active	O
ECOC13	EETS Enhancements 2015	150169	0	9.9	24.8	Active	O
ECOC14	2015 Cyber Security Enhancements	150170	0	17.2	0.4	Active	O
		Sub-Totals:	0	593.3	245.9		

Electric Category	2016
Growth	
Customer Additions (C)	1,463,600
Subtotal Growth	1,463,600
Non-Growth	
Reliability (R)	201,800
Maintenance Replacement (M)	2,896,400
Mandated (H)	700,300
System Improvement (I)	5,929,400
Grid Modernization (G)	0
Other (O)	470,100
Subtotal Non-Growth	10,198,000
Total	11,661,600
	11,661,600
	0

Budget Category	2016
Annual Requirements Blankets	**2016**
T&D Improvements	1,143,400
New Customer Additions	382,800
Outdoor Lighting	148,300
Emergency & Storm Restoration	397,000
Billable work	262,800
Transformers	611,300
Meters	302,400
Sub-Totals:	**3,248,000**
Distribution	
Overhead Line Extensions over $20,000	42,000
Underground Line Extensions over $20,000	263,700
Street Light Projects	(400)
Telephone Company Requests	-
Highway Projects	700,300
Distribution Pole Replacements	694,900
Specific Projects: Distribution	216,800
Sub-Totals:	**1,917,300**
Substation	
Specific Projects: Substation	6,119,400
Sub-Totals:	**6,119,400**
Communications	**294,500**
Tools, Shop, Garage	**66,900**
Laboratory	**6,300**
Office	**2,200**
Structures	**7,000**
Distribution Totals:	**11,661,600**

CONSTRUCTION BUDGET 2016 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
NUMBER	DESCRIPTION	NUMBER	AMOUNT	AMOUNT	AMOUNT	STATUS	
	DISTRIBUTION ELECTRIC						
DABC00	Overhead Line Extensions		68.4		42.2	Active	C
DABC01	75 New Rd Canterbury-2 Pole OH Line Ext-Billable	160125	0	6.2	8.4	Active	
DABC02	Center Rd L# 44 Chichester-OH Line Ext-Non-Billable	160129	0	10.7	18.8	Closed 12/2016	
DABC03	5 Pleasant View Ave-One P OH Line Ext	160155	0			Active	
DABC04	Concord Hospital-Langley Parkway Line Relocation	160156	0		-0.7	Closed 12/2016	
DABC05	102 Woodhill Rd Bow-3 pole OH line ext-Billable	160157	0	10.3	15.5	Completed 11/2016	
DABC07	283 Shaker Rd Concord-One Pole Line Ext-Billable	160167	0	5.8	2.7	Active	
DABC08	53 South Bow Rd-OH Line Extension -Billable	160168	0	9.3	-3.4	Active	
DACC00	Overhead Line Extensions - Carryover		4.8		-0.2	Completed 11/2016	C
DACC01	250 Pleasant St-Concord Hospital-relocate pole	150162	0		2	Closed 3/2016	
DACC02	195 N Main St Boscawen -install 3 25kVA transf for 3 ph serv	150175	0		-2.2	Completed 11/2016	
DBBC00	Underground Line Extensions		111.4		224.6	Active	C
DBBC01	7 Penacook St Penacook-Wasterwater Treatment Plant-Billable	160127	0	7.2	-0.5	Active	
DBBC02	Tremont St Boscawen-California Fields-Primary urd line ext-Billable	160128	0	46.4	59.8	Active	
DBBC03	Julie Dr Concord-urd sub division-Billable	160134	0	41.6	38.7	Active	
DBBC04	250 Pleasant St-Urd Line Extension for OL's	160140	0		0.2	Closed 12/2016	
DBBC05	103 West Parish Rd-Underground Line Ext-Non-Billable	160139	0	4.6	8.2	Active	
DBBC08	121 Water St-OH to Urd-Non-billable	150164	0		0	Cancelled 1/2016	
DBBC09	121 Water St Boscawen-OH to Urd-Billable	150163	0		27.8	Cancelled 2/2016	
DBBC12	State of NH Liquor Commission 50 Storrs St-3 ph Line Ext-Billable	160143	0	3.5	9	Active	
DBBC13	The Woods of Bow Dev-Parson's Way Phase III-urd line ext	160146	0	9.2	5.9	Closed 12/2016	
DBBC14	94 Manchester St-Concord Key Collision-urd line ext-Billable	160147	0	39.5	45.9	Completed 11/2016	
DBBC15	20 Broken Bridge Rd Concord-INATGAS-1 p 3ph urd line ext-nonbillable	160152	0	95.2	20.5	Active	
DBBC16	Plum St Concord-Primary urd line ext	160153	0	1.3	0.7	Completed 11/2016	
DBBC17	Goldenrod Ln Bow-primary urd line ext	160154	0	1.8	1.8	Closed 12/2016	
DBBC18	1 Knox Rd-Bow Safety Complex 3 ph urd primary line extension	160161	0	10.4	6.8	Active	
DBCC00	Underground Line Extensions, Carryover		13.4		39.1	Active	C
DBCC01	Stonesled Farms Ph 2 Lewis Ln Bow-urd line ext	150150	0	33.6	-1.1	Closed 3/2016	
DBCC02	273 Old Loudon Rd 3 ph primary urd line ext	150151	0	18	-11.3	Closed 3/2016	
DBCC03	Triangle Park Dr 3 ph primary urd line ext	150152	0	31.7	2.1	Closed 9/2016	
DBCC04	4 Thibeault Dr Bow3 ph line primary urd line ext	150153	0	52.6	20	Closed 3/2016	
DBCC05	12 Cross St Penacook Sing Ph Urd Line Ext-Billable	150154	0	13	3.6	Active	
DBCC06	The Woods of BowDev-Parson's Way Ph2 urd line ext	150155	0	13	13.3	Closed 8/2016	
DBCC07	115 Appleton St Concord-OH to Urd-Billable	150158	0	3.9	7.4	Closed 5/2016	
DBCC08	121 Water ST Boscawe-OH to Urd Billable	150167	0	5	-4.2	Closed 10/2016	
DBCC09	34 Reserve Pl-Sing Ph Urd Line Ext	150174	0	5.4	9.3	Closed 12/2016	
DCBC00	Street Light Projects		8.5		-0.4	Active	M
DCBC01	Stickney Ave Concord-Relocating Parking OL's	160136	0		-0.4	Closed 12/2016	
DCCC00	Street Light Projects, Carryover		0			Completed 2/2016	M
DDBC00	Telephone Company Requests		35.9			Active	H
DDCC00	Telephone Company Request - Carryover		3.4			Completed 1/2016	H
DEBC00	Highway Projects		82.3		558.8	Active	H
DEBC01	Relocate OH to UG Along S Main St., Concord	160132	0	76	0	Completed 1/2016	
DEBC02	TIGER Main Street Project-Pleasant St to Thompson St Concord	160141	0		540.6	Active	
DEBC03	1 Knox Rd Bow-Bow Safety Complex-Relocate Primary-Billable	160162	0	1.7	20.2	Active	
DEBC04	Relocate Pole 70 for Hospital Entrance Widening - Pleasant St., Concord	150161	0		0	Cancelled 1/2016	
DEBC05	Exit 17 off I-93 Concord/Canterbury -Repair Electr pull box	160170	0		-2	Active	
DECC00	Highway Projects, Carryover		7.9		141.5	Active	H
DECC01	106 Airport Rd-NewOL's Banks Chevorlete	150172	0		25.1	Closed 8/2016	
DECC02	Install Push Brace, Relocate Quad, Remove Pole 18-1A	150160	0		-4.3	Closed 11/2016	
DECC03	Sewalls Falls Bridge-Relocate Pole Line	150173	0		138.4	Active	
DECC04	Pole Relocation for Bridge Replacement - State of NH	140168	0		-4	Closed 12/2016	
DECC05	Relocation of Aluminum Light Standards and Removal of Hi Mast	2254	0		-13.8	Closed 10/2016	
DPBC01	Distribution Pole Replacement	160111	579.7	625.5	694.9	Closed 12/2016	M
DPBC02	New Subtransmission Lines - Broken Ground to Hollis	160158	487.5	897	0	Active	I
DPBC07	Transpose 374 & 375 Lines out of Garvins		141.8			Cancelled 4/2016	I
DPBC11	Manhole improvements		100.2			Cancelled 10/2016	M
DPCC01	Relocate 396X1 tap	150148	99.9		17	Closed 10/2016	M
DPNC01	Replace Failed UG Cable - MH 25 to School Street. Concord	160166	0	44.9	0	Active	M
DPNC02	Replace Failed UG Cable - MH 24 to MH 25 - N State St., Concord	160172	0	47.8	0	Active	M
DPNC89	Best Ave Boscawen Elementary School-Install Pole & OL	160144	0		-2	Active	C
DPOC01	Distribution Pole Replacements	150126	0		0	Closed 10/2016	M
DPOC02	Replace Failed Pri UG - Pads 2-3 - Broken Ground Dr., Concord	150131	0		0	Cancelled 1/2016	M
DPOC03	Install New Underground Switch, 211P, MH25	13218	0		0	Closed 11/2016	I
DRBC00	Reliability Projects		388.9		171.2	Active	R
DRBC07	URD Cable injection project Middlebury St	160163	0	225.1	171.2	Active	
DRCC00	Reliabilty Projects, Carryover		0			Completed 2/2016	R
DROC01	Install Fusesaver device on pole # 130 Bow Bog Rd and P# 28 New Orchard Rd. Epsom	150157	0	9.2	6.6	Closed 3/2016	R
DROC02	Reliability Improvements on 34.5 KV main lines and Sub Trans lines	150168	0	91.8	24	Closed 10/2016	R
		Sub-Totals:	2,133.90	2,498.00	1917.3		

Electric Category	2016

Budget Category

CONSTRUCTION BUDGET 2016 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEC01	Tools, Shop & Garage, Normal replacements	160116	13.5	13.5	16.8	Active	O
EAEC02	Purchase and replace rubber goods	160117	5	5	4.3	Active	O
EAEC03	Purchase and replace Hot Line Tools	160118	3.3	3.3	2.7	Active	O
EAEC05	Purchase new Tracemaster Dig Safe Locating Machine	160120	3	3	3.4	Completed 3/2016	O
EAEC06	Purchase new stick saw for truck # 23	160119	1.8	1.8	1.1	Active	O
EAEC07	Purchase Non-Entry Manhole rescue system	160131	2	2.3	2.4	Completed 6/2016	O
EAEC08	Normal additions & replacement - tools & equipment Metering	160112	7	7	6.4	Active	O
EENC01	Purchase grounding mat for Mobile substation	160151	0	23	22.2	Active	O
EEOC01	NH ESCC RTU Replacement	13293	0		0	Closed 11/2016	O
		Sub-Totals:	35.6	58.9	59.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EACC01	Purchase tools for new Bucket Truck # 25	160165	5	5	7.1	Active	O
EAOC01	Electric Tools, Shop & Garage normal replacements	150115	0	13.5	0	Completed 1/2016	O
EAOC02	Purchase and replace Rubber Goods	150122	0	5	0	Completed 1/2016	O
EAOC03	Purchase and Replace Hot Line Tools	150123	0		0.3	Closed 11/2016	O
EAOC04	Normal additions & replacement - tools & equipment Metering	150110	0		0.2	Closed 11/2016	O
EAOC05	Normal Replacement and Additions Substation Tools	150119	0		0	Closed 3/2016	O
EAOC06	Purchase Bierer ST800 Service Tester	150124	0		0	Closed 11/2016	O
		Sub-Totals:	5	23.5	7.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBC01	Lab Equipment - Normal Additions and Replacements	160113	7	7	5.9	Active	O
EBOC01	Lab Equipment - Normal Additions and Replacements	150111	0		0.4	Closed 11/2016	O
		Sub-Totals:	7	7	6.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEC03	Office Furniture and Equipment-Replacements	160121	6	6	2.2	Active	O
		Sub-Totals:	6	6	2.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOC01	Office Furniture and Equipment	150125	0		0	Closed 11/2016	O
		Sub-Totals:	0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBC01	Normal Improvements to Capital Facility	160114	12	12	7	Active	O
GPCC01	CAPITAL - Relocate SCADA Equipment	13248	13	20.6	0	Active	O
GPCC02	Electrical systems and life safety upgrades	13243	32	46.3	0	Active	O
GPOC01	Normal Improvements to Capital Facility	150113	0		0	Closed 11/2016	O
		Sub-Totals:	57	78.9	7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBC01	Hollis S/s - Upgrades to Accomodate Broken Ground	160159	195	1,462.50	0	Active	I
SPBC02	Replace Battery Bank	160122	32.6	46.4	48.2	Active	O
SPCC01	Broken Ground - Site Evaluation, Permitting, Preliminary Survey	140144	6,175.00	12,620.00	5,897.50	Active	I
SPCC02	Replace Bridge Street Transfer Trip - PSNH Garvins Rebuild		56.1			Cancelled 4/2016	O
SPCC03	Transformer 7T1 Replacement at Bow Junction and Purchase Spare Transformer	140161	25	616.2	2.5	Closed 12/2016	I
SPNC01	Replace Failed 7C1 Cap Bank	160130	0		35.9	Completed 8/2016	O
SPNC02	Replace transformer 13.8kV bushings	160135	0		31.5	Completed 10/2016	M
SPOC01	West Concord 2H1 & 2H2 - Eliminate AC Tripping	150138	0		9.1	Closed 11/2016	O
SPOC02	Purchase- Maintenance Reporting Database for Substations	150130	0	31.2	0	Completed 3/2016	O
SPOC03	Crushed Stone in Substations	150121	0		0	Closed 3/2016	O
SPOC06	Replace Regulator on 1H3 Phase B	150146	0		11.3	Closed 2/2016	M

Electric Category	2016

Budget Category

CONSTRUCTION BUDGET 2016 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
SPOC07	Replace Regulator on 3H2 Phase B	150147	0		0	Closed 11/2016	M
SPOC08	Replace Failed Recloser at Substation	150149	0		0	Closed 10/2016	M
SPOC09	Replace Failed Motor Operator on the 374J4 Switch	150156	0		7.9	Closed 11/2016	M
SPOC10	Replace Failed 1H1 and 2H2 Regulators	150166	0		30.8	Closed 11/2016	M
SPOC11	Replace Failed Regulator on Dover Rd Chichester	150171	0	40.2	40.6	Closed 11/2016	M
SPOC12	SPU 3000 Failures during Snowstorm	140184	0	30	0	Completed 10/2016	M
SPOC13	Replace Failed Cap Bank, RTU and Regulators due to a Fault	140133	0		4.1	Completed 8/2016	M
SPOC14	Purchase SPU for failed Bow Junction Unit	140164	0	14	0	Completed 3/2016	O
		Sub-Totals:	6,483.70	14,860.40	6119.4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBC01	Replace Bucket #25		0			Completed 12/2016	O
FEBC02	Replace pickup 41		0			Completed 6/2016	O
FEBC03	Replace pickup 40		0			Completed 6/2016	O
		Sub-Totals:	0	0			
		Grand Totals:	11,970.50	26,938.30	11,661.60		

Electric Category	2016

Budget Category

CONSTRUCTION BUDGET 2016 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABE16	Electric T&D Improvements	161000	1,563.00	1,556.70	1,516.60	Active	M
BABE17	Electric T & D Improvements	171000	0		0.6	Active	M
BACE15	Electric T & D	141000	0		0	Closed 3/2016	M
BACE16	2015 Electric T&D	151000	74.3	1,507.20	-30.7	Active	M
BBBE16	New Customer Additons	161001	478.7	526.6	463.5	Active	C
BBBE17	New Customer Additions	171001	0		4.1	Active	C
BBCE15	New Customer Additions	141001	0		0	Closed 3/2016	C
BBCE16	2015 New Customer Additions	151001	18.9	550.5	6.4	Closed 10/2016	C
BCBE16	Outdoor Lighting	161002	276.5	274.6	233.9	Active	M
BCBE17	Outdoor Lighting	171002	0		0	Active	M
BCCE15	Outdoor Lighting	141002	0		0	Closed 3/2016	M
BCCE16	2015 Outdoor Lighting	151002	7	219.8	7.3	Active	M
BDBE16	Emergency & Storm Restoration	161003	423.4	396.9	430.6	Active	M
BDBE17	Emergency & Storm Restoration	171003	0		0	Active	M
BDCE15	Emergency & Storm	141003	0	400.8	0	Closed 3/2016	M
BDCE16	2015 Emergency & Storm	151003	16	484.5	-79.1	Active	M
BEBE16	Billable Work	161004	431.6	399.7	337.5	Active	M
BEBE17	Billable Work	171004	0		-14.7	Active	M
BECE16	2015 Billable Work	151004	24.5	390.1	-9.7	Active	M
BEOE16	Billable Work	141004	0	400.1	0	Closed 3/2016	M
BFBE16	2016 Transformer Purchases-Company	161005	55.2	107	100.4	Active	I
BFBE17	2017 Transformer Purchases - Company	171005	0		0	Active	I
BFCE15	Transformer Purchase-Company	141005	0		0	Cancelled 1/2016	I
BFCE16	2015 Transformer Purchases-Company	151005	0		0.5	Closed 8/2016	I
BGBE16	2016 Transformer Purchases-Customer	161006	1,151.30	1,368.20	1,045.90	Active	C
BGBE17	2017 Transformer Purchases - Customer	171006	0		0.1	Active	C
BGCE16	2015 Transformer Purchases-Customer	151006	30.7		35.9	Closed 5/2016	C
BHBE16	2016 Meter Purchases-Company	161008	154.7	180	198.6	Active	M
BHBE17	2017 Meter Purchases - Company	171008	0		0	Active	M
BHOE16	2015 Meter Purchases-Company	151008	0		5	Closed 8/2016	M
BIBE16	2016 Meter Purchases-Customer	161007	179	315	362.5	Active	C
BIBE17	2017 Meter Purchases - Customer	171007	0		0	Active	C
BIOE16	2015 Meter Purchases-Customer	151007	0		-3.9	Closed 5/2016	C
		Sub-Totals:	4,884.80	9,077.70	4,611.30		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEE01	Replace AMI Equipment	161025	21.5	21.4	3.8	Active	O
ECEE02	Two way radio replacements	161015	6	6	2.7	Active	O
		Sub-Totals:	27.5	27.4	6.5		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECOE01	AMI Equipment, Normal Replacements	151037	0		9	Closed 11/2016	O
ECOE02	Two Way Radio Replacements	151018	0		0	Closed 2/2016	O
ECOE03	AMI - Guinea Switching PLX Permanent	141035	0		0	Closed 3/2016	O
ECOE04	Replace AMI SPU and Cell Modem	141034	0	9.3	0	Completed 3/2016	O
		Sub-Totals:	0	9.3	9		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABE00	Overhead Line Extensions - New Projects		83.2		52.6	Active	C
DABE01	Single Phase, Overhead Line Ext., 218 Haverhill Rd., East Kingston	161031	0	8.5	7.9	Closed 5/2016	
DABE02	Single Phase, Overhead Line Ext., 14 Nicholas Rd., Plaistow	161040	0	10	9.9	Closed 9/2016	
DABE03	Three Phase, Overhead Line Ext., 18 Dorre Rd., Kingston	161041	0	10.7	6	Closed 11/2016	
DABE04	Single Phase, Overhead Line Ext., Sarah's Way, Newton	161042	0	17.8	23.8	Closed 9/2016	
DABE05	Three Phase, O/H Line Ext, 1 Lafayette Rd, Hampton	161054	0	4.2	5	Closed 12/2016	
DACE00	Overhead Line Extensions, Carryover		14.5		8.4	Active	C
DACE01	Three Phase, O/H Line Ext., 31-33 Ocean Blvd., Hampton	151053	0		0	Closed 8/2016	
DACE02	Single Phase, Overhead Line Ext., 218 Haverhill Rd, East Kingston	151099	0		8.4	Closed 8/2016	
DBBE00	Underground Line Extensions - New Projects		276.9		346.8	Active	C
DBBE01	Extend Three Phase, 4 Commerce Dr., Atkinson	161030	0	3.9	-3.8	Active	
DBBE02	Single Phase, URD Line Ext., Rollins Farm Rd., Stratham	161032	0	76	82.2	Closed 12/2016	
DBBE03	Single Phase, URD Line Ext., 19 Powder Mill Rd, Exeter	161033	0	3.7	5	Closed 9/2016	
DBBE04	Single Phase, URD Line Ext., 44 Timber Swamp Rd., Hampton	161035	0	26.5	26.7	Closed 11/2016	
DBBE05	Single Phase, URD Line Ext., 12 Heron Dr., Danville	161036	0	8.1	10.4	Closed 11/2016	
DBBE06	Installation of Secondary Underground Service, Drakeside Rd., Hampton	161038	0	9	4.2	Active	
DBBE07	Single Phase, URD Line Ext., 263 Drakeside Rd., Hampton	161039	0	26.4	24.9	Closed 11/2016	

Electric Category	2016
Growth	
Customer Additions (C)	2,567,200
Subtotal Growth	2,567,200
Non-Growth	
Reliability (R)	144,300
Maintenance Replacement (M)	3,463,400
Mandated (H)	660,900
System Improvement (I)	4,763,500
Grid Modernization (G)	0
Other (O)	-73,200
Subtotal Non-Growth	8,958,900
Total	11,526,100
	11,526,100
	0

Budget Category	2016
Annual Requirements Blankets	**2016**
T&D Improvements	1,486,500
New Customer Additions	474,000
Outdoor Lighting	241,200
Emergency & Storm Restoration	351,500
Billable work	313,100
Transformers	1,182,800
Meters	562,200
Sub-Totals:	**4,611,300**
Distribution	
Overhead Line Extensions over $20,000	61,000
Underground Line Extensions over $20,000	591,700
Street Light Projects	(900)
Telephone Company Requests	301,200
Highway Projects	359,700
Distribution Pole Replacements	742,600
Specific Projects: Distribution	1,275,400
Sub-Totals:	**3,330,700**
Substation	
Specific Projects: Substation	3,496,500
Sub-Totals:	**3,496,500**
Communications	**15,500**
Tools, Shop, Garage	**50,300**
Laboratory	**7,100**
Office	**2,100**
Structures	**12,600**
Distribution Totals:	**11,526,100**

CONSTRUCTION BUDGET 2016 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DBBE08	Three Phase, URD Line Ext., 27 Brown Rd., Hampton Falls	161044	0	73.1	20.6	Active	
DBBE09	Three Phase, URD Line Ext., 80 Epping Rd, Exeter - Phase 1	161045	0	58.5	-5	Active	
DBBE10	Three Phase, URD Line Ext., 94 Tide Mill Rd., Hampton	161046	0		41.8	Closed 11/2016	
DBBE11	Three Phase, URD Line Ext., 9 Plaistow Rd., Plaistow	161047	0	10.8	15.5	Closed 12/2016	
DBBE12	Three Phase, URD Line Ext., 18 Continental Dr., Exeter	161048	0	8.9	11.2	Active	
DBBE13	Three Phase, URD Line Ext., 172 Main St., Sawmill Ridge, Phase 2	161049	0	27.4	26.7	Closed 11/2016	
DBBE14	Three Phase, URD Line Ext., 12 Continental Dr., Exeter	161050	0	49	62.6	Active	
DBBE15	Single Phase, URD Line Ext., Chandler Ave, Plaistow - Phase 1	161055	0	29.6	20.8	Active	
DBBE16	Three Phase, URD Line Ext., 603 Lafayette Rd., Seabrook	161057	0	33.3	-17	Active	
DBBE17	Single Phase, URD Line Ext., Folsom St., Exeter	161058	0	33.3	12.9	Completed 1/2016	
DBBE18	Remove O/H Secondary Lines, Install URD Line Ext., String Bridge, Exeter	161060	0		-12.4	Active	
DBBE19	Single Phase, URD Line Ext., Sawmill Ridge, Atkinson, Phase 3	161061	0	33.8	19.6	Closed 1/2016	
DBCE00	Underground Line Extensions, Carryovers		284.2		244.9	Active	C
DBCE01	Three Phase, URD Line Ext, 580 Winnacunnet Rd, Hampton	141036	0		0	Closed 1/2016	
DBCE02	Three Phase, URD Line Ext., Mill Rd., Kingston	151048	0		-49.1	Closed 2/2016	
DBCE03	Three Phase, URD Line Ext., 14-26 N St., Hampton	151055	0	58.8	-20.2	Closed 3/2016	
DBCE04	Single Phase, URD Line Ext., 22 Marshall Rd., Kingston	151057	0	87.7	20.5	Closed 2/2016	
DBCE05	Single Phase, URD LIne Ext., 2 Hampton Rd., Exeter	151063	0	76	9.2	Closed 2/2016	
DBCE06	Single Phase, URD Line Ext., 94 Black Snake Rd., Seabrook	151068	0	30	4	Completed 8/2016	
DBCE07	Three Phase, URD Line Ext., 27 Chestnut St.	151044	0	44.1	61.8	Closed 8/2016	
DBCE09	Single Phase, URD Line Ext., 86 Woodland Rd., Hampton	151078	0	26.9	33.8	Closed 5/2016	
DBCE10	Three Phase, URD Line Ext., 15 Industrial Way, Atkinson	151085	0	22.1	6.8	Closed 2/2016	
DBCE11	Three Phase, URD Line Ext., 377 Ocean Blvd, Hampton	151087	0	35.8	-1.3	Closed 8/2016	
DBCE12	Single Phase, URD Line Ext., off Patriots Rd., Strahtam	151088	0		0.7	Closed 2/2016	
DBCE13	Single Phase, URD Line Ext., off Smith Corner Rd., Plaistow	151089	0	37.9	-9.5	Closed 11/2016	
DBCE14	Three Phase, URD Line Ext, Sterling Hill, Exeter - Building 8	151090	0	7	15.4	Closed 9/2016	
DBCE15	Single Phase, URD Line Ext., Wild Pasture Rd., Kensington	151091	0	19.9	22	Closed 5/2016	
DBCE16	Three Phase, URD Line Ext., 146 Main St., Plaistow	151092	0		63.1	Closed 10/2016	
DBCE17	Single Phase, URD Line Ext., off North Main St., Newton	151093	0	31.1	27.8	Closed 9/2016	
DBCE18	Single Phase, URD Line Ext., 109 High St., Stratham	151094	0	32.4	40.8	Closed 8/2016	
DBCE19	Single Phase, URD Line Ext., 372 Exeter Rd., Hampton	151096	0	11.5	3.1	Closed 2/2016	
DBCE20	Single Phase, URD Line Ext., off Sweet Hill Rd., Plaistow	151098	0	27.3	34.2	Closed 5/2016	
DBCE21	Three Phase, URD Line Ext., 600 Lafayette Rd., Seabrook	141042	0	122.9	0	Active	
DBCE22	Three Phase, URD Line Ext., 7 Puzzle Ln., Newton	141076	0	19.5	-1	Closed 2/2016	
DBCE23	Three Phase, URD Line Ext., Mill Rd., Kingston	151048	0	5.3	0	Closed 2/2016	
DBCE24	Three Phase, URD Line Ext., 172 Main St., Atkinson, Phase 1	151069	0	82.8	-17.2	Closed 5/2016	
DCBE00	Street Light Projects		48.6		0	Active	M
DCBE01	Installation of Street Lighting, Provident Way, Lafayette Rd, Seabrook	151060	0		0	Closed 1/2016	
DCBE02	Installation of Street Lighting, Beckman Woods, Seabrook	151079	0		0	Closed 8/2016	
DCCE00	Street Light Projects, Carryover		0			Active	M
DCOE01	Installation of URD Secondary & Street Light, State Rt 125, Plaistow - 10044G	151084	0	0.6	-0.9	Closed 12/2016	M
DDBE00	Telephone Company Requests		0			Active	H
DDCE00	Telephone Requests, Carryover		304.5		301.2	Active	H
DDCE01	3353 Line Relocation, State Rt. 101, Hampton	141047	0	1,800.00	301.2	Active	
DEBE00	Highway Projects		551.8		366.2	Active	H
DEBE01	Relocate Overhead Facilities, State Rt 125, Plaistow	161009	0		211.4	Closed 11/2016	
DEBE02	Relocate Overhead Facilities, State Rt 1, Seabrook	161010	0	153.5	102.3	Closed 10/2016	
DEBE04	Replacement/Relocation of Poles, Lafayette Rd., Hampton	161051	0	48	52.6	Closed 11/2016	
Dec-00	Highway Projects, Carryover		0		-6.5	Active	H
DECE01	Relocation of Highway Light	141079	0		0	Active	
DECE03	Relocation of Poles, Lafayette Rd., Seabrook	151081	0		-6.5	Closed 2/2016	
DPBE01	Distribution Pole Replacements (REP), Various Locations	161011	640.1	638.7	742.6	Active	M
DPBE02	Relocate Main Line to Route 111, Kingston/Danville - Circuit 22X1	161014	1,399.10	1,830.80	423.6	Active	I
DPBE03	Rebuild Country Pond Road to Three-Phase	151035	0		0	Closed 1/2016	I
DPBE04	Reconductor Portsmouth Ave, Seabrook Beach	151030	0		0	Closed 1/2016	I
DPBE05	Reconductor Portions of 2X3, 23X1 and 15X1	151010	0		0	Completed 1/2016	I
DPCE01	Rebuild and Convert Maple Ave and Main Street, Plaistow - Circuits 5H1/5X3 (new)	151072	55.8	376.2	248.7	Closed 11/2016	I
DPCE02	Winnacunnet Road Tap - Install Regulation	141021	247.3	386.1	156.4	Closed 12/2016	I
DPNE01	Convert Exeter Road and Rebuild Brown Road to Three Phase, Hampton Falls Circuits 2X3 & 18X1	161034	0	92.3	43.7	Active	I
DPNE02	Distribution Upgrades to Accommodate Foss Manufacturing, Hampton	161037	0	525	271.4	Active	I
DPNE04	Replace Overhead Pole Line with Underground Facilities for PEA	161053	0		-207.7	Active	O
DPNE05	Upgrade Neutral Along a Portion of Circuit 5H2, Plaistow	161056	0	83	0	Active	I
DPNE06	Replace H-Structure and Changeover	161059	0	39.4	39.4	Completed 1/2016	M
DPNE09	Improve Voltage along Wentworth Street, Exeter	151074	0		0	Closed 8/2016	I
DPNE25	SnowStorm - November 26	141081	0		0	Completed 1/2016	M
DPOE01	Upgrade Stard Road Tap	151066	0	230	51.5	Active	I
DPOE02	Replace the 03341 and the 3352 Reclosers at Wolf Hill	13161	0	154.6	39.2	Completed 9/2016	M
DPOE04	Replace Three Phase Failed Primary Underground Cable, Chase's Way, Seabrook	151071	0	50.9	0	Closed 12/2016	M
DPOE05	Reconstruct Overhead Pole Line, Highland Ave., Hampton	151097	0	85	47.2	Closed 5/2016	M
DPOE06	Convert Ashworth Ave to 8 kV, Circuit 3W4	151041	0	170	17.7	Closed 10/2016	I

Electric Category	2016

Budget Category

CONSTRUCTION BUDGET 2016 UES Seacoast
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BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPOE07	Replace Direct Buried Underground Facilities, 32 Industrial Dr., Exeter	141055	0		0	Closed 1/2016	M
DRBE00	Reliabilty Projects		0		19.2	Active	R
DRBE05	Replace manually operated switches with automated switches, 3343 and 3354 Lines	151056	0		19.2	Active	
DRCE00	Reliability Carry-overs		221.4		90.3	Active	R
DRCE01	Replace manually operated switches with automated switches, 3343 and 3354 Lines	151056	0	400.5	73.5	Completed 7/2016	
DRCE02	New Boston Road Tap - Install Reclosers	151043	0	302	16.9	Completed 8/2016	
DROE01	Install Motor Operated Air Breaks on 3362 & 3351 lines, RTU and SCADA	151058	0	150	0.1	Active	R
DROE03	Hampton S/S - Install Protective Devices on 3342, 3353 and 3348	13170	0	645.1	34.7	Active	R
		Sub-Totals:	4,127.40	9,503.70	3330.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEE01	Tools, Shop & Garage - Normal Additons and Replacements	161017	13.5	13.5	17.7	Active	O
EAEE02	Purchase and Replace Rubber Goods	161018	5.5	5.5	5.5	Active	O
EAEE03	Purchase and Replace Hot Line Tools	161019	3.5	3.5	2.8	Active	O
EAEE04	Normal additions & replacement - tools & equipment Meter and Services	161012	7	7	0	Active	O
EAEE05	Normal Replacements Tools - Substation	161024	7	7	3.1	Active	O
EAEE06	Purchase/Replace Tooling for Bucket Truck #23	161020	6.5	6.5	1	Active	O
EAEE07	Replace Underground Locating Equipment	161021	3		3.4	Closed 11/2016	O
EEOE01	Replace Seabrook Marsh RTU	13193	0	20.4	0.1	Active	O
		Sub-Totals:	46	63.4	33.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EANE02	Replace Tooling for Bucket Truck #33 - Damaged in Fire	161029	0	6	2.2	Active	O
EAOE02	Purchase and Replace Rubber Goods	151024	0		2.3	Closed 12/2016	O
EAOE03	Purchase and Replace Hot Line Tools	151025	0		1.5	Closed 11/2016	O
EAOE04	Normal additions & replacement - tools & equipment Metering	151012	0		0.2	Closed 11/2016	O
EAOE05	Normal Additional Substation Tools	151026	0		0	Closed 5/2016	O
EAOE06	Purchase/Replace Tooling for New Bucket Truck #8	151031	0		0.3	Closed 12/2016	O
EAOE07	Purchase/Replace Tooling for New Digger Truck #17	151032	0	3.5	7.9	Closed 12/2016	O
EAOE08	Tools, Shop & Garage - Normal Additions and Replacements	151023	0		2.3	Closed 12/2016	O
		Sub-Totals:	0	9.5	16.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBE43	Lab Equipment normal additions and replacements	161027	7	7	6.7	Active	O
EBOE01	Lab Equipment - Normal Additions and Replacements	151013	0		0.4	Closed 11/2016	O
		Sub-Totals:	7	7	7.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEE01	Office Furniture and Equipment-Replacements	161022	3.5	3.5	2.1	Active	O
		Sub-Totals:	3.5	3.5	2.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOE01	Office Furniture and Equipment	151021	0	6	0	Active	O
		Sub-Totals:	0	6	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBE01	Normal Improvements to Seacoast Facility	161013	15	15	12.6	Active	O
GPBE02	Physical Security Facility Upgrades & Additions	151019	0		0	Active	O
GPCE01	Electric system/life safety upgrades	13146	40	51.6	0	Active	O
GPOE01	Normal Improvements to Seacoast Facility	151016	0		0	Closed 11/2016	O
GPOE02	Physical Security Facility Upgrades & Additions	151019	0	35	0	Active	O
		Sub-Totals:	55	101.6	12.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						

Electric Category	2016

Budget Category

CONSTRUCTION BUDGET 2016 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
SPCE01	Kingston Substation-System Supply	13184	2,925.00	12,705.60	2,903.70	Active	I
SPCE02	Build New 5X3 Distribution Circuit Position in Plaistow Substation	151076	280.8	556.1	545.9	Active	I
SPNE01	Guinea 18X1 - Replace Breaker and Relaying	161052	0	237.9	2.6	Active	O
SPOE01	Crushed Stone in Substations	151027	0		4.8	Closed 5/2016	O
SPOE02	Guinea 18C2 and 18C3 - Replace Switches and Unground	151011	0	188.8	36.6	Closed 12/2016	O
SPOE04	Replace Regulator on 7X2 Phase C	151067	0		2.9	Closed 11/2016	O
		Sub-Totals:	3,205.80	13,688.40	3,496.50		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBE01	Replace bucket truck #23		0			Completed 12/2016	O
FEBE02	Replace Pick Up Truck #16		0			Completed 6/2016	O
FEBE03	Replace Pick Up Truck #34		0			Completed 6/2016	O
		Sub-Totals:	0	0			
		Grand Totals:	12,357.00	32,497.40	11,526.10		

Electric Category	2016

Budget Category

CONSTRUCTION BUDGET 2017 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABC17	Electric T & D Improvements	170100	1,113.70	1,188.00	1,385.40	Active	M
BABC18	Electric T&D Improvements	180100	0		0	Active	M
BACC17	Electric T&D Improvements	160100	28.6	1,138.20	118.7	Active	M
BAOC17	2015 Electric T & D	150100	0	1,225.00	0	Completed 1/2017	M
BBBC17	New Customer Additions	170101	312.9	420	471.7	Active	C
BBBC18	New Customer Additions	180101	0		-0.5	Active	C
BBCC17	New Customer Additions	160101	39.6	294.9	11.2	Completed 5/2017	C
BCBC17	Outdoor Lighting	170102	111.8	106.2	102.8	Active	M
BCBC18	Outdoor Lighting	180102	0		0	Active	M
BCCC17	Outdoor Lighting	160102	4.7	143.6	0.2	Completed 5/2017	M
BDBC17	Emergency & Storm Restoration	170103	752.4	753	1,420.30	Active	M
BDBC18	Emergency & Storm Restoration	180103	0		0	Active	M
BDCC17	Emergency & Storm Restoration	160103	13.3	500	-71.1	Completed 10/2017	M
BDOC17	2015 Emergency & Storm	150103	0	574.3	0	Completed 2/2017	M
BEBC01	5 Quincy Rd Concord-Installation of a Pad & wire for Subdiv lot	170143	0		3.3	Closed 11/2017	M
BEBC17	Billable Work	170104	237	237	291.4	Active	M
BEBC18	Billable Work	180104	0		0.1	Active	M
BECC17	Billable Work	160104	9.7	285	-50.3	Completed 9/2017	M
BEOC17	2015 Billable Work	150104	0	281.8	0	Completed 2/2017	M
BFBC17	2017 Transformer Purchases - Company	170105	97.7	50	5.3	Active	I
BFBC18	Transformer Purchases - Company Conversions	180105	0		0	Active	I
BFCC17	2016 Transformer Purchases-Company	160105	0		3.1	Closed 10/2017	I
BGBC17	2017 Transformer Purchases - Customer	170106	644	644	877.5	Active	C
BGBC18	Transformer Purchases - Customer Requirements	180106	0		0	Active	C
BGCC17	2016 Transformer Purchases-Customer	160106	14		147.9	Closed 10/2017	C
BHBC17	2017 Meter Purchases - Company	170108	107.1	107.1	118.9	Active	M
BHBC18	Electric Meter Purchases - Company	180108	0		0	Active	M
BHOC17	2016 Meter Purchases-Company	160108	0		6.9	Closed 4/2017	M
BIBC17	2017 Meter Purchases - Customer	170107	404	404	288.4	Active	C
BIBC18	Electric Meter Purchases - Customers	180107	0		0	Active	C
BIOC17	2016 Meter Purchases-Customer	160107	0		31	Closed 4/2017	C
		Sub-Totals:	3,890.50	8,352.10	5,162.20		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEC01	Two Way Radio Replacements	170114	3	3	1.1	Active	O
ECEC02	AMI Equipment, Unanticipated Replacements	170123	22.5	38	29.1	Active	O
		Sub-Totals:	25.5	41	30.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNC01	Meter data archiving plan	170127	0	9.2	3.1	Active	O
ECNC02	Replace MV-90 communication bank modules	170128	0	6.7	0	Active	O
ECNC04	Electronic Time Sheet-Phase One	170130	0	28.1	4.6	Active	O
ECNC05	2017 Cyber Security Scheduled Replacements	170131	0	50.2	4.3	Active	O
ECNC06	Power Plant Upgrade 10.4 to 2016.1	170132	0	121.9	117.7	Closed 12/2017	O
ECNC07	2017 IT Infrastructure	170136	0	135.5	13.2	Active	O
ECNC08	Electric Inspections Version Upgrade	170151	0	38	0	Active	O
ECNC09	2017 General Software Enhancements	170157	0	16.5	8.4	Active	O
ECNC10	Eintake Miigration	170171	0	40	12.3	Closed 4/2017	O
ECNC11	IS Project Tracker Replacement	170172	0	9.9	1.9	Active	O
ECNC13	Meter Data Management	170177	0		2,398.50	Active	O
ECOC01	Two way radio replacements	160115	0		0	Closed 7/2017	O
ECOC02	24 Hour Damage Assessment/Field Restoration	140146	0	60.1	4.9	Active	O
ECOC03	Two Way Radio Replacements	150114	0		0	Closed 7/2017	O
ECOC04	AMI Equipment, Unanticipated Replacements	150120	0	43.5	-10	Closed 12/2017	O
ECOC05	Electric Inspections	150128	0		0	Closed 4/2017	O
ECOC06	GIS Version Upgrade & Data Model Consolidation	150129	0	94.4	27.7	Active	O
ECOC07	Upgrade Generator Interconnection Database	140141	0	56	2.7	Active	O
ECOC08	General Software Enhancements	150143	0		-13.7	Closed 4/2017	O
ECOC10	2015 Cyber Security Enhancements	150170	0		0	Closed 4/2017	O
ECOC11	AMI Equipment - Unanticipated Replacements	160123	0	29.6	1	Closed 12/2017	O
ECOC12	2016 IT Infrastructure	160124	0		11.9	Closed 4/2017	O
ECOC14	2016 Cyber Security Enhancements	160137	0		0	Closed 4/2017	O
ECOC15	Unify Workforce Management System	160142	0		0.6	Closed 4/2017	O
ECOC16	ITRON MVRS Upgrade	160145	0	9.4	0	Active	O
ECOC17	General Software Enhancements	160150	0	16.5	6	Closed 4/2017	O
ECOC18	Upgrade Critical Integration/Interface Jobs	160164	0		0	Cancelled 6/2017	O
ECOC19	EETS Enhancements 2015	150169	0	33.2	-0.2	Closed 4/2017	O
ECOC20	First Responder - Municipal Trouble Reporting App	160133	0	17.2	102.3	Closed 1/2017	O
ECOC21	Enhancements for Third Party Attachments-ODI Plant Records	150136	0	17	17	Closed 3/2017	O
		Sub-Totals:	0	832.9	2,714.20		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABC00	Overhead Line Extensions		80.7		28.6	Active	C
DABC01	110-118 Loudon Rd Red ArrowDiner- 3ph OH Line Ext-Billable	170112	0		4.8	Completed 12/2017	

Electric Category	2017
Growth	
Customer Additions (C)	1,919,000
Subtotal Growth	1,919,000
Non-Growth	
Reliability (R)	171,700
Maintenance Replacement (M)	4,296,300
Mandated (H)	-477,100
System Improvement (I)	3,959,800
Grid Modernization (G)	0
Other (O)	3,127,600
Subtotal Non-Growth	11,078,300
Total	12,997,300
	12,997,300
	0

Budget Category	
Annual Requirements Blankets	**2017**
T&D Improvements	1,504,100
New Customer Additions	482,400
Outdoor Lighting	103,000
Emergency & Storm Restoration	1,349,200
Billable work	244,500
Transformers	1,033,800
Meters	445,200
Sub-Totals:	**5,162,200**
Distribution	
Overhead Line Extensions over $20,000	38,700
Underground Line Extensions over $20,000	53,100
Street Light Projects	-
Telephone Company Requests	50,200
Highway Projects	(527,300)
Distribution Pole Replacements	751,500
Specific Projects: Distribution	2,199,600
Sub-Totals:	**2,565,800**
Substation	
Specific Projects: Substation	2,158,400
Sub-Totals:	**2,158,400**
Communications	**2,744,400**
Tools, Shop, Garage	**50,600**
Laboratory	**11,500**
Office	**2,300**
Structures	**302,100**
Distribution Totals:	**12,997,300**

CONSTRUCTION BUDGET 2017 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DABC02	41 Tremont St Boscawen-3 ph line extension-Billable	170141	0	15.3	20.2	Closed 12/2017	
DABC03	8 Gordon Rd Bow-3ph OH line Ext-Billable	170165	0	4.1	3.6	Completed 12/2017	
DACC00	Overhead Line Extensions - Carryover		9.1		10.1	Completed 2/2017	C
DACC01	75 New Rd Canterbury-2 Pole OH Line Ext-Billable	160125	0	6.2	0	Completed 1/2017	
DACC02	5 Pleasant View Ave-One P OH Line Ext	160155	0		-1	Closed 6/2017	
DACC03	102 Woodhill Rd Bow-3 pole OH line ext-Billable	160157	0		0	Closed 4/2017	
DACC04	283 Shaker Rd Concord-One Pole Line Ext-Billable	160167	0		0.6	Closed 4/2017	
DACC05	53 South Bow Rd-OH Line Extension -Billable	160168	0		10.5	Closed 4/2017	
DBBC00	Underground Line Extensions		130.1		27	Active	C
DBBC01	79 Dow Rd., Bow - Relocate Riser Pole	180109	0		-9.7	Closed 6/2017	
DBBC02	1113 Route 3A Bow-RYKEL Complex-PrimaryURD Line Ext	170138	0	18.4	-0.8	Active	
DBBC03	The Woods of Bow Dev-Parson's Way Ph III-compl urd line ext-Billable	170146	0	29	20.8	Active	
DBBC04	57 Ryan Rd Bow-3 ph urd line ext	170147	0	8.4	7.4	Closed 12/2017	
DBBC06	Vintage Estates, Sonoma Way Concord-singl ph urd line ext	170156	0	47	-51.6	Active	
DBBC07	6 Dunbarton Center Rd Bow-High Meadows-prim urd to two pads-billable	170162	0	38.4	4.1	Active	
DBBC08	163 N State St Merrimack County Court Primary Extend urd to pad	170169	0	20.2	-19.2	Completed 12/2017	
DBBC09	250 Pleasant St-Concord Hospital Memorial Bld-3 PH Primary urd to 3 ph transf	170170	0		1.1	Active	
DBBC10	76 Mountain Rd Epsom Getaway House-OH & URD Primary Line Extension-billable	170173	0	25.9	66.8	Completed 12/2017	
DBBC11	225 Water St Boscawen-OH to URD primary line ext-Non-Billable	170175	0	11.7	-7.8	Active	
DBBC15	20 Broken Bridge Rd Concord-INATGAS-1 p 3ph urd line ext-nonbillable	160152	0	95.2	1.6	Closed 12/2017	
DBBC17	Sunrise Meadows Senior Housing-Short Falls Rd Epsom urd line ext	170153	0	33	14.2	Active	
DBCC00	Underground Line Extensions, Carryover		14.4		26.1	Completed 11/2017	C
DBCC01	7 Penacook St Penacook-Wasterwater Treatment Plant-Billable	160127	0		5.7	Completed 2/2017	
DBCC02	Tremont St Boscawen-California Fields-Primary urd line ext-Billable	160128	0	46.4	-0.8	Completed 2/2017	
DBCC03	Julie Dr Concord-urd sub division-Billable	160134	0	41.6	5.2	Closed 12/2017	
DBCC04	Peaslee Hill Estates-Summer Ln Urd Line Extension	160138	0		10.9	Closed 6/2017	
DBCC05	12 Cross St Penacook Sing Ph Urd Line Ext-Billable	150154	0	13	-3.9	Completed 2/2017	
DBCC06	State of NH Liquor Commission 50 Storrs St-3 ph Line Ext-Billable	160143	0	3.5	6.9	Completed 2/2017	
DBCC08	Plum St Concord-Primary urd line ext	160153	0		0.8	Closed 4/2017	
DBCC09	1 Knox Rd-Bow Safety Complex 3 ph urd primary line extension	160161	0		1.2	Closed 6/2017	
DCBC00	Street Light Projects		9.3			Active	M
DCCC00	Street Light Projects - Carryover		1.5			Completed 4/2017	M
DDBC00	Telephone Company Requests		39.6		50.2	Active	H
DDBC01	Dunbarton Tel Requested Multiple Pole Replacements	170137	0	40.6	50.2	Completed 7/2017	
DDCC00	Telephone Company Request - Carryover		3.6			Completed 2/2017	H
DEBC00	Highway Projects		0		129.3	Active	H
DEBC01	CIP29 Exit 16 Roundabout - Concord	170140	0	189	113.9	Completed 8/2017	
DEBC02	1317 Route 3A Bow Auto Salvage-Primary urd to new pad	170145	0		0	Cancelled 7/2017	
DEBC04	Pole Relocations for Bridge Replacement Over White Brook	170164	0	13.9	15.4	Active	
DECC00	Highway Projects, Carryover		8.7		-520.9	Completed 2/2017	H
DECC01	TIGER Main Street Project-Pleasant St to Thompson St Concord	160141	0		-520.3	Completed 2/2017	
DECC02	1 Knox Rd Bow-Bow Safety Complex-Relocate Primary-Billable	160162	0	1.7	-2.6	Completed 2/2017	
DECC03	Exit 17 off I-93 Concord/Canterbury -Repair Electr pull box	160170	0		2	Completed 2/2017	
DEOC01	Sewalls Falls Bridge-Relocate Pole Line	150173	0		-135.7	Closed 4/2017	H
DPBC01	Condemned Poles quarter one 2017	170115	696.6	735.1	751.5	Active	M
DPBC02	Replace Chimney and riser	170168	104.8	60	32.4	Active	M
DPBC03	Circuit 6X3: Dunbarton Rd Step-down Replacement and Voltage Regulator Install		56.9			Active	I
DPCC01	New Subtransmission Lines - Broken Ground to Hollis	160158	845	2,750.00	1,871.20	Active	I
DPNC01	Replace Failed UG Cable - Pole 8 - Centerwood Dr., Concord	170148	0	27.9	28.6	Completed 9/2017	M
DPNC02	Replace Failed UG Cable - MH 24 to MH 25 - N State St., Concord	160172	0	47.8	47.6	Closed 7/2017	M
DPNC03	Replaced Failed Primary Cable - Portsmouth St., Concord	170152	0	37.7	0	Completed 9/2017	M
DPOC01	Replace Failed UG Cable - MH 25 to School Street. Concord	160166	0		48.1	Closed 7/2017	M
DRBC00	Reliabilty Projects		232.3		0	Active	R
DRBC01	Bow Junction Substation: Install an Auto Transfer Scheme		0			Cancelled 12/2017	
DRBC02	Circuit 8X3: Install a Fusesaver on Lane Road		0			Active	
DRBC03	Circuit 22W3: Install Sectionalizers on Birchdale Road, Bow	170139	0	10.2	0	Cancelled 6/2017	
DRBC04	374 Line: Install an Autosectionalizing Scheme		0			Cancelled 9/2017	
DRCC00	375 Line Automatic Sectionalizing at Terrill Park		160.6			Cancelled 12/2017	R
DROC01	URD Cable injection project Middlebury St	160163	0	225.1	44.8	Closed 12/2017	R
DROC13	Substation Reliability Improvements at Penacook	170166	0	172	67.6	Active	R
DROC15	Install 430 ft of conduit and 1/0 Al 35KV URD cable	170155	0	53.8	59.3	Completed 10/2017	R
		Sub-Totals:	2,393.20	4,822.00	2565.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEC01	Tools, Shop & Garage - Normal Additions and Replacements	170116	13.5	13.5	17.2	Active	O
EAEC02	Purchase and Replace Rubber Goods	170117	5.5	5.5	1.6	Active	O
EAEC03	Purchase and Replace Hot Line Tools	170118	3.3	3.3	7.1	Completed 11/2017	O
EAEC04	The normal addition and replacement of tools and equipment for the Electric Meter Department.	170110	7	7	7.6	Completed 12/2017	O
EAEC05	Normal additions & replacement - tools & equipment Substation	170122	7	7	9	Active	O
EEOC01	Replace and Upgrade Electric SCADA Master	150133	0	221.5	0	Closed 12/2017	O
EEOC02	Purchase grounding mat for Mobile substation	160151	0	23	0	Closed 12/2017	O
		Sub-Totals:	36.3	280.7	42.5		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						

Electric Category	2017

Budget Category

CONSTRUCTION BUDGET 2017 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
EACC01	Purchase tools for new Bucket Truck # 23	170167	5	5	2.5	Active	O
EAOC01	Purchase and replace Rubber Goods	150122	0		0	Closed 7/2017	O
EAOC02	Normal additions & replacement - tools & equipment Metering	160112	0		0	Closed 7/2017	O
EAOC03	Tools, Shop & Garage, Normal replacements	160116	0		0.4	Closed 7/2017	O
EAOC04	Purchase and replace rubber goods	160117	0		4.1	Closed 7/2017	O
EAOC05	Purchase and replace Hot Line Tools	160118	0		0	Closed 7/2017	O
EAOC06	Purchase new stick saw for truck # 23	160119	0		1.1	Closed 7/2017	O
EAOC07	Purchase new Tracemaster Dig Safe Locating Machine	160120	0		0	Closed 7/2017	O
EAOC08	Purchase Non-Entry Manhole rescue system	160131	0	2.3	0	Completed 1/2017	O
EAOC09	Purchase tools for new Bucket Truck # 25	160165	0	5	0	Closed 12/2017	O
		Sub-Totals:	5	12.3	8.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBC01	Unscheduled Additions & Replacements Lab Instruments	170111	7	7	11.5	Completed 12/2017	O
EBOC01	Lab Equipment - Normal Additions and Replacements	160113	0		0	Closed 7/2017	O
		Sub-Totals:	7	7	11.5		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEC01	Office Furniture & Additions - Normal Additions & Replacements	170120	3.5	3.5	2.3	Active	O
		Sub-Totals:	3.5	3.5	2.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOC01	Office Furniture and Equipment-Replacements	160121	0		0	Closed 7/2017	O
		Sub-Totals:	0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBC01	Normal Improvement Capital DOC	170113	12	12	9.2	Active	O
GPBC02	Replace Roof at Capital DOC	170135	400	400	261.5	Active	O
GPBC03	Roof Hatch		20			Cancelled 3/2017	O
GPCC01	CAPITAL - Relocate SCADA Equipment	13248	13	20.6	13	Active	O
GPCC02	Electrical systems and life safety upgrades	13243	32	46.3	18.4	Active	O
GPOC01	Normal Improvements to Capital Facility	160114	0		0	Closed 7/2017	O
		Sub-Totals:	477	478.9	302.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBC01	Bridge Street - Replace 35kV Line Relaying & Modify RTU		472.8			Cancelled 12/2017	O
SPBC02	Install Stone in Substation	170126	32.7	32.7	16.7	Active	O
SPBC03	Landgon S/S - Replace 374J5 & 375J6	170125	64.4	64.4	0	Active	O
SPCC01	Broken Ground - Site Evaluation, Permitting, Preliminary Survey	140144	1,950.00	12,620.00	1,479.00	Active	I
SPCC02	Hollis S/s - Upgrades to Accomodate Broken Ground	160159	1,267.50	1,462.50	601.2	Active	I
SPNC02	Replace 16H3 Recloser	170134	0	15	15	Closed 12/2017	M
SPNC03	Replaced Failed 2H1 Recloser	170142	0	78.5	0	Active	M
SPNC04	Replace Failed Operating Mechanism on the 13W1 Recloser	170161	0	30.6	31	Active	M
SPNC05	Replace 35kV Bushings on 3T1 at Gulf St S/S	170174	0	47.5	15.5	Active	M
SPOC01	Purchase SPU for failed Bow Junction Unit	140164	0		0	Closed 12/2017	M
SPOC02	SPU 3000 Failures during Snowstorm	140184	0	30	0	Closed 12/2017	M
SPOC03	Purchase- Maintenance Reporting Database for Substations	150130	0	31.2	0	Closed 12/2017	O
SPOC04	Replace Battery Bank	160122	0	46.4	0	Closed 12/2017	O
		Sub-Totals:	3,787.40	14,458.70	2158.4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBC01	Replace pick up truck for Forester		0			Active	
FEBC02	Replace pickup #44		0			Active	
FEBC03	Replace bucket truck #23		0			Active	
FEBC04	Purchase New Reel Trailer		0			Active	
FEBC05	Purchase New Pole Trailer		0			Active	
		Sub-Totals:	0	0			
		Grand Totals:	10,625.40	29,289.10	12,997.30		

Electric Category	2017

Budget Category

CONSTRUCTION BUDGET 2017 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABE17	Electric T & D Improvements	171000	1,631.80	1,638.90	1,849.70	Active	M
BABE18	Electric T&D Improvements	181000	0		0	Active	M
BACE17	Electric T&D Improvements	161000	49.6	1,556.70	28	Active	M
BAOE17	2015 Electric T&D	151000	0	1,507.20	-2.7	Completed 3/2017	M
BBBE17	New Customer Additions	171001	589.7	559.4	504.1	Active	C
BBBE18	NewCustomer Additions	181001	0		-1.3	Active	C
BBCE17	New Customer Additons	161001	14.9	526.6	1.4	Active	C
BCBE17	Outdoor Lighting	171002	276.7	276.8	204.9	Active	M
BCBE18	Outdoor Lighting	181002	0		0	Active	M
BCCE16	2015 Outdoor Lighting	151002	0	219.8	-4.8	Closed 7/2017	M
BCCE17	Outdoor Lighting	161002	7.6	274.6	2.1	Active	M
BCOE17	2015 Outdoor Lighting	151002	0		0	Closed 7/2017	M
BCOE17	2015 Billable Work	151004	0		0	Completed 3/2017	M
BDBE17	Emergency & Storm Restoration	171003	418.4	434.5	673.7	Active	M
BDBE18	Emergency & Storm Restoration	181003	0		0	Active	M
BDCE16	2015 Emergency & Storm	151003	0	484.5	0	Closed 7/2017	M
BDCE17	Emergency & Storm Restoration	161003	17.4	396.9	8.1	Active	M
BDOE17	2015 Emergency & Storm	151003	0		0	Closed 7/2017	M
BEBE17	Billable Work	171004	507	410.1	270.4	Active	M
BEBE18	Billable Work	181004	0		0	Active	M
BECE16	2015 Billable Work	151004	0	390.1	-4	Completed 3/2017	M
BECE17	Billable Work	161004	0	399.7	-30.4	Active	M
BFBE17	2017 Transformer Purchases - Company	171005	135.9	200	138	Active	I
BFBE18	Transformer Purchases - Company	181005	0		0	Active	I
BFOE17	2016 Transformer Purchases-Company	161005	0		2.2	Closed 10/2017	I
BGBE17	2017 Transformer Purchases - Customer	171006	1,157.60	1,154.10	954.3	Active	C
BGBE18	Transformer Purchases - Customer O/H	181006	0		0	Active	C
BGCE17	2016 Transformer Purchases-Customer	161006	32.7		213.7	Closed 10/2017	C
BHBE17	2017 Meter Purchases - Company	171008	192.8	192.8	204	Active	M
BHBE18	Electric Meter - Company	181008	0		0	Active	M
BHOE17	2016 Meter Purchases-Company	161008	0		5.2	Closed 4/2017	M
BIBE17	2017 Meter Purchases - Customer	171007	426.9	426.9	409.4	Active	C
BIBE18	Electric Meter - Customer	181007	0		0	Active	C
BIOE17	2016 Meter Purchases-Customer	161007	0	315	-1.3	Closed 4/2017	C
	Sub-Totals:		5,459.00	11,364.60	5,424.70		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEE01	AMI Equipment, Unanticipated Replacements	171022	22.5	22.5	26.8	Active	O
ECEE02	2 way radio replacements	171014	5	5	0.6	Active	O
EECE01	Replace Seabrook Marsh RTU	13193	36.7	20.4	-4	Cancelled 9/2017	O
	Sub-Totals:		64.1	47.9	23.4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECOE01	Replace AMI Equipment	161025	0		0	Closed 12/2017	O
ECOE02	Two way radio replacements	161015	0	6	0	Closed 10/2017	O
ECOE03	Replace AMI SPU and Cell Modem	141034	0		0	Closed 12/2017	O
	Sub-Totals:		0	6	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABE00	Overhead Line Extensions - New Projects		70.1		39.7	Active	C
DABE02	Three Phase, Overhead Line Ext., Rocks Rd., Seabrook	171029	0		0	Closed 7/2017	
DABE03	Single Phase, Overhead Line Ext., 105 Hilldale Ave., South Hampton	171033	0	3.2	10.1	Closed 12/2017	
DABE04	Single Phase, O/H Line Ext., Lefevre Dr., Kingston	171041	0		7.9	Closed 12/2017	
DABE05	Single Phase, Overhead Line Ext., 129 Depot Rd, East Kingston	171044	0		8.9	Closed 12/2017	
DABE06	Three Phase, Overhead Line Ext., 180 Ashworth Ave., Hampton	171053	0	14.4	11.6	Closed 12/2017	
DABE07	Three Phase, O/H Line Ext., 1 Franklin St., Exeter	171055	0	6.3	3	Active	
DABE08	Single Phase, O/H Line Ext., 158 Epping Rd., Exeter	171061	0	19.6	10.2	Active	
DABE09	Single Phase, O/H Line Ext., 49 Heath St., Newton	171062	0	18.5	-2.6	Active	
DABE10	Single Phase, Overhead Line Ext., 53 Highland Rd., South Hampton	171063	0	6	-9.4	Active	
DACE00	Overhead Line Extensions, Carryover		15.1		0	Active	C
DBBE00	Underground Line Extensions - New Projects		313.4		261.1	Active	C
DBBE01	Three Phase, URD Line Ext., 40 Main St., Exeter	171025	0	19.8	66	Completed 12/2017	
DBBE02	Single Phase, URD Line Ext., 199 South Rd., Kensington	171026	0	11.1	-4.3	Active	
DBBE03	Single Phase, URD Line Ext., Rollins Farm Rd, Stratham - Phase 2	171027	0	25.5	-7.1	Active	
DBBE04	Three Phase, URD Line Ext., 8 Commerce Way, Exeter	171028	0	13.6	15	Closed 12/2017	
DBBE05	Three Phase, URD Line Ext., 147 Lafayette Rd., Seabrook	171031	0	23.6	20.3	Closed 12/2017	
DBBE06	Three Phase, URD Line Ext., 299 Exeter Rd., Hampton	171032	0	43	-3.9	Active	
DBBE07	Single Phase, URD Line Ext., Cowbell Crossing, Atkinson - Phase 4	171034	0	39.6	40.3	Closed 12/2017	
DBBE08	Three Phase, URD Line Ext., Exeter Rd., Hampton18X1	171035	0	32	33.5	Active	
DBBE09	Single Phase, URD Line Ext., Forrest St, Plaistow	171036	0	24.2	23.8	Closed 12/2017	
DBBE10	Single Phase, URD Line Ext., off Centennial St., Seabrook	171037	0	3.2	-3.2	Active	
DBBE11	Three Phase, URD Line Ext., Newfields Rd, Exeter	171038	0	23.9	-5.5	Active	
DBBE12	Single Phase, URD Line Ext., off Stratham Heights Rd., Stratham	171039	0	60.5	43.3	Completed 12/2017	
DBBE13	Three Phase, URD Line Ext., 23 Portsmouth Ave., Stratham	171040	0	14.5	15.6	Closed 12/2017	

Electric Category	2017
Growth	
Customer Additions (C)	2,577,900
Subtotal Growth	2,577,900
Non-Growth	
Reliability (R)	495,300
Maintenance Replacement (M)	4,527,500
Mandated (H)	632,000
System Improvement (I)	2,146,900
Grid Modernization (G)	0
Other (O)	372,500
Subtotal Non-Growth	8,174,200
Total	10,752,100

10,752,100
0

Budget Category	
Annual Requirements Blankets	**2017**
T&D Improvements	1,875,000
New Customer Additions	504,200
Outdoor Lighting	202,200
Emergency & Storm Restoration	681,800
Billable work	236,000
Transformers	1,308,200
Meters	617,300
Sub-Totals:	**5,424,700**
Distribution	
Overhead Line Extensions over $20,000	39,700
Underground Line Extensions over $20,000	457,900
Street Light Projects	-
Telephone Company Requests	618,100
Highway Projects	7,900
Distribution Pole Replacements	770,700
Specific Projects: Distribution	2,730,300
Sub-Totals:	**4,624,600**
Substation	
Specific Projects: Substation	589,600
Sub-Totals:	**589,600**
Communications	**23,400**
Tools, Shop, Garage	**64,500**
Laboratory	**12,400**
Office	**2,700**
Structures	**10,200**
Distribution Totals:	**10,752,100**

CONSTRUCTION BUDGET 2017 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DBBE14	Three Phase URD Line Ext., 21 Blossom Rd., Plaistow	171042	0	12	13.8	Closed 12/2017	
DBBE15	Single Phase, URD Line Ext., Wiggin Way, Stratham	171046	0	14.3	15.9	Completed 12/2017	
DBBE16	Three Phase, URD Line Ext., 29 Academy Ave., Hampton	171047	0	28.8	38.6	Active	
DBBE17	Three Phase, URD Line Ext., 22 Whittier St., Newton	171051	0	33.9	3.3	Active	
DBBE18	Single Phase, URD Line Ext., 97 Portsmouth Ave., Stratham	171052	0	26.1	-9	Active	
DBBE19	Three Phase, URD Line Ext., 277 Water St, Exeter	171054	0	31.5	-32	Active	
DBBE20	Single Phase, URD Line Ext., Osgood Rd., Kensington	171056	0	29.8	-7	Completed 10/2017	
DBBE21	Single Phase, URD Line Ext., Rollins Farm Rd., Stratham - Phase 3	171058	0	41	-16	Active	
DBBE44	Three Phase, URD Line Ext., 11 Plaistow Rd., Plaistow	171043	0	16.6	19.8	Closed 12/2017	
DBCE00	Underground Line Extensions, Carryovers		329.9		196.8	Active	C
DBCE01	Extend Three Phase, 4 Commerce Dr., Atkinson	161030	0		7.5	Closed 6/2017	
DBCE02	Installation of Secondary Underground Service, Drakeside Rd., Hampton	161038	0		3.9	Closed 4/2017	
DBCE03	Three Phase, URD Line Ext., 27 Brown Rd., Hampton Falls	161044	0	73.1	25.9	Active	
DBCE04	Three Phase, URD Line Ext., 80 Epping Rd, Exeter - Phase 1	161045	0	58.5	57	Closed 7/2017	
DBCE05	Three Phase, URD Line Ext., 9 Plaistow Rd., Plaistow	161047	0		0	Closed 1/2017	
DBCE06	Single Phase, URD Line Ext., 94 Black Snake Rd., Seabrook	151068	0	30	1.7	Closed 2/2017	
DBCE07	Three Phase, URD Line Ext., 12 Continental Dr., Exeter	161050	0		6.1	Closed 4/2017	
DBCE08	Single Phase, URD Line Ext., Chandler Ave, Plaistow - Phase 1	161055	0		6.1	Closed 2/2017	
DBCE09	Three Phase, URD Line Ext., 603 Lafayette Rd., Seabrook	161057	0		46.1	Closed 6/2017	
DBCE10	Single Phase, URD Line Ext., Folsom St., Exeter	161058	0		21.7	Closed 6/2017	
DBCE11	Remove O/H Secondary Lines, Install URD Line Ext., String Bridge, Exeter	161060	0		13.3	Closed 2/2017	
DBCE12	Single Phase, URD Line Ext., Sawmill Ridge, Atkinson, Phase 3	161061	0		7.6	Closed 4/2017	
DBCE20	Single Phase, URD Line Ext., off Sweet Hill Rd., Plaistow	151098	0		0	Closed 1/2017	
DCBE00	Street Light Projects		31			Active	M
DCCE00	Street Light Projects, Carryover		0			Active	M
DDBE00	Telephone Company Requests		0			Active	H
DDCE00	Telephone Requests, Carryover		408.5		618.1	Active	H
DDCE01	3353 Line Relocation, State Rt. 101, Hampton	141047	0	2,150.00	618.1	Active	
DEBE00	Highway Projects		143		7.9	Active	H
DEBE01	Town of Exeter - Relocate Poles for Bridge Construction, Rt. 108, Exeter	171059	0	50	7.9	Active	
Dec-00	Highway Projects, Carryover		0			Active	H
DEOE01	Relocation of Highway Light	141079	0		6	Closed 11/2017	H
DPBE01	Distribution Pole Replacement	171024	653.3	780	770.7	Active	M
DPBE02	Reconductor Water Street, Exeter	171030	104.9	175	134.3	Completed 12/2017	I
DPBE03	Circuit 19X3- Convert Newfields Rd, Exeter Waste Water Treatment Plant	171023	358.4	358.4	238.9	Active	I
DPBE04	Replace Primary Metering at Seabrook Nuke Plant	171060	52.1	213.7	52.2	Active	M
DPBE16	Distribution Pole Replacements (REP), Various Locations	161011	0		0	Closed 1/2017	M
DPBE18	Distribution Pole Replacements	181009	0		0	Active	M
DPCE01	Relocate Main Line to Route 111, Kingston/Danville - Circuit 22X1	161014	1,658.00	1,830.80	892.1	Active	I
DPCE02	Distribution Upgrades to Accommodate Foss Manufacturing, Hampton	161037	402.7	630	376.2	Active	I
DPCE03	Convert Exeter Road and Rebuild Brown Road to Three Phase, Hampton Falls Circuits 2X3 & 18X1	161034	112		82.7	Completed 3/2017	I
DPCE04	Replace the 03341 and the 3352 Reclosers at Wolf Hill	13161	0	154.6	19	Completed 1/2017	M
DPCE05	Upgrade Stard Road Tap	151066	11	230	7.8	Closed 12/2017	I
DPCE06	Replace Overhead Pole Line with Underground Facilities for PEA	161053	237.4		211.6	Completed 8/2017	I
DPNE01	Replace Failed Underground Cable, St. Magnus Condo's, Hampton	171050	0	113.7	113.6	Completed 3/2017	M
DPNE02	Wind Storm - March 2, 2017	171057	0	37.5	38.7	Active	M
DPOE03	Upgrade Neutral Along a Portion of Circuit 5H2, Plaistow	161056	0		61.9	Closed 6/2017	M
DPOE04	Replace H-Structure and Changeover	161059	0	39.4	0	Closed 3/2017	M
DRBE00	Reliabilty Projects		413.5		417.8	Active	R
DRBE01	Install Devices with Pulsefinding	171020	0	413.5	417.8	Completed 12/2017	
DRCE00	Replace manually operated switches with automated switches, 3343 and 3354 Lines		30.1		74.8	Active	R
DRCE01	Replace manually operated switches with automated switches, 3343 and 3354 Lines	151056	0	400.5	74.8	Completed 11/2017	
DRCE02	New Boston Road Tap - Install Reclosers	151043	0	302	0	Closed 12/2017	
DROE01	Install Motor Operated Air Breaks on 3362 & 3351 lines, RTU and SCADA	151058	0		2.7	Closed 12/2017	R
DROE03	Hampton S/S - Install Protective Devices on 3342, 3353 and 3348	13170	0	645.1	0	Closed 12/2017	R
		Sub-Totals:	5,344.70	9,322.70	4624.6		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEE01	Tools, Shop & Garage - Normal Additions and Replacements	171016	14	14	18.1	Active	O
EAEE02	Purchase and Replace Rubber Goods	171017	5.5	5.5	6	Active	O
EAEE03	Purchase and Replace Hot Line Tools	171018	3	3	5.7	Active	O
EAEE04	Normal Adds & Repl - Tools Meters & Services	171010	7	7	7.6	Completed 12/2017	O
EAEE05	Normal Additions and Replacement - Tools and Equipment Substation	171021	7	7	8.6	Active	O
EAEE06	Purchase/Replace Tools for Bucket Truck #28	171019	6.5	6.5	0.5	Active	O
		Sub-Totals:	43	43	46.5		

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOE02	Tools, Shop & Garage - Normal Additons and Replacements	161017	0		0	Closed 7/2017	O
EAOE03	Purchase and Replace Rubber Goods	161018	0		0.3	Closed 6/2017	O
EAOE04	Normal additions & replacement - tools & equipment Meter and Services	161012	0	7	0	Cancelled 7/2017	O
EAOE05	Purchase and Replace Hot Line Tools	161019	0		2	Closed 7/2017	O
EAOE06	Purchase/Replace Tooling for Bucket Truck #23	161020	0		6.5	Closed 7/2017	O
EAOE07	Normal Replacements Tools - Substation	161024	0		0.4	Closed 2/2017	O
EAOE08	Replace Tooling for Bucket Truck #33 - Damaged in Fire	161029	0		8.8	Closed 7/2017	O

Electric Category	2017

Budget Category

CONSTRUCTION BUDGET 2017 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	Sub-Totals:		0	7	18		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBE01	This covers unscheduled additions and replacements of lab instruments, test equipment, etc	171011	7	7	11.5	Completed 12/2017	O
EBOE01	Lab Equipment normal additions and replacements	161027	0		0.9	Completed 1/2017	O
	Sub-Totals:		7	7	12.4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEE01	Office Furniture and Equipment	171015	3.5	3.5	2.7	Active	O
	Sub-Totals:		3.5	3.5	2.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOE01	Office Furniture and Equipment-Replacements	161022	0		0	Closed 3/2017	O
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBE01	Normal Improvements to Kensington Facility	171013	13.5	13.5	8.9	Active	O
GPCE01	Electric system/life safety upgrades	13146	40	51.6	1.3	Active	O
GPOE01	Normal Improvements to Seacoast Facility	161013	0		0	Closed 7/2017	O
	Sub-Totals:		53.5	65.1	10.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPCE01	Guinea 18X1 - Replace Breaker and Relaying	161052	237.1	237.9	259.3	Closed 12/2017	O
SPNE01	Replace 19X3 Recloser	171012	0	180	179.5	Completed 11/2017	M
SPNE02	Replace Failed Insulators and Station Service Transformers	171048	0	91	87.7	Closed 12/2017	M
SPOE01	Kingston Substation-System Supply	13184	0		42.5	Closed 11/2017	I
SPOE02	Build New 5X3 Distribution Circuit Position in Plaistow Substation	151076	0	556.1	20.6	Closed 12/2017	I
	Sub-Totals:		237.1	1,065.00	589.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBE01	Replace Pickup Truck #18		0			Active	
FEBE02	Replace Pick up Truck #15		0			Active	
FEBE03	Replace Bucket Truck #28		0			Active	
FEBE04	Replace wire trailer		0			Active	
	Sub-Totals:		0	0			
	Grand Totals:		11,211.90	21,931.70	10,752.1		

Electric Category	2017

Budget Category

CONSTRUCTION BUDGET 2018 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABC18	Electric T&D Improvements	180100	1,294.60	1,294.60	1,425.00	Active	M
BABC19	Electric T&D Improvements	190100	0		0	Active	M
BACC18	Electric T & D Improvements	170100	32.9	1,188.00	-68.7	Completed 12/2018	M
BAOC16	T & D Improvements	140100	0		0	Closed 1/2018	M
BAOC17	2015 Electric T & D	150100	0	1,225.00	-1.8	Closed 1/2018	M
BAOC18	Electric T&D Improvements	160100	0	1,138.20	42.7	Closed 2/2018	M
BBBC18	New Customer Additions	180101	367	375.5	476.1	Active	C
BBBC19	New Customer Additions	190101	0		0	Active	C
BBCC18	New Customer Additions	170101	42	420	36.4	Completed 12/2018	C
BBOC18	New Customer Additions	160101	0	294.9	-9.5	Closed 8/2018	C
BCBC18	Outdoor Lighting	180102	127.4	127.4	129.4	Active	M
BCBC19	Outdoor Lighting	190102	0		0	Active	M
BCCC18	Outdoor Lighting	170102	5.4	106.2	2.1	Completed 3/2018	M
BCOC18	Outdoor Lighting	160102	0	143.6	-2.7	Closed 2/2018	M
BDBC18	Emergency & Storm Restoration	180103	821	821	1,164.20	Active	M
BDBC19	Emergency & Storm Restoration	190103	0		0	Active	M
BDCC18	Emergency & Storm Restoration	170103	14.5	753	-655	Completed 10/2018	M
BDOC17	2015 Emergency & Storm	150103	0	574.3	-1.1	Closed 2/2018	M
BDOC18	Emergency & Storm Restoration	160103	0	500	-53.2	Closed 2/2018	M
BEBC01	5 Quincy Rd Concord-Installation of a Pad & wire for Subdiv lot	170143	0		0	Closed 2/2018	M
BEBC18	Billable Work	180104	257.7	257.7	282.6	Active	M
BEBC19	Billable Work	190104	0		0	Active	M
BECC18	Billable Work	170104	10.6	295	9.5	Completed 12/2018	M
BEOC17	2015 Billable Work	150104	0	281.8	-3.2	Closed 5/2018	M
BEOC18	Billable Work	160104	0	285	-5	Closed 11/2018	M
BFBC18	Transformer Purchases - Company Conversions	180105	81.7	51	1.7	Active	I
BFBC19	Transformer Purchases - Company	190105	0		0	Active	I
BFCC18	2017 Transformer Purchases - Company	170105	0		25.1	Closed 8/2018	I
BGBC18	Transformer Purchases - Customer Requirements	180106	728.4	894	1,426.50	Active	C
BGBC19	Transformer Purchases - Customer	190106	0		0	Active	C
BGCC18	2017 Transformer Purchases - Customer	170106	15.9		1.5	Closed 8/2018	C
BHBC18	Electric Meter Purchases - Company	180108	174.1	174.1	161.6	Active	M
BHBC19	Electric Meter Purchases - Company	190108	0		0	Active	M
BHOC18	2017 Meter Purchases - Company	170108	0		1.2	Closed 8/2018	M
BIBC18	Electric Meter Purchases - Customers	180107	409.8	409.8	415.5	Active	C
BIBC19	Electric Meter Purchases - Customers	190107	0		0	Active	C
BIOC18	2017 Meter Purchases - Customer	170107	0		0	Closed 8/2018	C
		Sub-Totals:	4,383.10	11,610.10	4,800.90		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEC01	Two Way Radio Replacements	180125	3	3	2.7	Active	O
ECEC02	Purchase Radio Recording System	180136	26	26	19.5	Closed 11/2018	O
		Sub-Totals:	29	29	22.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNC01	2018 IT Infrastructure	180120	0	173.5	36.7	Active	O
ECNC02	2018 Interface Enhancements	180132	0	216	157	Active	O
ECNC03	2018 Customer Facing Enhancements	180133	0	280.5	194.5	Active	O
ECNC04	2018 MeterSense Enhancements	180134	0	114	48.2	Active	O
ECNC05	Move e-Intake estimating functionality into GEM	180139	0	30.6	20.2	Active	O
ECNC06	Dev / Staging Refresh	180140	0	13.9	0	Active	O
ECNC07	Legacy Interface Job Rewrite	180141	0	5	3.5	Active	O
ECNC08	WebOps Replacement - Year 1 of 3	180142	0	21.2	26.4	Active	O
ECNC09	General Software Enhancements - 2018	180143	0	19.8	24	Active	O
ECNC10	TESS Replacement	180144	0	8.9	0	Active	O
ECNC11	2018 Cyber Security Enhancements	180146	0	45.6	7.2	Active	O
ECNC12	OMS Regulatory Reports - Carry-over	180147	0	27.5	6.6	Active	O
ECNC13	AMI Command Center Version Upgrade 7.XX	180152	0		9.7	Closed 11/2018	O
ECNC14	Microsoft Exchange Upgrade Carry-Over	180160	0	8.7	4.4	Active	O
ECNC15	Electronic Time Sheet-Phase Two	180162	0	28.1	20.8	Active	O
ECNC16	Universal Payment System (UPS) Reporting	180164	0	4.5	0	Active	O
ECNC72	Microsoft Exchange Upgrade 2007 to 2016	170176	0		0	Closed 8/2018	O
ECOC01	Two Way Radio Replacements	170114	0		0	Closed 5/2018	O
ECOC02	AMI Equipment, Unanticipated Replacements	170123	0		0	Closed 5/2018	O
ECOC03	Meter data archiving plan	170127	0		0.7	Closed 11/2018	O
ECOC04	Replace MV-90 communication bank modules	170128	0	6.7	0	Cancelled 9/2018	O
ECOC05	AMI Command Center Version Upgrade 6.5	170129	0		0	Cancelled 1/2018	O
ECOC06	GIS Version Upgrade & Data Model Consolidation	150129	0	94.4	17.3	Active	O
ECOC07	Upgrade Generator Interconnection Database	140141	0	56	0.6	Active	O
ECOC08	2017 Cyber Security Scheduled Replacements	170131	0		-0.8	Closed 5/2018	O
ECOC09	2017 IT Infrastructure	170136	0		2.3	Closed 5/2018	O
ECOC10	Electric Inspections Version Upgrade	170151	0	38	0	Cancelled 11/2018	O

Electric Category	2018
Growth	
Customer Additions (C)	2,765,400
Subtotal Growth	2,765,400
Non-Growth	
Reliability (R)	252,800
Maintenance Replacement (M)	4,110,500
Mandated (H)	55,000
System Improvement (I)	-394,100
Grid Modernization (G)	0
Other (O)	1,158,400
Subtotal Non-Growth	5,182,600
Total	7,948,000
	7,948,000
	0

Budget Category	
Annual Requirements Blankets	**2018**
T&D Improvements	1,397,200
New Customer Additions	503,000
Outdoor Lighting	128,800
Emergency & Storm Restoration	454,900
Billable work	283,900
Transformers	1,454,800
Meters	578,300
Sub-Totals:	**4,800,900**
Distribution	
Overhead Line Extensions over $20,000	97,300
Underground Line Extensions over $20,000	321,600
Street Light Projects	-
Telephone Company Requests	(4,000)
Highway Projects	59,000
Distribution Pole Replacements	868,000
Specific Projects: Distribution	575,200
Sub-Totals:	**1,917,100**
Substation	
Specific Projects: Substation	373,200
Sub-Totals:	**373,200**
Communications	**637,700**
Tools, Shop, Garage	**55,700**
Laboratory	**5,800**
Office	**7,700**
Structures	**149,900**
Distribution Totals:	**7,948,000**

CONSTRUCTION BUDGET 2018 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
ECOC11	2017 General Software Enhancements	170157	0		8.9	Closed 10/2018	O
ECOC12	Eintake Miigration	170171	0		15.7	Closed 8/2018	O
ECOC13	IS Project Tracker Replacement	170172	0	9.9	7.2	Active	O
ECOC14	24 Hour Damage Assessment/Field Restoration	140146	0		0	Closed 4/2018	O
ECOC15	Electronic Time Sheet-Phase One	170130	0		4.4	Closed 8/2018	O
ECOC20	First Responder - Municipal Trouble Reporting App	160133	0	118.8	0	Closed 1/2018	O
		Sub-Totals:	0	1,321.60	615.5		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABC00	Overhead Line Extensions		67.9		92.2	Active	C
DABC01	Single Phase, O/H Line Ext., Gauthier Dr., Epsom	180117	0		70.6	Closed 11/2018	
DABC02	Three Phase, Temporary O/H Line Ext., 123 Pleasant St., Concord	180126	0	51.1	-0.4	Completed 5/2018	
DABC03	Single Phase, O/H Line Ext., Black Hall Rd , Epsom	180165	0		8.7	Closed 11/2018	
DABC04	Single phase, OH line ext 228 Center Rd. Salisbury - Non-Billable	180175	0	12	35.7	Active	
DABC05	Three phase OH Primary Silver Hills Dr Pembroke	180177	0	6.1	-8.4	Active	
DABC06	Single Phase, O/H Line Extension. High St. Boscawen-Billable	180189	0	23.5	-14	Active	
DACC00	Overhead Line Extensions - Carryover		11.8		5.1	Completed 4/2018	C
DACC02	5 Pleasant View Ave-One P OH Line Ext	160155	0		0	Closed 1/2018	
DACC03	8 Gordon Rd Bow-3ph OH line Ext-Billable	170165	0	4.1	5.1	Closed 12/2018	
DACC04	283 Shaker Rd Concord-One Pole Line Ext-Billable	160167	0		0	Closed 1/2018	
DACC05	53 South Bow Rd-OH Line Extension -Billable	160168	0		0	Closed 1/2018	
DAOC03	75 New Rd Canterbury-2 Pole OH Line Ext-Billable	160125	0	6.2	0	Closed 1/2018	C
DBBC00	Underground Line Extensions		154.1		194	Active	C
DBBC01	79 Dow Rd., Bow - Relocate Riser Pole	180109	0		54	Closed 8/2018	
DBBC02	Single Phase, URD Line Ext., Hoit Rd, Concord	180145	0	28.1	22.8	Active	
DBBC03	Single Phase, URD Line Ext., 131 West Parish Rd., Concord	180148	0	9.3	7.7	Completed 11/2018	
DBBC04	Single Phase, URD Line Ext., Tuscany Village, Riesling Terrace, Penacook	180157	0	28.9	-5.9	Active	
DBBC05	Single Phase, URD Line Ext. - Billable	180158	0		16.2	Closed 11/2018	
DBBC06	Single Phase, URD Line to Two Pad Mounts, High Meadows, 6 Dunbarton Rd., Bow	180159	0		0	Completed 11/2018	
DBBC07	Three Phase, URD Line Ext., 250 Pleasant St., Concord	180167	0	32.6	-3.4	Active	
DBBC08	Three Phase, URD Line Ext., 285-287 Loudon Rd., Concord	180169	0	26.5	-5.9	Active	
DBBC09	Three Phase, URD Line Ext., 289 Loudon Rd., Concord	180170	0	30.7	27.6	Closed 12/2018	
DBBC10	Single Phase, URD Line Ext., Mountain Rd., Concord	180173	0	16.1	14.9	Closed 12/2018	
DBBC11	Three Phase, URD Line Ext., 660 River Rd., Bow - Non Billable	180174	0	24.3	31.2	Completed 12/2018	
DBBC12	Single phase, URD LIne Extens. 33 Elkins Rd, Epsom	180176	0		8.3	Active	
DBBC13	Single Phase URD Primary Line Ext. Fawn Court Bow Non-Billable	180179	0	24.6	-2.4	Active	
DBBC14	Single phase URD Line Ext. Oxbow Bluff -Penacook -Billable	180180	0	28.6	-10.1	Active	
DBBC15	Three Phase URD Line Ext -77 Merrimack St. Penacook-Non Billable	180182	0	21.5	28	Closed 1/2018	
DBBC16	Three Phase URD Line Ext 5-7 S State St. Concord-Non Billable	180183	0	63.8	10.9	Active	
DBCC00	Underground Line Extensions, Carryover		17.1		127.6	Active	C
DBCC01	7 Penacook St Penacook-Wasterwater Treatment Plant-Billable	160127	0		0	Closed 1/2018	
DBCC02	Tremont St Boscawen-California Fields-Primary urd line ext-Billable	160128	0	46.4	-7.5	Closed 12/2018	
DBCC03	The Woods of Bow Dev-Parson's Way Ph III-compl urd line ext-Billable	170146	0		6.8	Closed 5/2018	
DBCC04	1113 Route 3A Bow-RYKEL Complex-PrimaryURD Line Ext	170138	0	18.4	20.7	Closed 12/2018	
DBCC05	Vintage Estates, Sonoma Way Concord-singl ph urd line ext	170156	0	47	4.9	Active	
DBCC06	State of NH Liquor Commission 50 Storrs St-3 ph Line Ext-Billable	160143	0		-13.6	Closed 12/2018	
DBCC07	6 Dunbarton Center Rd Bow-High Meadows-prim urd to two pads-billable	170162	0	38.4	40.1	Closed 12/2018	
DBCC08	163 N State St Merrimack County Court Primary Extend urd to pad	170169	0	20.2	38.8	Closed 12/2018	
DBCC09	250 Pleasant St-Concord Hospital Memorial Bld-3 PH Primary urd to 3 ph transf	170170	0		0.7	Closed 9/2018	
DBCC10	76 Mountain Rd Epsom Getaway House-OH & URD Primary Line Extension-billable	170173	0	25.9	-13.9	Closed 12/2018	
DBCC11	225 Water St Boscawen-OH to URD primary line ext-Non-Billable	170175	0		17.2	Closed 5/2018	
DBCC12	Sunrise Meadows Senior Housing-Short Falls Rd Epsom urd line ext	170153	0	33	33.3	Active	
DCBC00	Street Light Projects		5.2			Active	M
DCCC00	Street Light Projects - Carryover		5.4			Completed 2/2018	M
DDBC00	Telephone Company Requests		22			Active	H
DDCC00	Telephone Company Request - Carryover		2		-4	Completed 2/2018	H
DDCC01	Dunbarton Tel Requested Multiple Pole Replacements	170137	0		-4	Closed 5/2018	
DEBC00	Highway Projects		100.1		74.8	Active	H
DEBC01	Manor & Abbott Road, Concord - Roundabout	180154	0	93.5	74.8	Closed 10/2018	
DECC00	Highway Projects, Carryover		0		-15.8	Completed 8/2018	H
DECC01	TIGER Main Street Project-Pleasant St to Thompson St Concord	160141	0		0	Closed 1/2018	
DECC02	1 Knox Rd Bow-Bow Safety Complex-Relocate Primary-Billable	160162	0		-15.8	Closed 11/2018	
DECC03	CIP29 Exit 16 Roundabout - Concord	170140	0		0	Closed 5/2018	
DECC04	Pole Relocations for Bridge Replacement Over White Brook	170164	0		0	Closed 11/2018	
DEOC01	Sewalls Falls Bridge-Relocate Pole Line	150173	0		0	Closed 1/2018	H
DPBC01	Condemned Poles Distribution	190112	779.5		865.1	Closed 12/2018	M

Electric Category	2018

Budget Category

CONSTRUCTION BUDGET 2018 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPBC02	Replace Man Hole roof with new precast roof	180181	239.4	277.4	50.8	Active	M
DPBC03	Rebuild Low Ave, Concord with Hendrix Construction	180172	102.7	102.7	56.1	Active	M
DPBC04	Replace Direct Burried cable with conduit and 35kv URD Cable	180171	97.2	129.3	126.1	Completed 12/2018	M
DPNC01	Primary Net Metering for the Hydro Dam	180156	0	101.5	10.2	Completed 12/2018	M
DPNC02	May 4th Wind Event	180185	0	130.9	0	Active	M
DPNC03	Wind Event 7-10-18	180187	0	124	0	Active	M
DPNC04	Replace Failed URD Primary Cable and add Pull Box	180188	0	27.2	27.2	Active	M
DPOC01	Condemned Poles quarter one 2017	170115	0	735.1	2.9	Closed 5/2018	M
DPOC02	Replace Chimney and riser	170168	0		0	Closed 12/2018	M
DPOC03	Replaced Failed Primary Cable - Portsmouth St., Concord	170152	0		52	Closed 5/2018	M
DPOC04	New Subtransmission Lines - Broken Ground to Hollis	160158	0		0	Closed 5/2018	I
DRBC00	Reliability Projects		262.7		118	Active	R
DRBC10	Substation Reliability Enhancements at West Concord	180153	0	126	49	Completed 11/2018	
DRBC12	Install Recloser - Pole 60 - Bow Bog Rd., Bow	180163	0	108.8	69	Active	
DROC13	Substation Reliability Improvements at Penacook	170166	0	202.5	134.8	Closed 11/2018	R
DROC15	Install 430 ft of conduit and 1/0 Al 35KV URD cable	170155	0	53.8	0	Closed 9/2018	R
		Sub-Totals:	1,867.00	2,879.90	1917.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEC01	Tools, Shop and Garage, Normal additions and replacements	190113	14		19.2	Closed 12/2018	O
EAEC02	Purchase and Replace Rubber Goods	180128	5.5	5.5	4.2	Active	O
EAEC03	Purchase and Replace Hot Line Tools	180129	3.5	3.5	4.5	Closed 12/2018	O
EAEC04	Normal additions & replacement - tools & equipment Metering	180111	7	7	1.4	Active	O
EAEC05	Purchase new Dig safe locating machine	180150	4.2		3.8	Closed 11/2018	O
EAEC06	Normal Additions and Replacements - Tools and Equipment - Substation	180135	8.5	8.5	8	Active	O
EAEC07	Purchase Bierer ST-800 Service tester	180130	1.4		1.4	Closed 11/2018	O
EAEC08	Purchase Milwaukee battery operated 6 ton crimper	180131	2.8		3.6	Closed 11/2018	O
		Sub-Totals:	46.9	24.5	46.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EACC01	Purchase tools for new Digger truck # 30	180155	5	5	3.1	Active	O
EAOC01	Tools, Shop & Garage - Normal Additions and Replacements	170116	0	13.5	0.8	Closed 10/2018	O
EAOC02	Purchase and Replace Rubber Goods	170117	0	5.5	0.3	Closed 8/2018	O
EAOC03	Purchase and Replace Hot Line Tools	170118	0	3.3	0	Closed 10/2018	O
EAOC04	The normal addition and replacement of tools and equipment for the Electric Meter Department.	170110	0		0	Closed 8/2018	O
EAOC05	Normal additions & replacement - tools & equipment Substation	170122	0		0.3	Closed 8/2018	O
EAOC06	Purchase tools for new Bucket Truck # 23	170167	0	5	5.1	Closed 9/2018	O
EAOC08	Purchase Non-Entry Manhole rescue system	160131	0		0	Closed 8/2018	O
		Sub-Totals:	5	32.3	9.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBC01	Lab Equipment - Normal Additions and Replacements	180112	7	7	5.8	Active	O
EBOC01	Unscheduled Additions & Replacements Lab Instruments	170111	0		0	Closed 8/2018	O
		Sub-Totals:	7	7	5.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEC01	Office Furniture and Equipment	180116	3.5	3.5	7.5	Active	O
		Sub-Totals:	3.5	3.5	7.5		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOC01	Office Furniture & Additions - Normal Additions & Replacements	170120	0		0.2	Closed 8/2018	O
		Sub-Totals:	0	0	0.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBC01	Normal Improvements to Capital Facility	180119	15	15	11.7	Active	O
GPBC03	Physical Security Improvements	180121	12	12	3.1	Active	O
GPBC04	Office & Systems Furniture Reconfigurations	180122	100	100	135.1	Active	O
GPOC01	Normal Improvement Capital DOC	170113	0		0	Closed 8/2018	O
GPOC02	Replace Roof at Capital DOC	170135	0		0	Closed 5/2018	O
GPOC03	CAPITAL - Relocate SCADA Equipment	13248	0		0	Closed 8/2018	O
GPOC04	Electrical systems and life safety upgrades	13243	0		0	Closed 8/2018	O
		Sub-Totals:	127	127	149.9		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBC01	Replace the 374J5 and the 374J6 Switches	190114	27.2		21.8	Closed 11/2018	M
SPBC02	Bridge Street - Replace 35KV Line Relaying & Modify RTU	180149	361	672.2	228.7	Active	O

Electric Category	2018

Budget Category

CONSTRUCTION BUDGET 2018 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
SPCC01	Replaced Failed 2H1 Recloser	170142	237.4		314.2	Closed 11/2018	M
SPNC01	Install 2nd AMI TCU at Penacook	180138	0	80.2	77.6	Completed 11/2018	O
SPNC02	Replace 2H4 Regulators	180151	0		59.9	Closed 11/2018	M
SPNC03	Replace Failed 13W1 Recloser	180161	0	106.5	83.7	Closed 11/2018	M
SPOC01	Install Stone in Substation	170126	0		-4.7	Closed 11/2018	O
SPOC02	Landgon S/S - Replace 374J5 & 375J6	170125	0	64.4	0	Cancelled 1/2018	M
SPOC03	Broken Ground - Site Evaluation, Permitting, Preliminary Survey	140144	0	12,620.00	-500.4	Active	I
SPOC04	Hollis S/s - Upgrades to Accomodate Broken Ground	160159	0		79.5	Closed 8/2018	I
SPOC05	Replace Failed Operating Mechanism on the 13W1 Recloser	170161	0		9.8	Closed 8/2018	M
SPOC06	Replace 35kV Bushings on 3T1 at Gulf St S/S	170174	0		3.1	Closed 8/2018	M
		Sub-Totals:	625.5	13,543.30	373.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBC01	Replace Digger Truck - #30		0			Active	
FEBC02	Replace Pickup Truck - #55/Standby		0			Active	
FEBC03	Replace Pole Trailer - #T12		0			Active	
FEBC04	Replace Pickup Truck - #6/Digsafe		0			Active	
		Sub-Totals:	0	0			
		Grand Totals:	7,094.00	29,578.20	7,948.0		

Electric Category	2018

Budget Category

CONSTRUCTION BUDGET 2018 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABE18	Electric T&D Improvements	181000	1,830.20	1,806.60	1,603.60	Active	M
BABE19	Electric T & D Improvements	191000	0		0	Active	M
BACE18	Electric T & D Improvements	171000	52.7	1,955.00	25.6	Active	M
BAOE17	2015 Electric T&D	151000	0	1,507.20	-12.9	Closed	M
BAOE18	Electric T&D Improvements	161000	0	1,556.70	-3.2	Completed	M
BBBE18	NewCustomer Additions	181001	599	575.2	533.3	Active	C
BBBE19	New Customer Additions	191001	0		-0.6	Active	C
BBCE18	New Customer Additions	171001	10.5	559.4	28.9	Active	C
BBOE18	New Customer Additons	161001	0	526.6	-0.3	Closed	C
BCBE18	Outdoor Lighting	181002	317.9	240.6	158.7	Active	M
BCBE19	Outdoor Lighting	191002	0		0	Active	M
BCCE18	Outdoor Lighting	171002	8.7	276.8	8.5	Active	M
BCOE18	Outdoor Lighting	161002	0	274.6	-0.3	Completed	M
BDBE18	Emergency & Storm Restoration	181003	495	495	867	Active	M
BDBE19	Emergency & Storm Restoration	191003	0		0	Active	M
BDCE18	Emergency & Storm Restoration	171003	19.4	575.2	-100.6	Active	M
BDOE18	Emergency & Storm Restoration	161003	0	396.9	-0.7	Completed	M
BEBE18	Billable Work	181004	410.2	410.6	355.7	Active	M
BEBE19	Billable Work	191004	0		-1.6	Active	M
BECE18	Billable Work	171004	0	410.1	-29.5	Active	M
BEOE17	2015 Billable Work	151004	0	390.1	0	Closed	M
BEOE18	Billable Work	161004	0	399.7	-17.3	Completed	M
BFBE18	Transformer Purchases - Company	181005	859.8	859.8	766.1	Active	I
BFBE19	Transformer Purchases - Company	191005	0		0	Active	I
BFCE18	2017 Transformer Purchases - Company	171005	0		0	Active	I
BGBE18	Transformer Purchases - Customer O/H	181006	1,219.80	1,320.70	1,321.60	Active	C
BGBE19	Transformer Purchases - Customer	191006	0		0	Active	C
BGCE18	2017 Transformer Purchases - Customer	171006	45.3		205.9	Active	C
BHBE18	Electric Meter - Company	181008	305.1	305.1	265.4	Active	M
BHBE19	Electric Meter - Company	191008	0		0	Active	M
BHOE18	2017 Meter Purchases - Company	171008	0		1	Closed	M
BIBE18	Electric Meter - Customer	181007	447.3	447.3	507.6	Active	C
BIBE19	Electric Meter - Customer	191007	0		0	Active	C
BIOE18	2017 Meter Purchases - Customer	171007	0		49.1	Closed	C
		Sub-Totals:	6,620.70	15,289.20	6,531.00		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEE01	Radio Replacement Project	181022	197	222	199	Active	O
ECEE02	Two Way Radio Replacements		4			Active	O
		Sub-Totals:	201	222	199		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECOE01	AMI Equipment, Unanticipated Replacements	171022	0		0	Closed	O
ECOE02	2 way radio replacements	171014	0		0	Closed	O
		Sub-Totals:	0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABE00	Overhead Line Extensions - New Projects		71		4.4	Active	C
DABE01	Relocation of Pole, Three Phase Service, 92 Ashworth Ave., Hampton	181012	0	5.3	14.1	Completed	
DABE02	Single Phase, Overhead Line Ext., 26 Moulton Ridge Rd., Kensington	181049	0	5.4	6.5	Active	
DABE03	Single Phase, O/H Line Ext., Bent Grass Circle, Kingston	181065	0	9.4	12.7	Completed	
DABE04	Three Phase, O/H Line Ext., 137 Folly Mill Rd., Seabrook - Building B	181067	0	4.1	-5	Active	
DABE05	Three Phase, O/H Line Ext., Off Rocks Rd., Seabrook - A Lot	181070	0		-23.9	Active	
DACE00	Overhead Line Extensions, Carryover		10.3		49.9	Active	C
DACE01	Three Phase, O/H Line Ext., 1 Franklin St., Exeter	171055	0		4.7	Closed	
DACE02	Single Phase, O/H Line Ext., 158 Epping Rd., Exeter	171061	0		10.6	Closed	
DACE03	Single Phase, O/H Line Ext., 49 Heath St., Newton	171062	0		19.4	Closed	
DACE04	Single Phase, Overhead Line Ext., 53 Highland Rd., South Hampton	171063	0	6	15.2	Closed	
DBBE00	Underground Line Extensions - New Projects		373.7		154.6	Active	C
DBBE02	Three Phase, URD Line Ext., 4 Puzzle Ln., Newton	181021	0		8.6	Closed	
DBBE03	Single Phase and Three Phase, URD Line Ext., off Main St., Atkinson	181029	0	174.1	89.9	Active	
DBBE04	Three Phase, URD Line Ext., Country Club Dr., Atkinson	181031	0	119.5	154.8	Active	
DBBE05	Single Phase, URD Line Ext., Willowbrook Ave., Stratham	181032	0	22.3	28.7	Completed	
DBBE06	Three Phase, URD Line Ext., 3 Meeting Place Dr., Exeter	181033	0	4.2	2.3	Closed	
DBBE09	Single Phase, URD Line Ext., 24 Old Stage Rd., Hampton Falls	181036	0	9.9	7	Closed	

Electric Category	2018
Growth	
Customer Additions (C)	3,158,600
Subtotal Growth	3,158,600
Non-Growth	
Reliability (R)	487,200
Maintenance Replacement (M)	4,507,100
Mandated (H)	527,400
System Improvement (I)	1,362,000
Grid Modernization (G)	0
Other (O)	296,800
Subtotal Non-Growth	7,180,500
Total	10,339,100
	10,339,100
	0

Budget Category	
Annual Requirements Blankets	**2018**
T&D Improvements	1,613,100
New Customer Additions	561,300
Outdoor Lighting	166,900
Emergency & Storm Restoration	765,700
Billable work	307,300
Transformers	2,293,600
Meters	823,100
Sub-Totals:	**6,531,000**
Distribution	
Overhead Line Extensions over $20,000	54,300
Underground Line Extensions over $20,000	458,800
Street Light Projects	-
Telephone Company Requests	271,200
Highway Projects	256,200
Distribution Pole Replacements	746,000
Specific Projects: Distribution	1,502,000
Sub-Totals:	**3,288,500**
Substation	
Specific Projects: Substation	240,800
Sub-Totals:	**240,800**
Communications	**199,000**
Tools, Shop, Garage	**58,900**
Laboratory	**6,000**
Office	**2,300**
Structures	**12,600**
Distribution Totals:	**10,339,100**

CONSTRUCTION BUDGET 2018 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DBBE13	Three Phase, URD Line Ext., Mill Rd., Hampton	181040	0	6.2	-52.2	Active	
DBBE14	Three Phase, URD Line Ext., 118 Portsmouth Ave., Stratham	181048	0	22.7	23.6	Completed	
DBBE15	Single Phase, URD Line Ext., McCarron Dr., Hampton	181038	0	7.8	5.2	Completed	
DBBE17	Three Phase, URD Line Ext., 137 Folly Mill Rd., Seabrook - Building A	181066	0	9.3	-11.5	Active	
DBBE18	Three Phase, URD Line Ext., 183 Epping Rd, Exeter	181059	0	68.9	-50.1	Active	
DBBE20	Single Phase, URD Line Ext., 8 Kingston Rd, Exeter	181069	0	14.3	-12.1	Active	
DBBE22	Three Phase, URD Line Ext, Main St., Kingston	181041	0	36.3	-30.4	Active	
DBBE23	Single Phase, URD Line Ext., 460 East Rd., Hampstead	181044	0	12.8	1.6	Completed	
DBBE24	Single Phase, URD Line Ext., 199 South Rd, Kensington	181071	0		-24.4	Active	
DBBE25	Single Phase, URD Line Ext., Whittaker Way, Stratham	181068	0	22	-6.3	Active	
DBBE30	Single Phase, URD Line Ext., off Stratham Ln, Stratham	181043	0	17.5	19.7	Closed	
DBCE00	Underground Line Extensions, Carryovers		270.3		304.2	Active	C
DBCE01	Three Phase, URD Line Ext., 40 Main St., Exeter	171025	0		-33.7	Closed	
DBCE02	Single Phase, URD Line Ext., 199 South Rd., Kensington	171026	0	11.1	0	Active	
DBCE03	Single Phase, URD Line Ext., Rollins Farm Rd, Stratham - Phase 2	171027	0	25.5	30.7	Closed	
DBCE04	Three Phase, URD Line Ext., 299 Exeter Rd., Hampton	171032	0		55.6	Closed	
DBCE05	Single Phase, URD Line Ext., Cowbell Crossing, Atkinson - Phase 4	171034	0		9.3	Closed	
DBCE06	Three Phase, URD Line Ext., Exeter Rd., Hampton18X1	171035	0	32	-5.5	Closed	
DBCE07	Single Phase, URD Line Ext., off Centennial St., Seabrook	171037	0		10	Closed	
DBCE08	Three Phase, URD Line Ext., Newfields Rd, Exeter	171038	0		34	Closed	
DBCE09	Single Phase, URD Line Ext., off Stratham Heights Rd., Stratham	171039	0		3.8	Closed	
DBCE10	Three Phase, URD Line Ext., 29 Academy Ave., Hampton	171047	0	28.8	-4.9	Closed	
DBCE11	Three Phase, URD Line Ext., 22 Whittier St., Newton	171051	0		21	Closed	
DBCE12	Single Phase, URD Line Ext., 97 Portsmouth Ave., Stratham	171052	0		33.4	Closed	
DBCE13	Three Phase, URD Line Ext., 277 Water St, Exeter	171054	0	31.5	55.4	Active	
DBCE14	Single Phase, URD Line Ext., Osgood Rd., Kensington	171056	0		28.7	Closed	
DBCE15	Single Phase, URD Line Ext., Rollins Farm Rd., Stratham - Phase 3	171058	0	41	63.8	Closed	
DBCE16	Three Phase, URD Line Ext., 27 Brown Rd., Hampton Falls	161044	0		8.2	Closed	
DBCE17	Three Phas, URD Line Ext. 105 Towle Farm Rd., Hampton	2175	0		-5.6	Closed	
DCBE00	Street Light Projects		35.2			Active	M
DDCE00	Telephone Requests, Carryover		271.5		271.2	Active	H
DDCE01	3353 Line Relocation, State Rt. 101, Hampton	141047	0	2,150.00	271.2	Completed	
DEBE00	Highway Projects		163.1		234.2	Active	H
DEBE01	Replacement/Relocation of Poles, Lincoln Street, Exeter	181027	0		128.3	Closed	
DEBE02	Relocation and Changeover of Poles, Westville Rd., Plaistow	181039	0	73.2	0	Active	
DEBE03	Relocation of Poles, Epping Road, Exeter	181057	0	146	105.9	Completed	
Dec-00	Highway Projects, Carryover		0		22	Active	H
DECE01	Town of Exeter - Relocate Poles for Bridge Construction, Rt. 108,	171059	0		22	Closed	
DEOE01	Relocation of Highway Light	141079	0		0	Closed	H
DPBE01	Distribution Pole Replacements	181009	754.9	754.9	628.7	Active	M
DPBE02	Circuit 3H1 - Convert to 13.8 kV, Ocean Blvd., Hampton	181052	175.2	1,351.40	61.9	Active	I
DPBE03	Circuits 3H2 & 3H3 Convert to 13.8 kV, Hampton Beach	181056	25.3	450	73.9	Active	I
DPBE05	Circuits 5H1/5H2 - Transfer to 5X3, Witch Lane, Plaistow	181050	180.1	240.5	176.8	Active	I
DPBE99	Distribution Pole Replacements	191010	0		0	Active	M
DPCE01	Circuit 19X3- Convert Newfields Rd, Exeter Waste Water Treatment Plant	171023	43.3	358.4	27.5	Closed	I
DPCE02	Replace Primary Metering at Seabrook Nuke Plant	171060	74.1	213.7	223.1	Completed	M
DPNE01	Wind Storm - October 30, 2017	181034	0		123.1	Closed	M
DPNE03	Replace 3347A and 3347B Reclosers at 3347 Line Tap	181042	0	235	39.3	Active	M
DPNE04	Convert Portion of 43X1 to 6W2, Main St and Rt. 125, Kingston	181051	0	170	183.4	Active	I
DPNE06	Replace Structure 2055 on 3348 Sub T Line, Seabrook	181060	0	100	113.4	Completed	M
DPNE07	Replace Structure 2044 on 3348 Sub-Transmission Line, Hampton Falls	181061	0	78	0	Active	M
DPNE08	Wind/Snow Storm - March 7, 2018	181062	0		165.1	Closed	M
DPNE10	Wind Storm - March 2, 2018	181064	0		56.7	Closed	M
DPNE99	Anticipated Storm over $30K - Nonbudget		0			Active	M
DPOE01	Distribution Pole Replacement	171024	0	780	3.9	Closed	M
DPOE02	Reconductor Water Street, Exeter	171030	0		0	Closed	I
DPOE03	Relocate Main Line to Route 111, Kingston/Danville - Circuit 22X1	161014	0		-97	Closed	I
DPOE04	Distribution Upgrades to Accommodate Foss Manufacturing, Hampton	161037	0	630	0	Closed	I
DPOE05	Replace the 03341 and the 3352 Reclosers at Wolf Hill	13161	0		-19	Closed	M
DPOE06	Replace Overhead Pole Line with Underground Facilities for PEA	161053	0		0	Closed	I
DPOE07	Replace Failed Underground Cable, St. Magnus Condo's, Hampton	171050	0	113.7	0	Closed	M
DRBE00	Reliability Projects		461.7		454.5	Active	R
DRBE01	Installation of Recloser, Exeter Rd., Kingston - Circuit 43X1	181028	0	175	205.8	Completed	
DRBE07	3346 Line - Automatic Restoration Scheme	181030	0	570	119.8	Active	
DRBE16	Guinea Switching Reliability Enhancements	181046	0	188	128.9	Active	
DRCE00	Reliabilty Projects, Carryover		0			Active	R
DROE01	Install Devices with Pulsefinding	171020	0	413.5	32.7	Closed	R
		Sub-Totals:	2,909.80	9,939.40	3288.5		
BUDGET		AUTH	BUDGETED	AUTH	PROJECTED	PROJECT	

Electric Category	2018

Budget Category

CONSTRUCTION BUDGET 2018 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
NUMBER	DESCRIPTION	NUMBER	AMOUNT	AMOUNT	AMOUNT	STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEE01	Tools, Shop & Garage - Normal Additions and Replacements	181016	14	14	18.6	Active	O
EAEE02	Purchase and Replace Rubber Goods	181017	5.5	5.5	4.5	Active	O
EAEE03	Purchase and Replace Hot Line Tools	181018	4	4	4.8	Active	O
EAEE04	Normal additions & replacement - tools & equipment Meter	181010	7	7	3.9	Active	O
EAEE05	Normal Additions and Replacements- Tools and Equipment Substation	181023	8.5	8.5	8.8	Active	O
	Sub-Totals:		39	39	40.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOE01	Tools, Shop & Garage - Normal Additions and Replacements	171016	0		2.2	Closed	O
EAOE02	Purchase and Replace Rubber Goods	171017	0		1.4	Closed	O
EAOE03	Purchase and Replace Hot Line Tools	171018	0		0	Closed	O
EAOE04	Normal Adds & Repl - Tools Meters & Services	171010	0		0	Closed	O
EAOE05	Normal Additions and Replacement - Tools and Equipment Substation	171021	0		5.4	Closed	O
EAOE06	Purchase/Replace Tools for Bucket Truck #28	171019	0		9.3	Closed	O
	Sub-Totals:		0	0	18.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBE01	Lab Equipment - Normal Additions and Replacements	181011	7	7	6	Active	O
EBOE01	This covers unscheduled additions and replacements of lab instruments,	171011	0		0	Closed	O
	Sub-Totals:		7	7	6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEE01	Office Furniture and Equipment	181015	3.5	3.5	2.1	Active	O
	Sub-Totals:		3.5	3.5	2.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOE01	Office Furniture and Equipment	171015	0		0.2	Closed	O
	Sub-Totals:		0	0	0.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBE01	Normal Improvements to Kensington Facility	181019	15	15	12.6	Active	O
GPCE01	Acquisition of New DOC & Sale of Existing DOC		1,000.00			Active	O
GPCE02	NewUES/Seacoast DOC Facility		1,000.00			Active	O
GPOE01	Electric system/life safety upgrades	13146	0		0	Closed	O
	Sub-Totals:		2,015.00	15	12.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBE01	Hampton Beach - 13kV Additions and other modifications	181047	314.2	1,199.00	169.4	Active	I
SPBE02	Replace Fence at Dow's Hill Substation	181024	65.6	66.6	0	Active	O
SPBE03	Install Stone in Dows Hill S/S &Guinea S/S	181026	26.7		18.4	Completed	O
SPBE99	Plaistow Substation #5 - Remove Foundations and Transformer	191013	0		0	Active	O
SPCE01	Guinea 18X1 - Replace Breaker and Relaying	161052	0		-0.4	Closed	O
SPNE01	Replace Failed bus PT at Guinea S/S	181053	0	72	56.9	Completed	M
SPOE01	Replace 19X3 Recloser	171012	0		-4.6	Closed	M
SPOE02	Replace Failed Insulators and Station Service Transformers	171048	0	91	1.1	Closed	M
	Sub-Totals:		406.5	1,428.60	240.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBE01	Replace Pickup Truck #7 - Fleet & Facilities		0			Active	
FEBE02	Replace Pickup Truck #36		0			Active	
FEBE03	Replave Pickup Truck #4- Metering Supervisor		0			Active	
FEBE04	Replace Pickup Truck #3/ meter worker		0			Active	
	Sub-Totals:		0	0			
	Grand Totals:		12,202.60	26,943.70	10,339.10		

Electric Category	2018		Budget Category

CONSTRUCTION BUDGET 2019 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABC19	Electric T&D Improvements	190100	975.5	1,118.50	1,046.30	Active	M
BABC20	Electric T & D Improvements	200100	0		0	Active	M
BACC19	Electric T&D Improvements	180100	24.5	1,551.70	40.5	Completed 4/2019	M
BAOC17	2015 Electric T & D	150100	0		0	Closed 1/2019	M
BAOC18	Electric T&D Improvements	160100	0		0	Closed 5/2019	M
BAOC19	Electric T & D Improvements	170100	0	1,188.00	-0.1	Closed 1/2019	M
BBBC19	New Customer Additions	190101	270	417.5	431.6	Active	C
BBBC20	New Customer Additions	200101	0		0	Active	C
BBCC18	New Customer Additions	170101	0	420	0	Closed 1/2019	C
BBCC19	New Customer Additions	180101	26.3	448.9	29.9	Completed 4/2019	C
BCBC19	Outdoor Lighting	190102	84.1	136.1	145.4	Active	M
BCBC20	Outdoor Lighting	200102	0		0	Active	M
BCCC19	Outdoor Lighting	180102	3.6	127.4	5.6	Completed 3/2019	M
BDBC19	Emergency & Storm Restoration	190103	560.6	875.2	1,162.80	Active	M
BDBC20	Emergency & Storm Restoration	200103	0		0	Active	M
BDCC18	Emergency & Storm Restoration	170103	0	753	0	Closed 1/2019	M
BDCC19	Emergency & Storm Restoration	180103	9.1	821	-293.4	Completed 9/2019	M
BDOC19	Emergency & Storm Restoration	160103	0		0	Closed 1/2019	M
BEBC19	Billable Work	190104	168.7	173.3	145.5	Active	M
BEBC20	Billable Work	200104	0		0.8	Active	M
BECC19	Billable Work	180104	7.3	257.7	-19.8	Completed 4/2019	M
BEOC18	Billable Work	160104	0		0	Closed 5/2019	M
BEOC19	Billable Work	170104	0		0	Closed 1/2019	M
BFBC19	Transformer Purchases - Company	190105	497.1	421.2	392.2	Active	I
BFBC20	Transformer Purchases - Company	200105	0		0	Active	I
BFOC19	Transformer Purchases - Company Conversions	180105	0	51	0	Closed 12/2019	I
BGBC19	Transformer Purchases - Customer	190106	676.2	948.7	1,022.00	Active	C
BGBC20	Transformer Purchases - Customer	200106	0		0	Active	C
BGCC18	2017 Transformer Purchases - Customer	170106	0		0	Closed 1/2019	C
BGCC19	Transformer Purchases - Customer Requirements	180106	13.2	1,421.60	161.4	Closed 12/2019	C
BHBC19	Electric Meter Purchases - Company	190108	168.4	167.9	195.2	Active	M
BHBC20	Electric Meter Purchases - Company	200108	0		0	Active	M
BHOC19	Electric Meter Purchases - Company	180108	0	174.1	44.1	Closed 12/2019	M
BIBC19	Electric Meter Purchases - Customers	190107	434.3	433	451.6	Active	C
BIBC20	Electric Meter Purchases - Customer	200107	0		0	Active	C
BIOC18	2017 Meter Purchases - Customer	170107	0		0	Closed 5/2019	C
BIOC19	Electric Meter Purchases - Customers	180107	0	409.8	0	Closed 12/2019	C
Sub-Totals:			3,918.90	12,315.40	4,961.60		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEC01	Two Way Radio Replacements		3			Active	O
ECEC02	Radio Upgrade Project		363			Active	O
ECEC03	AMI Cell Modem Installations	190137	64.9	83.4	58.9	Active	O
ECEC04	Bridge St S/S AMI Contractor Inv - TS2 to PLX	190147	989.8	987.9	728.2	Active	O
Sub-Totals:			1,420.70	1,071.20	787.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNC01	UES – Software Licenses	200113	0		378.1	Closed 12/2019	O
ECNC02	General Software Enhancements - 2019	190126	0	18	15.7	Completed 11/2019	O
ECNC03	WebOps Replacement - Year 2 of 3	190127	0	16.8	20.3	Completed 11/2019	O
ECNC04	Reporting Blanket	190128	0	24	32.2	Completed 11/2019	O
ECNC05	Power Plan Updated License	190129	0		88.2	Closed 2/2019	O
ECNC06	Metersense Upgrade 4.2 to 4.3	190133	0	4.6	0.5	Closed 12/2019	O
ECNC07	2019 Infrastructure PC & Network	190141	0	501.8	310	Completed 12/2019	O
ECNC08	EE Tracking & Reporting System	190142	0	57.4	39.5	Active	O
ECNC10	Regulatory Work Blanket	190145	0	9.2	2.1	Completed 11/2019	O
ECNC11	2019 Interface Enhancements	190151	0	19.3	20.3	Completed 12/2019	O
ECNC12	2019 Customer Facing Enhancements	190152	0	295	361.7	Completed 12/2019	O
ECNC13	GIS Overlay in Electronic Inspection Platform	190157	0	19	20.7	Closed 4/2019	O
ECNC14	MV-90xi Upgrade v4.5 to 6.0	190178	0	38	0.9	Active	O
ECNC15	FCS Upgrade	190179	0	24.5	0.8	Completed 11/2019	O
ECNC17	OMS Upgrade to V9.1	190180	0	18.2	6.6	Closed 2/2019	O
ECNC18	GIS Enhancements	190185	0	6.8	6.4	Active	O
ECNC19	Replace MV-90 communication bank modules	190186	0	17.6	3.4	Completed 11/2019	O
ECNC20	Generator Interconnection Database	190189	0	54.4	50	Completed 12/2019	O
ECOC01	2018 IT Infrastructure	180120	0	173.5	12.4	Closed 6/2019	O
ECOC02	2018 Interface Enhancements	180132	0	216	-157	Cancelled 6/2019	O
ECOC03	2018 Customer Facing Enhancements	180133	0	280.5	-194.5	Closed 10/2019	O

Electric Category	2019
Growth	
Customer Additions (C)	2,525,300
Subtotal Growth	2,525,300
Non-Growth	
Reliability (R)	229,100
Maintenance Replacement (M)	5,733,000
Mandated (H)	0
System Improvement (I)	1,038,400
Grid Modernization (G)	0
Other (O)	3,046,800
Subtotal Non-Growth	10,047,300
Total	12,572,600
	12,572,600
	0

Budget Category	
Annual Requirements Blankets	**2019**
T&D Improvements	1,086,700
New Customer Additions	461,500
Outdoor Lighting	151,000
Emergency & Storm Restoration	869,400
Billable work	126,500
Transformers	1,575,600
Meters	690,900
Sub-Totals:	**4,961,600**
Distribution	
Overhead Line Extensions over $20,000	82,900
Underground Line Extensions over $20,000	345,900
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	-
Distribution Pole Replacements	926,800
Specific Projects: Distribution	3,211,500
Sub-Totals:	**4,567,100**
Substation	
Specific Projects: Substation	1,077,000
Sub-Totals:	**1,077,000**
Communications	**1,725,700**
Tools, Shop, Garage	**122,200**
Laboratory	**6,900**
Office	**22,700**
Structures	**89,400**
Distribution Totals:	**12,572,600**

CONSTRUCTION BUDGET 2019 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
ECOC04	Replace MV-90 communication bank modules	170128	0	6.7	0	Cancelled 1/2019	O
ECOC05	AMI Command Center Version Upgrade 6.5	170129	0		0	Cancelled 1/2019	O
ECOC06	GIS Version Upgrade & Data Model Consolidation	150129	0		0	Closed 4/2019	O
ECOC07	Upgrade Generator Interconnection Database	140141	0	56	-48.9	Active	O
ECOC08	2018 MeterSense Enhancements	180134	0	114	-48.2	Cancelled 6/2019	O
ECOC09	General Software Enhancements - 2018	180143	0	19.8	-1.9	Closed 4/2019	O
ECOC10	Electric Inspections Version Upgrade	170151	0		0	Cancelled 1/2019	O
ECOC11	2018 Cyber Security Enhancements	180146	0	45.6	-0.1	Closed 8/2019	O
ECOC12	OMS Regulatory Reports - Carry-over	180147	0	27.5	0	Closed 12/2019	O
ECOC13	IS Project Tracker Replacement	170172	0		0	Closed 4/2019	O
ECOC14	Microsoft Exchange Upgrade Carry-Over	180160	0	8.7	0	Closed 12/2019	O
ECOC15	Electronic Time Sheet-Phase Two	180162	0	28.1	3.5	Closed 12/2019	O
ECOC16	Universal Payment System (UPS) Reporting	180164	0		1.1	Closed 4/2019	O
ECOC17	Legacy Interface Job Rewrite	180141	0		1.3	Closed 4/2019	O
ECOC18	Dev / Staging Refresh	180140	0	13.9	9.5	Closed 12/2019	O
ECOC19	Move e-Intake estimating functionality into GEM	180139	0	30.6	0	Active	O
ECOC20	WebOps Replacement - Year 1 of 3	180142	0	21.2	-3.6	Closed 8/2019	O
ECOC21	TESS Replacement	180144	0		7.6	Closed 4/2019	O
ECOC22	Two Way Radio Replacements	180125	0	3	0	Closed 5/2019	O
ECOC23	Purchase Radio Recording System	180136	0	26	0	Closed 3/2019	O
Sub-Totals:			0	2,195.90	938.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABC00	Overhead Line Extensions		34.6		28.4	Active	C
DABC01	OH Line Ext along a public way Vaughn Rd. Bow	190155	0	8.3	8.9	Completed 9/2019	
DABC03	Three Phase Line Relocation 72 S Main St Concord-Billa	190164	0		4.5	Active	
DABC04	Single Phase, OH Line Extension 33 Bailey Rd Chichest	190177	0	15.1	19.8	Completed 10/2019	
DABC05	Single Phase Overhead Line Ext-Relocate Pole, Anchor	190182	0		0.1	Closed 11/2019	
DABC06	Three Phase OH Line Ext-Relocate Pole & Anchor Per C	190183	0		0.3	Closed 11/2019	
DABC07	Three Phase OH Line Ext, 56 E Ricker Rd, Loudon-Non I	190196	0	10.6	0	Active	
DABC08	Three Phase Overhead Line Ext 3 Merrimack St, Concor	190201	0	12.7	-5.2	Active	
DACC00	Overhead Line Extensions - Carryover		4.3		54.5	Completed 3/2019	C
DACC02	Three Phase, Temporary O/H Line Ext., 123 Pleasant St.	180126	0		13.4	Closed 12/2019	
DACC04	Single phase, OH line ext 228 Center Rd. Salisbury - No	180175	0	12	0.9	Completed 1/2019	
DACC05	Three phase OH Primary Silver Hills Dr Pembroke	180177	0		15.1	Closed 4/2019	
DACC06	Single Phase, O/H Line Extension. High St. Boscawen-B	180189	0		25.1	Closed 9/2019	
DBBC00	Underground Line Extensions		84		155.2	Active	C
DBBC01	Three Phase URD Line Ext-1 Minuteman Way, Concord-	190150	0	5.3	7.3	Completed 11/2019	
DBBC02	Underground Line Extension - S Main St., Concord	190156	0		18.1	Closed 10/2019	
DBBC03	Three phase URG Line Ext -406 Main St. Concord -Billat	190162	0		30.9	Closed 12/2019	
DBBC04	Three Phase URD Line Ext- Silver Hills Pembroke	190165	0		11.6	Closed 11/2019	
DBBC05	Single Phase, URD Line Extension. 226 Queen St, Bosc	190166	0	6.6	19.3	Closed 11/2019	
DBBC06	Three Phase, URD Line Ext. 13 Dunklee Rd. Bow-Billabl	190167	0	7.3	2.6	Active	
DBBC07	Single Phase URD Line Ext 10 Deer Track Ln, Concord	190170	0		3.2	Closed 11/2019	
DBBC08	Single Phase URD Line Extension 15 Morgan Dr, Bow	190187	0	1.5	-2.1	Active	
DBBC09	Three Phase URD Line Extension - 404 S Main St. Conc	190188	0	3.6	33.4	Completed 12/2019	
DBBC10	Three Phase UG Primary 89 Fort Eddy Rd, Concord-Billa	190193	0	17.3	49.6	Completed 11/2019	
DBBC11	Three phase URD Line Ext, 25 Sandquist St, Concord	190194	0	14	0	Active	
DBBC12	SINGLE PHASE URD LINE EXT 130 SNOW POND RD,	190195	0	4.8	4.1	Completed 12/2019	
DBBC13	Three Phase URD Primary Line Ext, 33 Canal St Penacc	190197	0	23.6	0	Active	
DBBC14	Single Phase Underground Line Ext. Sign Board I93 Sou	190199	0	3.1	-14.4	Active	
DBBC15	Single Phase OH/URD Line Ext 135 N State St, Concord	190200	0	22.4	-8.4	Active	
DBCC00	Underground Line Extensions, Carryover		10.3		190.7	Active	C
DBCC02	Tremont St Boscawen-California Fields-Primary urd line	160128	0		2.5	Closed 3/2019	
DBCC04	Single Phase, URD Line Ext., Tuscany Village, Riesling T	180157	0		26.6	Closed 9/2019	
DBCC05	Vintage Estates, Sonoma Way Concord-singl ph urd line	170156	0		34.3	Closed 8/2019	
DBCC06	State of NH Liquor Commission 50 Storrs St-3 ph Line E	160143	0		0	Closed 1/2019	
DBCC07	Three Phase, URD Line Ext., 250 Pleasant St., Concord	180167	0	32.6	44.7	Active	
DBCC08	Three Phase, URD Line Ext., 285-287 Loudon Rd., Conc	180169	0	26.5	0	Closed 10/2019	
DBCC09	Single phase, URD LIne Extens. 33 Elkins Rd, Epsom	180176	0		-4.6	Completed 1/2019	
DBCC10	76 Mountain Rd Epsom Getaway House-OH & URD Prim	170173	0	25.9	0	Closed 1/2019	
DBCC11	Three Phase, URD Line Ext., 660 River Rd., Bow - Non E	180174	0	24.3	-0.5	Completed 1/2019	
DBCC12	Sunrise Meadows Senior Housing-Short Falls Rd Epsom	170153	0		-1.4	Closed 4/2019	
DBCC13	Single Phase URD Primary Line Ext. Fawn Court Bow Nc	180179	0	24.6	19.1	Closed 10/2019	
DBCC14	Single phase URD Line Ext. Oxbow Bluff -Penacook -Bill	180180	0		28.2	Closed 11/2019	
DBCC15	Three Phase URD Line Ext -77 Merrimack St. Penacook-	180182	0	21.5	1.6	Completed 1/2019	
DBCC16	Three Phase URD Line Ext 5-7 S State St. Concord-Non	180183	0		40.2	Closed 10/2019	
DCBC00	Street Light Projects		3.3			Active	M
DCCC00	Street Light Projects - Carryover		0.5			Completed 2/2019	M
DDBC00	Telephone Company Requests		13.8			Active	H

Electric Category	2019

Budget Category

CONSTRUCTION BUDGET 2019 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DDCC00	Telephone Company Request - Carryover		1.4			Completed 2/2019	H
DEBC00	Highway Projects		64.9		0	Active	H
DECC00	Highway Projects, Carryover		6.5		0	Completed 2/2019	H
DPBC01	Condemned Poles Distribution	190112	568.2	874.5	926.8	Active	M
DPBC02	Build Circuit Tie 8X3-8X5 - Sheep Davis Rd. North, Concord	190144	88.5		103.4	Closed 11/2019	I
DPBC03	Replace Poles 93/1X and 93/2 and install 3 regulators	190171	52.9	52.8	70.4	Completed 12/2019	M
DPBC04	Re-conductor and re-insulate circuit 1H6	190149	805.9	250	159.1	Active	I
DPBC05	Porcelain Cutout Replacements	190130	185.2	185	183.5	Active	M
DPBC06	Perform Cable rejuvenating fluid injection on Phase C Cable	190153	179.3	178.8	162.8	Completed 9/2019	M
DPBC07	Install Conduit and Primary URD Cable between Pads 2 & 3	190159	54.5		59.6	Closed 12/2019	M
DPBC08	Install Conduit and Primary URD Cable between Pads 5 & 6	190160	38.2		62.2	Closed 12/2019	M
DPBC09	2H2 Spacer Cable Replacement		193.2			Cancelled 9/2019	M
DPBC10	Replace Recloser - Pole 27-1 - Water Street, Boscawen	190139	36.8	36.7	22.4	Active	M
DPBC11	Perform Cable rejuvenating fluid injection on Phase A Cable	190154	89.5	89.2	102.3	Completed 9/2019	M
DPBC12	Replace Pad mounted switchgear Cir 1H2 and 1H3	190169	188.3	472.9	169.6	Active	M
DPBC13	Install three 100 Amp Regulators on P# 354/8	190161	99.1	80	34.9	Completed 10/2019	M
DPBC14	Install 3 Regulators on Pole # 33	190168	85.3	99.3	97.1	Completed 9/2019	M
DPCC01	Manhole improvements MH 17		201.8			Cancelled 3/2019	M
DPNC01	Install three phase Hendrix	190148	0	584.7	670	Completed 12/2019	M
DPNC02	Install Pullbox and Replace Failed Cable - Victorian Ln, Conc	190163	0		123.9	Closed 2/2019	M
DPNC03	Wind Event 7-10-18	180187	0		123.7	Closed 2/2019	M
DPNC05	Reconductor 1H6 - Pleasant and Green Street, Concord	190174	0	197.8	129.1	Active	I
DPNC06	Install Conduit and Cable from Riser P 209 to pad mount	190176	0		52.5	Closed 10/2019	M
DPNC07	Reconductor/Convert Circuit 1H6 - Thompson Street, Concor	190181	0	128.7	144.7	Active	I
DPNC08	Install Step-Down Transformers - Pole 33 - Hall St., Concord	190184	0	19.1	18.5	Active	I
DPNC09	Convert 10 sections of Basin Rd to 34.5 KV to serve new loa	190190	0	96.1	43.7	Active	M
DPNC12	Reconductor/Convert Circuit 1H6 - S Spring St., Concord	190192	0	138.9	94.3	Active	I
DPNC13	374 Line Rebuild with 15kV Underbuild	190198	0	1,066.00	0	Active	I
DPNC99	Primary Net Metering for the Hydro Dam	180184	0		0	Cancelled 1/2019	M
DPOC01	Condemned Poles quarter one 2017	170115	0		0	Closed 1/2019	M
DPOC02	Primary Net Metering for the Hydro Dam	180156	0	101.5	43.4	Closed 10/2019	M
DPOC03	Replace Man Hole roof with new precast roof	180181	0	277.4	185	Active	M
DPOC04	Rebuild Low Ave, Concord with Hendrix Construction	180172	0	134.8	126.3	Active	M
DPOC05	Replace Failed URD Primary Cable and add Pull Box	180188	0		0	Closed 10/2019	M
DPOC06	Replace Direct Burried cable with conduit and 35kv URD Cal	180171	0		0	Closed 9/2019	M
DRBC00	Reliability Projects		229.5		189.7	Active	R
DRBC04	Install Recloser & Fuse Saver - Bow Bog Road, Bow	190140	0	139.8	109.4	Closed 12/2019	
DRBC07	Install Animal protection on Distribution Transformers	190136	0	40	24.2	Active	
DRBC13	396X1 Tap - Install Recloser	190119	0	94.2	56	Active	
DRCC00	Reliabilty Projects, Carryover		0			Completed 3/2019	R
DROC10	Substation Reliability Enhancements at West Concord	180153	0		24.7	Closed 9/2019	R
DROC12	Install Recloser - Pole 60 - Bow Bog Rd., Bow	180163	0	108.8	14.7	Closed 12/2019	R
DROC15	Install 430 ft of conduit and 1/0 Al 35KV URD cable	170155	0		0	Closed 1/2019	R
Sub-Totals:			3,319.60	5,770.40	4567.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEC01	Purchase and Replace Rubber Goods	190132	5.5	5.5	9	Active	O
EAEC02	Purchase and Replace Hot Line Tools	190124	3.5	3.5	5	Active	O
EAEC03	Tools, Shop and Garage, Normal additions and replacements	190113	14	14	2.8	Active	O
EAEC04	Normal additions & replacement - tools & equipment Meterin	190110	7	7	8.6	Active	O
EAEC05	Normal Additions and Replacements - Tools and Equipment	190121	8.5	8.5	11.2	Active	O
EAEC06	Purchase Omicron Relay Test Set	190146	70	70	67.1	Completed 12/2019	O
Sub-Totals:			108.5	108.5	103.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOC01	Tools, Shop & Garage - Normal Additions and Replacements	170116	0	13.5	0	Closed 1/2019	O
EAOC02	Purchase and Replace Rubber Goods	170117	0	5.5	0	Closed 1/2019	O
EAOC03	Purchase and Replace Hot Line Tools	170118	0	3.3	0	Closed 1/2019	O
EAOC04	Normal additions & replacement - tools & equipment Meterin	180111	0		9.1	Closed 4/2019	O
EAOC05	Normal Additions and Replacements - Tools and Equipment	180135	0		2.9	Closed 4/2019	O
EAOC06	Purchase tools for new Bucket Truck # 23	170167	0	5	0	Closed 1/2019	O
EAOC07	Purchase tools for new Digger truck # 30	180155	0		5.3	Closed 9/2019	O
EAOC08	Purchase and Replace Rubber Goods	180128	0	5.5	0	Closed 4/2019	O
EAOC09	Purchase and Replace Hot Line Tools	180129	0		0.4	Closed 4/2019	O
EAOC10	Tools, Shop & Garage - Normal Additions and Replacements	180127	0		0.8	Closed 1/2019	O
Sub-Totals:			0	32.8	18.5		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						

Electric Category	2019

Budget Category

CONSTRUCTION BUDGET 2019 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
EBBC01	Lab Equipment - Normal Additions and Replacements	190111	7	7	6.9	Active	O
EBOC01	Lab Equipment - Normal Additions and Replacements	180112	0		0	Closed 4/2019	O
Sub-Totals:			7	7	6.9		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEC01	Office Furniture and Equipment Replacements	190122	3.5	3.5	6.7	Active	O
EDEC02	Furniture Replacements Year 1	190123	13	13	16	Active	O
Sub-Totals:			16.5	16.5	22.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOC01	Office Furniture and Equipment	180116	0		0	Closed 4/2019	O
Sub-Totals:			0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBC01	Normal Improvements to Capital Facility	190120	18	18	17	Active	O
GPNC01	Rooftop AC condenser replacement	190138	0	76.1	66.1	Active	O
GPOC01	Normal Improvements to Capital Facility	180119	0	15	6.1	Closed 5/2019	O
GPOC03	Physical Security Improvements	180121	0		0	Closed 9/2019	O
GPOC04	Office & Systems Furniture Reconfigurations	180122	0	129	0.2	Closed 4/2019	O
Sub-Totals:			18	238.1	89.4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBC01	Replace the 374J5 and the 374J6 Switches	190114	120.5	182.1	1.4	Active	O
SPBC02	Gulf Street - Outside Services	190118	926.6	2,925.00	734.7	Active	O
SPBC03	West Concord - Replace RTU and Upgrade Equipment	190115	216	280	0	Active	O
SPBC04	Install Crushed Stone at West Concord S/S	190135	51.6	51.4	42.4	Active	O
SPBC05	Bow Bog - Replace SCADA RTU	190116	61.9	61.7	18.9	Active	O
SPBC06	Hazen Drive - Replace SCADA RTU	190117	50.4	50.2	34.6	Active	O
SPCC01	Bridge Street - Replace 35KV Line Relaying & Modify RTU	180149	279.6	672.2	244.7	Completed 10/2019	O
SPOC01	Install 2nd AMI TCU at Penacook	180138	0	80.2	3.2	Closed 2/2019	O
SPOC02	Landgon S/S - Replace 374J5 & 375J6	170125	0	64.4	0	Cancelled 1/2019	O
SPOC03	Broken Ground - Site Evaluation, Permitting, Preliminary Su	140144	0	12,620.00	-2.9	Closed 2/2019	I
Sub-Totals:			1,706.50	16,987.30	1,077.00		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBC01	Replace Wire Reel Trailer T-17		0			Active	
Sub-Totals:			0	0			
Grand Totals:			10,515.70	38,743.20	12,572.60		

Electric Category	2019

Budget Category

CONSTRUCTION BUDGET 2019 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABE19	Electric T & D Improvements	191000	1,441.90	1,441.50	1,384.50	Active	M
BABE20	Electric & T&D Improvements	201000	0		1.2	Active	M
BACE19	Electric T&D Improvements	181000	26.4	1,806.60	-6.4	Completed 4/2019	M
BAOE17	2015 Electric T&D	151000	0		0	Closed 1/2019	M
BAOE18	Electric T&D Improvements	161000	0	1,556.70	0	Closed 1/2019	M
BAOE19	Electric T & D Improvements	171000	0	1,955.00	0	Closed 2/2019	M
BBBE19	New Customer Additions	191001	387.9	386.2	421.9	Active	C
BBBE20	New Customer Additions	201001	0		0	Active	C
BBCE19	NewCustomer Additions	181001	15.4	575.2	4.7	Completed 4/2019	C
BBOE18	New Customer Additons	161001	0		0	Closed 1/2019	C
BBOE19	New Customer Additions	171001	0	559.4	0	Closed 2/2019	C
BCBE19	Outdoor Lighting	191002	197.4	196.4	143.9	Active	M
BCBE20	Outdoor Lighting	201002	0		0	Active	M
BCCE19	Outdoor Lighting	181002	6.2	240.6	14.7	Completed 4/2019	M
BCOE19	Outdoor Lighting	171002	0	276.8	0	Closed 2/2019	M
BDBE19	Emergency & Storm Restoration	191003	391.2	438.8	1,597.00	Active	M
BDBE20	Emergency & Storm Restoration	201003	0		1	Active	M
BDCE19	Emergency & Storm Restoration	181003	13.7	704.5	-151.8	Active	M
BDOE18	Emergency & Storm Restoration	161003	0		0	Closed 1/2019	M
BDOE19	Emergency & Storm Restoration	171003	0	575.2	0	Closed 2/2019	M
BEBE19	Billable Work	191004	289.5	325.3	295.2	Active	M
BEBE20	Billable Work	201004	0		0	Active	M
BECE19	Billable Work	181004	0	410.6	-37.8	Active	M
BEOE17	2015 Billable Work	151004	0	390.1	0	Closed 1/2019	M
BEOE18	Billable Work	161004	0		0	Closed 1/2019	M
BEOE19	Billable Work	171004	0	410.1	0	Closed 2/2019	M
BFBE19	Transformer Purchases - Company	191005	215.8	215.1	127.3	Active	I
BFBE20	Transformer Purchases - Company	201005	0		0	Active	I
BFOE19	Transformer Purchases - Company	181005	0	859.8	0	Closed 12/2019	I
BGBE19	Transformer Purchases - Customer	191006	1,010.50	1,010.60	1,039.90	Active	C
BGBE20	Transformer Purchases - Customer	201006	0		0	Active	C
BGCE18	2017 Transformer Purchases - Customer	171006	0	1,154.10	0	Closed 1/2019	C
BGCE19	Transformer Purchases - Customer O/H	181006	61.6	1,320.70	195.9	Closed 12/2019	C
BHBE19	Electric Meter - Company	191008	282	281.2	239.7	Active	M
BHBE20	Electric Meter Purchases - Company	201008	0		0	Active	M
BHOE19	Electric Meter - Company	181008	0	305.1	0.9	Closed 12/2019	M
BIBE19	Electric Meter - Customer	191007	532.3	530.8	530.8	Active	C
BIBE20	Electric Meter Purchases - Customer	201007	0		0	Active	C
BIOE18	2017 Meter Purchases - Customer	171007	0		0	Closed 1/2019	C
BIOE19	Electric Meter - Customer	181007	0	447.3	0	Closed 1/2019	C
Sub-Totals:			4,871.80	18,373.70	5,802.60		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEE01	Two Way Radio Replacements		5			Active	O
ECEE02	AMI Cell Modem Installations	191039	97	96.8	78.1	Active	O
Sub-Totals:			102	96.8	78.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECOE01	Radio Replacement Project	181022	0	222	0.1	Closed 10/2019	O
Sub-Totals:			0	222	0.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABE00	Overhead Line Extensions - New Projects		25		63	Active	C
DABE01	Single Phase, O/H Line Ext., 41 Kimball F	191044	0	5.7	10.3	Closed 1/2019	
DABE02	Single Phase, O/H Line Ext., 10 Dodge R	191049	0		3.9	Closed 11/2019	
DABE03	Single Phase, O/H Line Ext., 18 Moulton I	191053	0		0.1	Closed 11/2019	
DABE04	Three Phase, O/H Line Ext., 157 Plaistow	191057	0		3.1	Closed 12/2019	
DABE05	Single Phase, O/H Line Ext., Marshall Rd	191059	0	26.5	19.3	Completed 11/2019	
DABE06	Three Phase, Overhead Line Ext., 139 La	191064	0	4	8.2	Closed 12/2019	
DABE07	Three Phase, Overhead Line Ext., 81 Led	191067	0	15.7	18.1	Completed 11/2019	
DACE00	Overhead Line Extensions, Carryover		9.5		27.3	Active	C
DACE01	Relocation of Pole, Three Phase Service,	181012	0		-5.4	Closed 12/2019	

Electric Category	2015
Growth	
Customer Additions (C)	2,925,100
Subtotal Growth	2,925,100
Non-Growth	
Reliability (R)	691,400
Maintenance Replacement (M)	5,416,200
Mandated (H)	23,500
System Improvement (I)	3,471,500
Grid Modernization (G)	0
Other (O)	3,968,500
Subtotal Non-Growth	13,571,100
Total	16,496,200

16,496,200
0

Budget Category	
Annual Requirements Blankets	**2019**
T&D Improvements	1,379,300
New Customer Additions	426,600
Outdoor Lighting	158,600
Emergency & Storm Restoration	1,446,200
Billable work	257,400
Transformers	1,363,100
Meters	771,400
Sub-Totals:	**5,802,600**
Distribution	
Overhead Line Extensions over $20,000	90,300
Underground Line Extensions over $20,000	641,600
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	23,500
Distribution Pole Replacements	1,358,700
Specific Projects: Distribution	3,100,300
Sub-Totals:	**5,214,400**
Substation	
Specific Projects: Substation	1,771,300
Sub-Totals:	**1,771,300**
Communications	**78,200**
Tools, Shop, Garage	**66,500**
Laboratory	**54,600**
Office	**2,800**
Structures	**3,505,800**
Distribution Totals:	**16,496,200**

CONSTRUCTION BUDGET 2019 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DACE02	Single Phase, Overhead Line Ext., 26 Mo	181049	0	5.4	0	Completed 1/2019	
DACE03	Single Phase, O/H Line Ext., Bent Grass	181065	0		1	Closed 1/2019	
DACE04	Single Phase, Overhead Line Ext., 53 Hig	171063	0	6	0	Closed 1/2019	
DACE05	Three Phase, O/H Line Ext., Off Rocks R	181070	0		23.8	Closed 9/2019	
DACE06	Three Phase, O/H Line Ext., 137 Folly Mil	181067	0		7.9	Closed 3/2019	
DBBE00	Underground Line Extensions - New Projects		207.1		293.5	Active	C
DBBE01	Single Phase, URD Line Ext., Ward Way,	191072	0	37.8	-11.9	Closed 11/2019	
DBBE02	Single Phase, URD Line Ext., 98 Linden S	191041	0		38.9	Closed 11/2019	
DBBE03	Install Underground Secondary, 482 High	191045	0		3.1	Closed 11/2019	
DBBE04	Three Phase, URD Line Ext., 700 Lafayet	191046	0	12	7.5	Completed 12/2019	
DBBE05	Single Phase, URD Line Ext., Old County	191047	0	44.2	42.2	Completed 11/2019	
DBBE07	Single Phase, URD Line Ext, 236 Winnac	191050	0	26.4	33.9	Completed 12/2019	
DBBE09	Single Phase, URD Line Ext., 663 Exeter	191052	0		38.5	Closed 12/2019	
DBBE10	Three Phase, URD Line Ext., 27 Brown R	191051	0		7.9	Closed 12/2019	
DBBE11	Three Phase, URD Line Ext., 106 Ledge I	191054	0		19.2	Closed 11/2019	
DBBE12	Three Phase, URD Line Ext., 315 Ocean	191056	0	9.3	-3.7	Active	
DBBE13	Single Phase, URD Line Ext., Heritage La	191061	0	40	8.9	Active	
DBBE14	Single Phase, URD Line Ext., 69 Main St.	191062	0	10.3	-6.1	Active	
DBBE15	Three Phase, URD Line Ext., 127 Plaistov	191063	0	25.1	64.8	Completed 12/2019	
DBBE16	Three Phase, URD Line Ext., 9 Puzzle Ln	191066	0	14.4	28.1	Completed 11/2019	
DBBE17	Single Phase, URD Line Ext., 177 North F	191069	0	11.6	0.8	Completed 11/2019	
DBBE18	Three Phase, URD Line Ext., 60 Portsmo	191070	0	13	-1.6	Active	
DBBE20	Three Phase, URD Line Ext., 82 Newton	191055	0	19	23.1	Completed 11/2019	
DBCE00	Underground Line Extensions, Carryovers		198.1		328.1	Active	C
DBCE01	Three Phase, URD Line Ext., 118 Portsm	181048	0		-2.2	Closed 2/2019	
DBCE03	Single Phase, URD Line Ext., Rollins Farr	171027	0		0	Closed 1/2019	
DBCE04	Three Phase, URD Line Ext., Country Clu	181031	0	119.5	-54.5	Closed 12/2019	
DBCE05	Single Phase, URD Line Ext., Willowbroc	181032	0		-2.1	Closed 2/2019	
DBCE06	Three Phase, URD Line Ext., Exeter Rd.,	171035	0		22.3	Closed 11/2019	
DBCE07	Three Phase, URD Line Ext., 183 Epping	181059	0		103.1	Closed 11/2019	
DBCE08	Single Phase, URD Line Ext., 8 Kingston	181069	0		16.5	Closed 10/2019	
DBCE09	Three Phase, URD Line Ext, Main St., Kir	181041	0		52.1	Closed 4/2019	
DBCE10	Single Phase, URD Line Ext., 460 East R	181044	0		2.4	Closed 2/2019	
DBCE11	Single Phase, URD Line Ext., 199 South I	181071	0		25.1	Closed 3/2019	
DBCE12	Single Phase, URD Line Ext., Whittaker V	181068	0		20.4	Closed 10/2019	
DBCE14	Single Phase, URD Line Ext., McCarron I	181038	0		0.9	Closed 2/2019	
DBCE15	Single Phase and Three Phase, URD Lin	181029	0	174.1	91.2	Closed 12/2019	
DBCE16	Three Phase, URD Line Ext., Mill Rd., Ha	181040	0	6.2	52.9	Active	
DBCE17	Three Phase, URD Line Ext., 3 Meeting F	181033	0		0	Closed 1/2019	
DBOE01	Single Phase, URD Line Ext., 199 South Rd.,	171026	0	11.1	0	Closed 1/2019	C
DBOE02	Three Phase, URD Line Ext., 277 Water St, E	171054	0		21.4	Closed 11/2019	C
DBOE03	Single Phase, URD Line Ext., Rollins Farm R	171058	0		-1.4	Closed 2/2019	C
DCBE00	Street Light Projects		23.7			Active	M
DCCE00	Street Light Projects, Carryover		0			Active	M
DDBE00	Telephone Company Requests		0			Active	H
DDCE00	Telephone Company Requests, Carryover		0			Active	H
DEBE00	Highway Projects		176.7		23	Active	H
DEBE01	Relocation and Changeover of Poles, We	191034	0		23	Closed 11/2019	
Dec-00	Highway Projects, Carryover		20.8		0.5	Active	H
DECE01	Relocation of Poles, Epping Road, Exeter	181057	0		0.5	Closed 2/2019	
DECE02	Relocation and Changeover of Poles, We	181039	0		0	Cancelled 1/2019	
DPBE01	Distribution Pole Replacements	201009	989.2		1,123.10	Active	M
DPBE02	Porcelain Cutout Replacements, Various Loc	191022	185.2	184.7	104.1	Active	M
DPBE03	Circuit 6W1 - Install Regulator, Burnt Swamp	191024	39.5		27.3	Closed 12/2019	M
DPBE04	Install Voltage Regulator	201010	417.3		207.3	Active	M
DPBE05	Install Voltage Regulator	201011	46.1		0	Cancelled 4/2019	M
DPCE01	Distribution Pole Replacements	191010	58.9	986.2	102.8	Closed 4/2019	M
DPCE02	Circuit 3H1 - Convert to 13.8 kV, Ocean Blvd	181052	937.9	1,351.40	1,087.60	Active	I
DPCE03	Circuits 3H2 & 3H3 Convert to 13.8 kV, Ham	181056	468.2		395.7	Closed 10/2019	I
DPCE04	Convert Portion of 43X1 to 6W2, Main St and	181051	22.1		10.7	Closed 4/2019	I
DPCE05	Replace 3347A and 3347B Reclosers at 3347	181042	164.6	235	118.7	Completed 11/2019	M
DPCE06	Circuits 5H1/5H2 - Transfer to 5X3, Witch La	181050	39.2		48.8	Closed 4/2019	I
DPNE01	Replace Structure 2011 on 3348 Sub-Transm	191014	0		54.6	Closed 10/2019	M
DPNE02	Distribution work for PV facility at 199 South I	191042	0		-12	Completed 9/2019	M
DPNE03	Convert and Transfer Portion of 5X3 to 13W1	191065	0	155	14.8	Active	I
DPNE04	Circuit 6W1 - Convert Chase Road, South Ha	191068	0	275	64.8	Active	I

Electric Category	2015

Budget Category

CONSTRUCTION BUDGET 2019 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPOE01	Distribution Pole Replacement	171024	0		0	Closed 1/2019	M
DPOE02	Replace Primary Metering at Seabrook Nuke	171060	0	287.8	0	Closed 7/2019	M
DPOE03	Relocate Main Line to Route 111, Kingston/D	161014	0		0	Closed 1/2019	M
DPOE04	Establish 5X3/58X1 Distribution Circuit Tie, N	191025	0	416.1	211.1	Closed 1/2019	I
DPOE05	Replace the 03341 and the 3352 Reclosers a	13161	0		0	Closed 1/2019	M
DPOE06	Kingston S/S AMI Equip - TS2 to PLX	181058	0	199.6	130	Active	M
DPOE07	Replace Failed Underground Cable, St. Magı	171050	0		0	Closed 1/2019	M
DPOE09	Replace Structure 2055 on 3348 Sub T Line,	181060	0		0	Closed 4/2019	M
DPOE10	Replace Structure 2044 on 3348 Sub-Transm	181061	0		78.2	Closed 2/2019	M
DRBE00	Reliability Projects		799.8		235.5	Active	R
DRBE07	Install Hydraulic Reclosers, North Shore I	191032	0		28.9	Closed 9/2019	
DRBE08	Install Electronic Recloser, Little River Rc	191033	0	85	100.7	Completed 11/2019	
DRBE09	Circuit 13W2, Install Reclosers, Various L	191058	0	250	56	Active	
DRBE14	Circuit 19X2 - Distribution Automation Sc	191040	0	205.3	49.8	Active	
DRCE00	Reliabilty Projects, Carryover		0		440.3	Active	R
DRCE01	3346 Line - Automatic Restoration Schem	181030	378.3	570	440.3	Completed 8/2019	
DROE01	Install Devices with Pulsefinding	171020	0		0	Closed 1/2019	R
DROE02	Installation of Recloser, Exeter Rd., Kingston	181028	0		9.6	Closed 10/2019	R
DROE16	Guinea Switching Reliability Enhancements	181046	0	188	6	Closed 10/2019	R
Sub-Totals:			5,207.30	6,026.40	5,214.40		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEE01	Tools, Shop & Garage - Normal Additions an	191015	14.5	14.5	18.9	Active	O
EAEE02	Purchase and Replace Rubber Goods	191016	6	6	3	Active	O
EAEE03	Purchase and Replace Hot Line Tools	191017	4.5	4.5	7.4	Active	O
EAEE04	Normal additions & replacement - tools & equ	191030	7	7	7.7	Active	O
EAEE05	Normal Additions and Replacements- Tools a	191026	8.5	8.5	10.6	Active	O
EAEE06	Purchase and Replace Tools for New Truck #	191018	7	7	7.4	Active	O
EAEE07	Purchase Tools for New Back Yard Lift	191019	3	3	1.3	Active	O
Sub-Totals:			50.5	50.5	56.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOE01	Tools, Shop & Garage - Normal Additions an	181016	0		0	Closed 4/2019	O
EAOE02	Purchase and Replace Rubber Goods	181017	0		2.3	Closed 4/2019	O
EAOE03	Purchase and Replace Hot Line Tools	181018	0		3.9	Closed 4/2019	O
EAOE05	Normal Additions and Replacements- Tools a	181023	0	8.5	0	Closed 4/2019	O
EAOE10	Normal additions & replacement - tools & equ	181010	0	7	4	Closed 4/2019	O
Sub-Totals:			0	15.5	10.2		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBE01	Lab Equipment - Normal Additions and Repla	191011	7	7	9.3	Active	O
EBBE02	Purchase Meter Shop Test Station	191012	53.5	53.5	45.3	Completed 10/2019	O
EBOE01	Lab Equipment - Normal Additions and Repla	181011	0		0	Closed 4/2019	O
Sub-Totals:			60.5	60.5	54.6		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDBE01	Office Furniture and Equipment Replacemen	191028	3.5	3.5	2.8	Active	O
EDOE01	Office Furniture and Equipment	181015	0		0	Closed 4/2019	O
Sub-Totals:			3.5	3.5	2.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBE01	Normal Improvements to Seacoast DOC Fac	191027	18	18	14.8	Active	O
GPBE02	Legal . Insurance, Permitting & Misc	191060	5,000.00	15,931.50	2,089.40	Active	O
GPBE03	Acquisition of New DOC & Sale of Existing D	191035	1,200.00	1,200.00	1,373.70	Active	O
GPCE01	Acquisition of New DOC & Sale of Existing D	181054	0		0	Cancelled 1/2019	O
GPNE01	Plaistow Garage - Roof improvements	191043	0	28	27.9	Active	O
GPOE01	Normal Improvements to Kensington Facility	181019	0		0	Closed 3/2019	O
Sub-Totals:			6,218.00	17,177.50	3,505.80		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						

Electric Category	2015

Budget Category

CONSTRUCTION BUDGET 2019 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
SPBE01	Plaistow Substation #5 - Remove Foundatior	191013	98.5	131.4	122.5	Completed 11/2019	O
SPBE02	Install Crushed Stone at Mill Lane Tap	191037	43.9	43.8	-22.2	Active	O
SPBE03	Replace Fence at Timberlane S/S	191038	83.6	99.6	103.2	Active	O
SPBE04	Replace Substation Locks	191021	25	25	27.5	Completed 9/2019	O
SPBE05	Stard Road - Replace SCADA RTU	191023	50.4	50.2	15.1	Completed 5/2019	O
SPBE06	Kingston - Modifications & Additions	191071	56.3	56.3	0	Active	I
SPCE01	Hampton Beach - 13kV Additions and other n	181047	1,630.20	1,552.00	1,510.70	Completed 7/2019	I
SPOE01	Replace Failed bus PT at Guinea S/S	181053	0		1.8	Closed 1/2019	O
SPOE02	Replace Failed Insulators and Station Servic	171048	0	91	0	Closed 1/2019	O
SPOE03	Replace Fence at Dow's Hill Substation	181024	0	66.6	12.7	Closed 10/2019	O
Sub-Totals:			1,987.90	2,115.80	1,771.30		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBE01	Purchase Off Road/Back Yard Lift		0			Active	
FEBE02	Replace Bucket Truck #21		0			Active	
FEBE03	Replace Pickup Truck #35 - Line Supervisor		0			Active	
FEBE04	Replace Pickup Truck #22 - Substation		0			Active	
FEBE05	Replace trailer T-4 (Flatbed)		0			Active	
FEBE06	Replace Wire Reel Trailer T-3		0			Active	
FEBE07	Replace Fork Lift-Heavy (Propane)		0			Active	
FEBE08	NewFork Lift - Light (Electric)		0			Active	
Sub-Totals:			0	0			
Grand Totals:			18,501.60	44,142.10	16,496.20		

Electric Category	2015

Budget Category

CONSTRUCTION BUDGET 2020 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	?? ??						
XXXC01	Pension & PBOP Allocation 2018 & 2019	200162	0		0	Closed 6/2020	O
BB0C18	New Customer Additions	170101	0		0	Closed 1/2020	O
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	BLANKETS ELECTRIC						
BABC20	Electric T & D Improvements	200100	1,089.00	1,107.50	1,383.20	Active	M
BABC21	Electric T& D Improvements	210100	0		0	Active	M
BACC20	Electric T&D Improvements	190100	24.8	1,118.50	37.3	Active	M
BAOC18	Electric T & D Improvements	170100	0	1,188.00	0.1	Closed 1/2020	M
BAOC19	Electric T&D Improvements	180100	0	1,551.70	7.8	Closed 1/2020	M
BBBC20	New Customer Additions	200101	380.1	493.4	537.2	Active	C
BBBC21	New Customer Additions	210101	0		0.6	Active	C
BBCC16	2015 New Customer Additions	150101	0	475	0	Completed 1/2020	C
BBCC18	New Customer Additions	170101	0		0	Closed 1/2020	C
BBCC19	New Customer Additions	180101	0		0	Closed 1/2020	C
BBCC20	New Customer Additions	190101	29.4	417.5	44.5	Completed 2/2020	C
BBOC18	New Customer Additions	170101	0	420	0	Closed 1/2020	C
BBOC18	New Customer Additions	170101	0		0	Closed 1/2020	C
BBOC19	New Customer Additions	180101	0	448.9	0	Closed 1/2020	C
BCBC20	Outdoor Lighting	200102	96.2	146	134.2	Active	M
BCBC21	Outdoor Lighting	210102	0		0	Active	M
BCCC18	Outdoor Lighting	170102	0		0	Closed 1/2020	M
BCCC20	Outdoor Lighting	190102	4	136.1	-0.8	Completed 4/2020	M
BCOC19	Outdoor Lighting	180102	0	127.4	0	Closed 1/2020	M
BDBC20	Emergency & Storm Restoration	200103	615.4	625	689.6	Active	M
BDBC21	Emergency & Storm Restoration	210103	0		0	Active	M
BDCC18	Emergency & Storm Restoration	170103	0	753	0	Closed 1/2020	M
BDCC19	Emergency & Storm Restoration	180103	0	821	-7	Closed 1/2020	M
BDCC20	Emergency & Storm Restoration	190103	10.1	875.2	-366.7	Active	M
BDOC19	Emergency & Storm Restoration	160103	0		0.1	Closed 1/2020	M
BEBC20	Billable Work	200104	188.9	220	243.2	Active	M
BEBC21	Billable Work	210104	0		0	Active	M
BECC20	Billable Work	190104	8	173.3	36.5	Completed 5/2020	M
BEOC18	Billable Work	160104	0	285	-0.1	Completed 1/2020	M
BEOC19	Billable Work	180104	0	257.7	-12.1	Closed 1/2020	M
BFBC20	Transformer Purchases - Company	200105	84.1	406.1	412.4	Active	I
BFBC21	Transformer Purchases - Companay Conver	210105	0		0	Active	I
BFCC20	Transformer Purchases - Company	190105	10.9	421.2	64.9	Completed 1/2020	I
BFOC19	Transformer Purchases - Company Conversi	180105	0	51	0	Closed 1/2020	I
BGBC20	Transformer Purchases - Customer	200106	741.4	333.6	1,153.50	Active	C
BGBC21	Transformer Purchases - Customer Requirer	210106	0		0	Active	C
BGCC19	Transformer Purchases - Customer Requirer	180106	0	1,421.60	0	Closed 1/2020	C
BGCC20	Transformer Purchases - Customer	190106	83.7	948.7	18.5	Completed 6/2020	C
BHBC20	Electric Meter Purchases - Company	200108	174.9	174.9	183.2	Active	M
BHBC21	Electric Meter Purchases - Company Require	210108	0		0	Active	M
BHOC19	Electric Meter Purchases - Company	180108	0		-5.5	Closed 1/2020	M
BHOC20	Electric Meter Purchases - Company	190108	0	167.9	-4.5	Completed 3/2020	M
BIBC20	Electric Meter Purchases - Customer	200107	466.6	466.6	508.3	Active	C
BIBC21	Electric Meter Purchases - Customer Require	210107	0		0	Active	C
BIOC20	Electric Meter Purchases - Customers	190107	0	433	13.8	Completed 1/2020	C
	Sub-Totals:		4,007.20	16,464.60	5,072.20		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEC01	Two Way Radio Replacements		4			Active	O
EECC01	Radio Upgrade Project	200195	250	105	0	Active	O
EECC02	Upgrade TS2 to PLX Infrastructure Carryover		173.9			Active	O
	Sub-Totals:		427.9	105	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECNC01	UES – Software Licenses	200113	0		331.3	Active	O
ECNC02	2020 IT Infrastructure Budget	200134	0		492.5	Completed 12/2020	O
ECNC03	2020 Customer Facing Enhancements	200135	0	279.7	232	Completed 12/2020	O

Electric Category	2019
Growth	
Customer Additions (C)	2,550,700
Subtotal Growth	2,550,700
Non-Growth	
Reliability (R)	417,700
Maintenance Replacement (M)	4,747,000
Mandated (H)	138,200
System Improvement (I)	4,259,400
Grid Modernization (G)	0
Other (O)	1,944,900
Subtotal Non-Growth	11,507,200
Total	14,057,900

14,057,900
0

Budget Category	
Annual Requirements Blankets	**2020**
T&D Improvements	1,428,400
New Customer Additions	582,300
Outdoor Lighting	133,400
Emergency & Storm Restoration	316,000
Billable work	267,500
Transformers	1,649,300
Meters	695,300
Sub-Totals:	**5,072,200**
Distribution	
Overhead Line Extensions over $20,000	66,400
Underground Line Extensions over $20,000	207,900
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	138,200
Distribution Pole Replacements	1,538,600
Specific Projects: Distribution	2,350,900
Sub-Totals:	**4,302,000**
Substation	
Specific Projects: Substation	2,826,000
Sub-Totals:	**2,826,000**
Communications	**1,762,600**
Tools, Shop, Garage	**54,100**
Laboratory	**3,800**
Office	**1,000**
Structures	**36,200**
Distribution Totals:	**14,057,900**

CONSTRUCTION BUDGET 2020 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
ECNC04	Metersense Upgrade 2020	200136	0	5.1	0.6	Completed 12/2020	O
ECNC05	2020 Interface Enhancements	200137	0	69.2	50.2	Completed 12/2020	O
ECNC06	Regulatory Work Blanket	200138	0	15.1	12.8	Active	O
ECNC08	2020 General Software Enhancements	200140	0	15.5	1.5	Completed 12/2020	O
ECNC09	Reporting Blanket	200141	0	38.8	37.8	Completed 12/2020	O
ECNC11	Universal Payment System Enhancements	200143	0	24	1.2	Active	O
ECNC12	DevOps Implementation Project	200144	0	72.1	54.7	Active	O
ECNC13	AMI Command Center Upgrade X.X - 2020	200145	0	60	37.3	Closed 12/2020	O
ECNC14	Cyber Security Enhancements	200146	0	35.2	36.9	Completed 11/2020	O
ECNC15	Cloud Data Warehouse	200147	0	15.5	1.9	Active	O
ECNC16	Power Plan Upgrade	200167	0	142.5	111.9	Completed 12/2020	O
ECNC17	Damage Assessment Mobile Platform - Grid	200185	0	442	9.7	Active	O
ECNC18	Debt Management Software	200189	0	14	0	Active	O
ECNC19	Customer Experience Mgmt Project Year 1 o	200191	0	160	46.3	Active	O
ECNC99	2020 Infrastructure PC & Network	210113	0		0	Active	O
ECOC01	AMI Cell Modem Installations	190137	0	83.4	2.4	Closed 2/2020	O
ECOC02	Bridge St S/S AMI Contractor Inv - TS2 to PL	190147	0	987.9	193.9	Active	O
ECOC03	2019 Voice System Replacement	190125	0		-3.7	Closed 8/2020	O
ECOC04	General Software Enhancements - 2019	190126	0		3.2	Closed 8/2020	O
ECOC05	WebOps Replacement - Year 2 of 3	190127	0		1.4	Closed 8/2020	O
ECOC06	Reporting Blanket	190128	0		3.1	Closed 8/2020	O
ECOC07	Upgrade Generator Interconnection Databas	140141	0	56	0	Cancelled 1/2020	O
ECOC08	2019 Infrastructure PC & Network	190141	0		4.2	Closed 8/2020	O
ECOC09	EE Tracking & Reporting System	190142	0	64.6	41.7	Closed 12/2020	O
ECOC10	Regulatory Work Blanket	190145	0		6.9	Closed 8/2020	O
ECOC11	2019 Interface Enhancements	190151	0		0.8	Closed 8/2020	O
ECOC12	2019 Customer Facing Enhancements	190152	0		10.3	Closed 8/2020	O
ECOC13	GIS Overlay in Electronic Inspection Platform	190157	0		0	Closed 8/2020	O
ECOC14	MV-90xi Upgrade v4.5 to 6.0	190178	0	38	14.4	Closed 12/2020	O
ECOC15	FCS Upgrade	190179	0	24.5	10.5	Completed 1/2020	O
ECOC16	OMS Upgrade to V9.1	190180	0		4.5	Closed 8/2020	O
ECOC17	GIS Enhancements	190185	0		0.1	Closed 8/2020	O
ECOC18	Replace MV-90 communication bank module	190186	0	17.6	1.8	Closed 12/2020	O
ECOC19	Move e-Intake estimating functionality into GI	180139	0	30.6	8.6	Closed 12/2020	O
ECOC20	Generator Interconnection Database	190189	0		-0.1	Closed 8/2020	O
ECOC22	Two Way Radio Replacements	180125	0		0	Closed 1/2020	O
ECOC23	Purchase Radio Recording System	180136	0	26	0	Closed 1/2020	O
	Sub-Totals:		0	2,717.20	1,762.60		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABC00	Overhead Line Extensions		39.3		27.6	Active	C
DABC01	Single Phase OH Primary Line Extens. 2(	200176	0		17.6	Closed 12/2020	
DABC02	Single Phase OH Line Ext. Dover Rd, Ch	200177	0	12.5	10.3	Closed 12/2020	
DABC03	Single Phase OH Line Ext 116 Mountain I	200181	0	16.9	6.2	Closed 12/2020	
DABC04	Single Phase OH Line Ext. 190 Manchest	200183	0	13.6	-3.4	Active	
DABC05	Single Phase OH Line Ext. 13 Knowlton F	200190	0	27	-1	Active	
DABC06	Relocation of 5 Utility Poles 87 White Roc	200193	0	7.1	-2.1	Active	
DACC00	Overhead Line Extensions - Carryover		4.9		38.8	Completed 11/2020	C
DACC01	OH Line Ext along a public way Vaughn F	190155	0		1.9	Closed 5/2020	
DACC02	Three Phase Line Relocation 72 S Main S	190164	0		0	Closed 11/2020	
DACC03	Single Phase, OH Line Extension 33 Baile	190177	0		0	Closed 1/2020	
DACC04	Single phase, OH line ext 228 Center Rd.	180175	0	12	-19.9	Closed 5/2020	
DACC05	Three Phase OH Line Ext, 56 E Ricker Rc	190196	0	23	23	Closed 12/2020	
DACC06	Three Phase Overhead Line Ext 3 Merrim	190201	0		33.9	Closed 11/2020	
DBBC00	Underground Line Extensions		99.8		98.7	Active	C
DBBC02	Three Phase URD Line Ext -47 Ryan Rd,	200109	0	6.9	9.2	Closed 12/2020	
DBBC03	Single Phase URD Line Extension 105 W	200122	0		10.9	Closed 11/2020	
DBBC04	Relocate EL Infrastructure for Pedestrian	200148	0		-7.7	Closed 11/2020	
DBBC05	Single Phase URD Line Ext. Hamilton Ct.	200149	0		41.4	Closed 11/2020	
DBBC06	Three Phase URD Line Ext. 1912 Dover F	200150	0	50.1	-24.5	Active	
DBBC07	Three Phase PrimaryURD Line Ext 63 Bc	200161	0		21.7	Closed 11/2020	
DBBC08	New Primary UG Line Ext to Feed Site Li	200171	0	14.2	10.2	Closed 12/2020	
DBBC09	Single Phase URD Line Ext 35 Howards	200172	0	4.7	-5.6	Active	
DBBC10	Replace Pole to accomodate Primary UR	200173	0	19.5	32.1	Completed 8/2020	
DBBC11	Three Phase Primary URD Line Ext. 212	200166	0	39.1	39.8	Closed 12/2020	

Electric Category	2019

Budget Category

CONSTRUCTION BUDGET 2020 UES Capital
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BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DBBC12	Single Phase URD Line Extension Welch	200175	0	15.3	-15.4	Active	
DBBC13	3 PH URD Line Extension Primary 10 Do	200179	0	23.1	18.1	Closed 12/2020	
DBBC14	Single Phase URD Primary Line Ext. 129	200186	0	21.4	-4.3	Active	
DBBC15	Three Phase URD Line Extension-5 Tallw	200188	0	14.4	-5	Active	
DBBC16	Three Phase URD Line Ext 149 East Side	200196	0	41.8	-22.3	Active	
DBCC00	Underground Line Extensions, Carryover		23.6		109.2	Completed 8/2020	C
DBCC01	Three Phase URD Line Ext-1 Minuteman	190150	0		0	Closed 2/2020	
DBCC02	Single Phase, URD Line Extension. 226 (	190166	0		0.3	Completed 3/2020	
DBCC03	Three Phase, URD Line Ext. 13 Dunklee	190167	0		3.3	Closed 10/2020	
DBCC04	Single Phase URD Line Extension 15 Mo	190187	0	1.5	4	Closed 5/2020	
DBCC05	Three Phase URD Line Extension - 404 S	190188	0	3.6	-27	Closed 11/2020	
DBCC06	Three Phase UG Primary 89 Fort Eddy R	190193	0		0	Closed 11/2020	
DBCC07	Three Phase, URD Line Ext., 250 Pleasar	180167	0	32.6	-17.3	Closed 11/2020	
DBCC08	Three Phase, URD Line Ext., 285-287 Lo	180169	0		5.9	Cancelled 1/2020	
DBCC09	Single phase, URD LIne Extens. 33 Elkin	180176	0		-3.5	Closed 12/2020	
DBCC10	Three phase URD Line Ext, 25 Sandquist	190194	0		40.9	Closed 11/2020	
DBCC11	Three Phase, URD Line Ext., 660 River R	180174	0	24.3	-3.5	Closed 12/2020	
DBCC12	SINGLE PHASE URD LINE EXT 130 SN	190195	0		1.3	Closed 10/2020	
DBCC13	Three Phase URD Primary Line Ext, 33 C	190197	0	51.5	51.5	Closed 12/2020	
DBCC14	Single Phase Underground Line Ext. Sigr	190199	0		21.8	Closed 10/2020	
DBCC15	Three Phase URD Line Ext -77 Merrimac	180182	0		0	Closed 11/2020	
DBCC16	Single Phase OH/URD Line Ext 135 N St	190200	0		31.6	Closed 11/2020	
DBCC17	Single Phase URD Primary Line Ext. Faw	180179	0	24.6	0	Completed 5/2020	
DCBC00	Street Light Projects		3.7			Active	M
DCCC00	Street Light Projects - Carryover		0.6			Completed 2/2020	M
DDBC00	Telephone Company Requests		15.4			Active	H
DDCC00	Telephone Company Request - Carryover		1.5			Completed 2/2020	H
DEBC00	Highway Projects		71.8		138.2	Active	H
DEBC01	Hooksett Turnpike Rd., Bow - Build Circu	200151	0	49.2	0	Active	
DEBC02	Birchdale Rd., Concord - Pole Relocation	200169	0	62.7	0	Active	
DEBC03	Relocate 15 Poles along Rt3A and Dunkl	200184	0	208.2	138.2	Active	
DECC00	Highway Projects, Carryover		7.2			Completed 2/2020	H
DPBC01	Condemned Poles Distribution	200110	646.8	1,476.50	1,512.20	Active	M
DPBC02	Build Circuit Tie 8X3-8X5 - Sheep Davis Rd.	190144	354.5		0	Completed 1/2020	I
DPBC03	Replace pole, Install Viper recloser and GOA	200157	220.5	220.5	151.9	Active	M
DPBC05	Replace roof with Precast roof	200194	128	229.1	0	Active	M
DPBC06	Install additional phase on Dunbarton Center	200178	177.7	231.5	81.6	Closed 12/2020	M
DPBC07	Conversion in Downtown Concord - Part 2	200124	721.8	721.8	408.6	Active	I
DPBC08	Install Conduit and Primary URD Cable betw	190160	0		20.3	Cancelled 1/2020	M
DPBC88	Condemned Poles Sub-Transmission	200111	0		-6.8	Cancelled 3/2020	M
DPBC89	Condemned Poles Consolidated Maint.	200112	0		-20.3	Cancelled 3/2020	M
DPBC99	Distribution Condemned Poles	210110	0		0	Active	M
DPCC01	Replace Pad mounted switchgear Cir 1H2 ar	190169	328.9	472.9	200.3	Active	M
DPNC01	Wind/Rain Storm - October 17th, 2019	200168	0		76.8	Closed 11/2020	M
DPNC02	N State St., Concord - Replace Conduit and F	200187	0	80.8	41.4	Completed 1/2020	M
DPNC03	Wind Event 7-10-18	180187	0	124	-0.1	Completed 1/2020	M
DPOC01	Condemned Poles Distribution	190112	0		53.5	Closed 11/2020	M
DPOC02	Replace Poles 93/1X and 93/2 and install 3 re	190171	0	52.8	-17.4	Closed 12/2020	M
DPOC03	Replace Man Hole roof with new precast roo	180181	0		44.4	Closed 10/2020	M
DPOC04	Rebuild Low Ave, Concord with Hendrix Con	180172	0		-34.3	Closed 8/2020	M
DPOC05	Re-conductor and re-insulate circuit 1H6	190149	0	250	35.6	Completed 12/2020	I
DPOC06	Porcelain Cutout Replacements	190130	0		11.8	Closed 2/2020	M
DPOC07	Perform Cable rejuvenating fluid injection on	190153	0		0	Closed 8/2020	M
DPOC08	Replace Recloser - Pole 27-1 - Water Street,	190139	0	36.7	0.8	Closed 12/2020	M
DPOC09	Perform Cable rejuvenating fluid injection on	190154	0		0	Closed 10/2020	M
DPOC10	Install three 100 Amp Regulators on P# 354/8	190161	0		0	Closed 2/2020	M
DPOC11	Install 3 Regulators on Pole # 33	190168	0		0	Closed 5/2020	I
DPOC12	Install three phase Hendrix	190148	0		-3.5	Closed 8/2020	M
DPOC13	Reconductor 1H6 - Pleasant and Green Stree	190174	0	197.8	32.9	Closed 10/2020	I
DPOC14	Reconductor/Convert Circuit 1H6 - Thompso	190181	0		-7.3	Closed 10/2020	I
DPOC15	Install Step-Down Transformers - Pole 33 - H	190184	0		0	Closed 10/2020	I
DPOC16	Convert 10 sections of Basin Rd to 34.5 KV t	190190	0		65.9	Closed 8/2020	I
DPOC17	Reconductor/Convert Circuit 1H6 - S Spring S	190192	0		36.2	Closed 10/2020	I
DPOC18	374 Line Rebuild with 15kV Underbuild	190198	0	1,066.00	787.3	Active	I
DRBC00	Reliability Projects		287.5		386.9	Active	R
DRBC12	Lincoln St., Boscawen - Pole 1 - Install Fu	200152	0		16.3	Closed 11/2020	

Electric Category	2019

Budget Category

CONSTRUCTION BUDGET 2020 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DRBC14	Install Fuse Saver - Stickney Hill Rd., Hop	200153	0		14.2	Closed 10/2020	
DRBC15	Knox Rd., Bow - Pole 56 - Install Fuse Sa	200155	0		17.9	Closed 10/2020	
DRBC16	Install Viper Recloser Main Street, Chiche	200156	0	115.3	91.3	Active	
DRBC17	New Orchard Rd., Epsom - Pole 1 - Insta	200154	0		7.9	Closed 10/2020	
DRBC20	Install Viper Recloser on Pleasant St - 6X	200160	0	106.5	49.1	Active	
DRBC27	Install Viper Recloser on Mountain Rd - 1	200158	0	108.8	72.9	Active	
DRBC29	Install Viper Recloser on Regional Dr - 8X	200159	0	112.4	117.3	Active	
DRCC00	Reliabilty Projects, Carryover		0			Completed 6/2020	R
DROC01	Install Recloser & Fuse Saver - Bow Bog Roa	190140	0		0	Completed 7/2020	R
DROC02	Install Animal protection on Distribution Trans	190136	0		0.7	Closed 10/2020	R
DROC03	396X1 Tap - Install Recloser	190119	0		30.1	Closed 11/2020	R
DROC10	Substation Reliability Enhancements at West	180153	0		0	Active	R
DROC12	Install Recloser - Pole 60 - Bow Bog Rd., Bow	180163	0		0	Completed 7/2020	R
	Sub-Totals:		3,133.40	6,424.10	4302.0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEC01	Purchase and Replace Rubber Goods	200125	5.5	5.5	2.4	Active	O
EAEC02	Purchase and Replace Hot Line Tools	200126	3.5	3.5	9	Active	O
EAEC03	Tools, Shop & Garage - Normal Additions and	200127	14	14	19	Active	O
EAEC04	Normal additions & replacement - tools & equ	200116	7	7	3.8	Active	O
EAEC05	Normal Additions and Replacements - Tools	200130	10	10	9.4	Active	O
EAEC06	Purchase Bierer PD - 50 All purpose Utility M	200128	3		0	Cancelled 6/2020	O
EAEC07	Purchase tools for new Bucket Truck #24		5		0	Active	O
EAEC08	Purchase Bierer PD - 50 All purpose Utility M	200128	12		3	Closed 11/2020	O
EAEC10	Purchase new Dig Safe Locating Machine		4.5			Cancelled 6/2020	O
EAEC12	Purchase Vivaz/Metrotech Pro 2 Dig safe loc	200170	4.3	4.5	3.5	Closed 12/2020	O
	Sub-Totals:		68.8	44.5	50.1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOC01	Tools, Shop & Garage - Normal Additions and	170116	0	13.5	0	Closed 2/2020	O
EAOC02	Purchase and Replace Rubber Goods	170117	0	5.5	2	Closed 3/2020	O
EAOC03	Purchase and Replace Hot Line Tools	170118	0	3.3	1.4	Closed 1/2020	O
EAOC04	Normal additions & replacement - tools & equ	190110	0		0	Closed 2/2020	O
EAOC05	Normal Additions and Replacements - Tools	190121	0		0.6	Closed 2/2020	O
EAOC06	Purchase tools for new Bucket Truck # 23	170167	0	5	0	Closed 1/2020	O
EAOC08	Purchase and Replace Rubber Goods	180128	0	5.5	0	Closed 1/2020	O
	Sub-Totals:		0	32.8	4		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	LABORATORY GENERAL						
EBBC01	Lab Equipment - Normal Additions and Repla	200117	7	7	3.8	Active	O
EBOC01	Lab Equipment - Normal Additions and Repla	190111	0		0	Closed 3/2020	O
	Sub-Totals:		7	7	3.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEC01	Office Furniture & Equipment-Normal Additio	200120	3.5	3.5	1	Active	O
EDEC02	Furniture Replacements-Year 2 of 2 Year Pro	200121	13	13	0	Active	O
	Sub-Totals:		16.5	16.5	1		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOC01	Office Furniture and Equipment Replacemen	190122	0		0	Closed 3/2020	O
EDOC02	Furniture Replacements Year 1	190123	0		0	Closed 3/2020	O
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBC01	Normal Improvements to Capital Facility	200118	18	18	21.9	Closed 12/2020	O
GPBC03	Office Finishes Improvements	200119	12	12	14.3	Closed 12/2020	O
GPOC01	Normal Improvements to Capital Facility	190120	0		0	Closed 10/2020	O
GPOC02	Rooftop AC condenser replacement	190138	0		0	Closed 8/2020	O
GPOC04	Office & Systems Furniture Reconfigurations	180122	0	129	0	Closed 1/2020	O
	Sub-Totals:		30	159	36.2		

Electric Category	2019

Budget Category

CONSTRUCTION BUDGET 2020 UES Capital
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBC01	Various Substations	200131	10	10	12.2	Active	O
SPBC06	Bridge St. Regulator Replacement		271.5			Active	M
SPBC07	Substation Stone Installation at W Portsmout	200132	56	56	36.6	Closed 12/2020	M
SPBC10	Replace 13W2 Circuit Position	210109	253.6		0.0	Active	I
SPCC01	Gulf Street - Outside Services	190118	1,846.70	2,925.00	2422.9	Closed 11/2020	I
SPCC02	West Concord - Replace RTU and Upgrade E	190115	229.1	280	33.1	Active	M
SPNC02	Replace Failed Capacitor Vacuum Switch 4C	200165	0		52.8	Closed 10/2020	M
SPOC01	Replace the 374J5 and the 374J6 Switches	190114	0	182.1	193.4	Closed 12/2020	M
SPOC02	Install Crushed Stone at West Concord S/S	190135	0		0.0	Closed 2/2020	O
SPOC03	Bow Bog - Replace SCADA RTU	190116	0		35.4	Closed 11/2020	O
SPOC04	Hazen Drive - Replace SCADA RTU	190117	0	50.2	7.7	Closed 12/2020	O
SPOC05	Bridge Street - Replace 35KV Line Relaying a	180149	0		31.9	Closed 10/2020	O
	Sub-Totals:		2,666.80	3,503.40	2826.0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBC01	#14 - Electric Ops (Mgr) - SUV		0			Active	
FEBC02	#11 - Electric Ops (Line Supv) - Pick Up		0			Active	
FEBC03	#45 - Electrics Ops (Utility Mnt Wrkr) - Pick Up		0			Active	
FEBC04	#15 - Electric Ops (Field Svc Spvsr) - Pick Up		0			Active	
FEBC05	#24 - Electric Ops (Substation) - Line Truck		0			Active	
FEBC06	Forklift (Propane)		0			Active	
FEBC07	Purchase GPS Tracking Devices for Contractor Crews		2.1			Active	
FEBC08	Purchase Substation Work Trailer		0			Active	
	Sub-Totals:		2.1	0			
	Grand Totals:		10,359.70	29,474.00	14057.9		

Electric Category	2019

Budget Category

CONSTRUCTION BUDGET 2020 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	BLANKETS ELECTRIC						
BABE20	Electric & T&D Improvements	201000	1,608.70	1,611.80	1,317.80	Active	M
BABE21	Electric T&D Improvements	211000	0		0.9	Active	M
BACE19	Electric T&D Improvements	181000	0	1,806.60	-33.9	Completed 1/2020	M
BACE20	Electric T & D Improvements	191000	44.2	1,441.50	46.5	Active	M
BAOE17	2015 Electric T&D	151000	0		0.1	Active	M
BAOE18	Electric T&D Improvements	161000	0	1,556.70	-0.7	Closed 1/2020	M
BAOE19	Electric T & D Improvements	171000	0	1,955.00	-0.4	Closed 1/2020	M
BBBE20	New Customer Additions	201001	437.6	487.7	744.3	Active	C
BBBE21	New Customer Additions	211001	0		2	Active	C
BBCE19	NewCustomer Additions	181001	0		0	Closed 1/2020	C
BBCE20	New Customer Additions	191001	17.6	445.7	38.3	Active	C
BBOE19	New Customer Additions	171001	0	559.4	0	Closed 1/2020	C
BCBE20	Outdoor Lighting	201002	182.8	143.7	113.8	Active	M
BCBE21	Outdoor Lighting	211002	0		0	Active	M
BCCE19	Outdoor Lighting	181002	0	240.6	-2.5	Completed 1/2020	M
BCCE20	Outdoor Lighting	191002	10.5	196.4	4.6	Active	M
BCOE18	Outdoor Lighting	161002	0	274.6	0	Active	M
BCOE19	Outdoor Lighting	171002	0	276.8	-0.6	Closed 1/2020	M
BDBE20	Emergency & Storm Restoration	201003	472.4	589	766.3	Active	M
BDBE21	Emergency & Storm Restoration	211003	0		0.2	Active	M
BDCE19	Emergency & Storm Restoration	181003	0	704.5	-81	Completed 1/2020	M
BDCE20	Emergency & Storm Restoration	191003	15.4	520	-1,077.30	Active	M
BDOE18	Emergency & Storm Restoration	161003	0	396.9	0	Closed 1/2020	M
BDOE19	Emergency & Storm Restoration	171003	0	575.2	-5.9	Closed 1/2020	M
BEBE20	Billable Work	201004	404	417.1	484.6	Active	M
BEBE21	Billable Work	211004	0		0.9	Active	M
BECE19	Billable Work	181004	0	410.6	-34.1	Completed 1/2020	M
BECE20	Billable Work	191004	0	325.3	-85.3	Active	M
BEOE17	2015 Billable Work	151004	0		0	Closed 1/2020	M
BEOE18	Billable Work	161004	0	399.7	8.9	Active	M
BEOE19	Billable Work	171004	0		-5.5	Closed 1/2020	M
BFBE20	Transformer Purchases - Company	201005	393.2	393.2	292.5	Active	I
BFBE21	Transformer Purchases - Company Conversi	211005	0		0.1	Active	I
BFCE20	Transformer Purchases - Company	191005	24.4	215.1	1.4	Completed 5/2020	I
BFOE19	Transformer Purchases - Company	181005	0	859.8	0	Closed 1/2020	I
BGBE20	Transformer Purchases - Customer	201006	1,118.50	1,120.80	1,020.40	Active	C
BGBE21	Transformer Purchases - Customer Requirer	211006	0		0	Active	C
BGCE17	2016 Transformer Purchases-Customer	161006	0		-2.1	Active	C
BGCE18	2017 Transformer Purchases - Customer	171006	0	1,154.10	0	Closed 1/2020	C
BGCE19	Transformer Purchases - Customer O/H	181006	0	1,320.70	1.2	Closed 1/2020	C
BGCE20	Transformer Purchases - Customer	191006	138.2	1,250.00	405.1	Completed 5/2020	C
BHBE20	Electric Meter Purchases - Company	201008	332.1	332.2	315.1	Active	M
BHBE21	Electric Meter Purchases - Company Require	211008	0		0	Active	M
BHOE19	Electric Meter - Company	181008	0		0	Closed 4/2020	M
BHOE20	Electric Meter - Company	191008	0	281.2	8.3	Completed 2/2020	M
BIBE20	Electric Meter Purchases - Customer	201007	567.2	567.2	600	Active	C
BIBE21	Electric Meter Purchases - Customer Require	211007	0		0	Active	C
BIOE17	2016 Meter Purchases-Customer	161007	0	315	0	Active	C
BIOE20	Electric Meter - Customer	191007	0	530.8	3.3	Completed 2/2020	C
		Sub-Totals:	5,766.80	23,675.00	4,847.30		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS ELECTRIC						
ECEE01	Two Way Radio Replacements		6			Active	O
		Sub-Totals:	6	0			
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	COMMUNICATIONS GENERAL						
ECOE01	AMI Cell Modem Installations	191039	0		0.8	Closed 10/2020	O
		Sub-Totals:	0	0	0.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	DISTRIBUTION ELECTRIC						
DABE00	Overhead Line Extensions - New Projects		29.4		72.2	Active	C
DABE01	Single Phase, Overhead Line Ext., 218 H	161031	0		0	Closed 1/2020	

Electric Category	2019
Growth	
Customer Additions (C)	3,131,600
Subtotal Growth	3,131,600
Non-Growth	
Reliability (R)	449,900
Maintenance Replacement (M)	4,301,800
Mandated (H)	195,400
System Improvement (I)	1,370,000
Grid Modernization (G)	0
Other (O)	13,739,200
Subtotal Non-Growth	20,056,300
Total	23,187,900
	23,187,900
	0

Budget Category	2020
Annual Requirements Blankets	
T&D Improvements	1,330,300
New Customer Additions	784,600
Outdoor Lighting	115,300
Emergency & Storm Restoration	(397,700)
Billable work	369,500
Transformers	1,718,600
Meters	926,700
Sub-Totals:	**4,847,300**
Distribution	
Overhead Line Extensions over $20,000	74,500
Underground Line Extensions over $20,000	244,600
Street Light Projects	-
Telephone Company Requests	-
Highway Projects	195,400
Distribution Pole Replacements	1,796,400
Specific Projects: Distribution	1,964,000
Sub-Totals:	**4,274,900**
Substation	
Specific Projects: Substation	386,700
Sub-Totals:	**386,700**
Communications	**800**
Tools, Shop, Garage	**54,600**
Laboratory	**6,300**
Office	**300**
Structures	**13,617,000**
Distribution Totals:	**23,187,900**

CONSTRUCTION BUDGET 2020 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DABE02	Single Phase, Overhead Line Ext., 124 D	201046	0		16.6	Closed 11/2020	
DABE03	Overhead Line Extension & Relocation of	201059	0	10.7	12.6	Active	
DABE04	Single Phase, O/H Line Ext., Brown Rd.,	201064	0		59.8	Closed 11/2020	
DABE05	Three phase, O/H Line Ext., 11 Batchelde	201066	0	22.3	22.1	Closed 10/2020	
DABE06	Three Phase, O/H Line Ext., 19A Batchel	201072	0		2.7	Closed 11/2020	
DABE07	Relocation of Poles, 601 Lafayette Rd., S	201075	0		-41.5	Active	
DACE00	Overhead Line Extensions, Carryover		22.4		2.3	Active	C
DACE01	Three Phase, O/H Line Ext., 31-33 Ocear	151053	0		3.5	Closed 1/2020	
DACE02	Single Phase, Overhead Line Ext., 218 H	151099	0	8.5	-1.2	Closed 10/2020	
DACE03	Three Phase, Overhead Line Ext., 81 Led	191067	0		0	Closed 1/2020	
DACE04	Single Phase, Overhead Line Ext., 53 Hig	171063	0	6	0	Closed 1/2020	
DACE05	Single Phase, O/H Line Ext., 41 Kimball F	191044	0	5.7	0	Closed 1/2020	
DACE06	Three Phase, O/H Line Ext., 137 Folly Mil	181067	0		0	Closed 1/2020	
DBBE00	Underground Line Extensions - New Projects		241		122.5	Active	C
DBBE01	Single Phase, URD Line Ext., Chandler D	191029	0		0	Closed 1/2020	
DBBE02	Single Phase, URD Line Ext., 98 Linden S	191041	0		0	Closed 1/2020	
DBBE03	Install Underground Secondary, 482 High	191045	0		0	Closed 1/2020	
DBBE08	Relocation of Pole & Underground Secon	201036	0		8.9	Closed 10/2020	
DBBE09	Three Phase, URD Line Ext., 24 Whittake	201038	0		16	Closed 11/2020	
DBBE10	Three Phase, URD Line Ext., Little River	201042	0		14.6	Closed 11/2020	
DBBE11	Single Phase, URD Line Ext., off Pine St.	201043	0	60.3	66.9	Closed 12/2020	
DBBE22	Three Phase, URD Line Ext., Ray Farmst	201047	0		13.6	Closed 10/2020	
DBBE23	Single Phase, URD Line Ext., 90 Winnicu	201048	0		47.6	Closed 11/2020	
DBBE24	Single Phase, URD Line Ext. Winchester	201052	0		23.7	Closed 10/2020	
DBBE25	Upgrade Three Phase Service, Exeter Pu	201053	0		9.6	Closed 10/2020	
DBBE26	Three Phase, URD Line Ext., 30 Energy V	201054	0		23.3	Closed 11/2020	
DBBE27	Three Phase, URD Line Ext., Main St & F	201056	0		-4.3	Closed 12/2020	
DBBE28	Single Phase, URD Line Ext., off Timbers	201062	0	129.6	-46.9	Active	
DBBE29	Single Phase, URD Line Ext., 230 Mill Rd	201063	0	40.1	42.1	Closed 12/2020	
DBBE30	Pole Relocation & URD Line Ext., 90 Dep	201065	0		-3.1	Closed 12/2020	
DBBE31	Three Phase, URD Line Ext., 152 Drinkw	201067	0	35	-4.4	Active	
DBBE32	Three Phase, URD Line Ext., 431-435 Oc	201069	0	29.3	3.3	Active	
DBBE33	Single Phase, URD Line Ext., off Spruce	201070	0		22.6	Closed 11/2020	
DBBE34	Single Phase, URD Line Ext., Campbell D	201071	0	12	3.5	Closed 12/2020	
DBBE35	Three Phase, URD Line Ext., 601 Lafayet	201073	0	63.9	-93.2	Active	
DBBE36	Three Phase, URD Line Ext., 89 Holland '	201074	0	27.2	6.7	Completed 12/2020	
DBBE37	Single Phase, URD Line Ext., 219 Hilldale	201082	0	29.5	6.7	Active	
DBBE39	Single Phase, URD Line Ext., 25 Depot R	201093	0	12.8	-16.2	Active	
DBBE40	Three Phase, URD Line Ext., 537 Ocean	201094	0	20.1	-18.3	Active	
DBCE00	Underground Line Extensions, Carryovers		310		122.1	Active	C
DBCE01	Single Phase, URD Line Ext., Ward Way,	191072	0		46.9	Closed 7/2020	
DBCE02	Three Phase, URD Line Ext., 700 Lafayet	191046	0		6.8	Closed 5/2020	
DBCE03	Single Phase, URD Line Ext., Old County	191047	0		0	Closed 1/2020	
DBCE04	Single Phase, URD Line Ext, 236 Winnac	191050	0	26.4	-3.6	Completed 1/2020	
DBCE05	Three Phase, URD Line Ext., 315 Ocean	191056	0	19	22	Completed 12/2020	
DBCE06	Single Phase, URD Line Ext., Heritage La	191061	0		26.1	Closed 10/2020	
DBCE07	Single Phase, URD Line Ext., 69 Main St.	191062	0	10.3	17.8	Closed 12/2020	
DBCE08	Three Phase, URD Line Ext., 127 Plaisto	191063	0		-24.5	Closed 10/2020	
DBCE09	Three Phase, URD Line Ext, Main St., Kir	181041	0		-1.2	Closed 1/2020	
DBCE10	Three Phase, URD Line Ext., 29 Academ	171047	0		0	Closed 1/2020	
DBCE11	Three Phase, URD Line Ext., 60 Portsmo	191070	0	13	16.4	Closed 12/2020	
DBCE12	Three Phase, URD Line Ext., 82 Newton	191055	0		0	Closed 1/2020	
DBCE13	Three Phase, URD Line Ext., Mill Rd., Ha	181040	0		6.3	Closed 10/2020	
DBCE14	Single Phase, URD Line Ext., 199 South I	171026	0		9.1	Closed 11/2020	
DBCE15	Single Phase and Three Phase, URD Lin	181029	0		0	Active	
DBOE02	Three Phase, URD Line Ext., 277 Water St, E	171054	0		0	Active	C
DCBE00	Street Light Projects		26.4			Active	M
DCCE00	Street Light Projects, Carryover		0			Active	M
DDBE00	Telephone Company Requests		0			Active	H
DDCE00	Telephone Company Requests, Carryover		0			Active	H
DEBE00	Highway Projects		196.3		195.4	Active	H
DEBE01	Relocation of 19 Poles and Anchors, Vari	201049	0		147.1	Closed 11/2020	
DEBE02	Relocation of Pole, West Main St., & Pea	201058	0		48.3	Closed 10/2020	
Dec-00	Highway Projects, Carryover		0		0	Active	H
DECE01	Relocation of Poles, Epping Road, Exeter	181057	0		0	Closed 1/2020	
DPBE01	Distribution Pole Replacements	211010	1,071.60		1,361.00	Active	M

Electric Category	2019

Budget Category

CONSTRUCTION BUDGET 2020 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
DPBE03	Transfer Circuit 19H1 to Circuit 27X1, Drinkw	201032	226.9		358.5	Closed 11/2020	I
DPBE04	Circuit 23X1 Install Stepdowns and Add Prim	211012	45.2		49.1	Closed 10/2020	I
DPBE05	15X1 - Upgrade Stepdown Transformer	211009	42.7		41.6	Closed 11/2020	I
DPBE06	Circuit 58X1 - Convert Main Street, Plaistow	201068	373.7	425	96.6	Active	I
DPBE07	Circuit 6W1, Convert Jewell St, South Hampt	211013	72.3		23.3	Active	I
DPBE08	Replace Eight (8) H-Structures on the 3348 &	201041	461.1		351.7	Active	M
DPBE12	Porcelain Cutout Replacements, Various Loc	211011	0		0	Active	M
DPBE13	Circuit 47X1, Stratham - Add SCADA to 47X	201087	8.9	8.9	0	Active	M
DPBE14	Circuit 13W1, Convert Kelley Road, Plaistow	201024	149.3		105.2	Closed 11/2020	I
DPBE16	Circuit 56X1 - Convert Route 125, Kingston	201034	224.9	562.7	0	Active	I
DPBE20	Distribution Pole Replacements	201009	0	1,416.60	83.6	Active	M
DPBE88	Replace Eight (8) H-Structures on the 3348 &	201041	0	461.1	0	Active	M
DPCE01	Establish 5X3/58X1 Distribution Circuit Tie, M	191025	41.1		32	Closed 11/2020	I
DPCE04	Convert Portion of 43X1 to 6W2, Main St and	181051	0		0	Closed 1/2020	I
DPCE06	Circuits 5H1/5H2 - Transfer to 5X3, Witch La	181050	0		0	Closed 1/2020	I
DPNE01	Wind Storm - February 25th, 2019	201050	0	46.4	46.4	Closed 11/2020	M
DPNE02	Wind/Rain Storm - October 17th, 2019	201051	0	168.4	168.8	Closed 12/2020	M
DPNE03	Replace Damaged 18X1R2 Recloser, Timbe	201088	0	65	24.2	Active	M
DPNE04	Upgrade Poles and Stepdown Transformers,	201090	0		50.9	Closed 11/2020	I
DPNE05	Circuit 3W4, Upgrade Stepdown Transforme	201091	0	49	0	Active	I
DPNE06	Circuit 21W1, Extend primary to Improve Vol	201092	0	45	0	Active	I
DPNE08	Wind/Snow Storm - March 7, 2018	181062	0		0.1	Closed 1/2020	M
DPOE01	Porcelain Cutout Replacements, Various Loc	191022	0	327.4	213.4	Active	M
DPOE02	Circuit 3H1 - Convert to 13.8 kV, Ocean Blvd	181052	0		44.8	Closed 11/2020	I
DPOE03	Replace 3347A and 3347B Reclosers at 3347	181042	0		0	Closed 10/2020	M
DPOE04	Distribution work for PV facility at 199 South	191042	0		11.4	Closed 12/2020	M
DPOE05	Convert and Transfer Portion of 5X3 to 13W1	191065	0		41	Closed 2/2020	I
DPOE06	Kingston S/S AMI Equip - TS2 to PLX	181058	0		8.4	Closed 2/2020	M
DPOE07	Circuit 6W1 - Convert Chase Road, South Ha	191068	0		198.4	Closed 5/2020	I
DPOE10	Replace Structure 2044 on 3348 Sub-Transm	181061	0		0.1	Active	M
DRBE00	Reliability Projects		323.6		232.2	Active	R
DRBE05	Install Reclosers on the 3354 & 3343 Sub	201040	0	240	194.2	Active	
DRBE07	Install Reclosers and Implement Distribut	201061	0	375	38	Active	
DRCE00	Reliability Projects, Carryover		311.3		272.9	Active	R
DRCE01	Circuit 13W2, Install Reclosers, Various L	191058	256.7	250	222.4	Completed 12/2020	
DRCE02	Circuit 19X2 - Distribution Automation Sc	191040	0	205.3	50.5	Active	
DROE01	Install Electronic Recloser, Little River Rd., H	191033	0		1.3	Closed 5/2020	R
DROE02	3346 Line - Automatic Restoration Scheme	181030	0		-63.2	Closed 2/2020	R
DROE16	Guinea Switching Reliability Enhancements	181046	0		6.7	Closed 2/2020	R
	Sub-Totals:		4,434.90	5,227.40	4,274.90		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE ELECTRIC						
EAEE01	Tools, Shop & Garage - Normal Additions an	201015	14.5	14.5	14.6	Active	O
EAEE02	Purchase and Replace Rubber Goods	201016	6	6	4.1	Active	O
EAEE03	Purchase and Replace Hot Line Tools	201017	4.5	4.5	5.9	Active	O
EAEE04	Normal additions & replacement - tools & equ	201012	7	7	6.4	Active	O
EAEE05	Normal Additions and Replacements- Tools a	201025	10	10	9.4	Active	O
EAEE06	Purchase and Replace Tools for New Truck #	201018	7	7	4.1	Active	O
EAEE08	Replace Battery Operated Compression Tool	201019	5.5		6.3	Closed 7/2020	O
EAEE09	Replace FC300 Handhelds		16		0	Active	O
	Sub-Totals:		70.5	49	50.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TOOLS, SHOP, GARAGE GENERAL						
EAOE01	Tools, Shop & Garage - Normal Additions an	191015	0		0.5	Closed 2/2020	O
EAOE02	Purchase and Replace Rubber Goods	191016	0		0	Closed 2/2020	O
EAOE03	Purchase and Replace Hot Line Tools	191017	0	4.5	0	Closed 2/2020	O
EAOE04	Normal additions & replacement - tools & equ	191030	0		0	Closed 3/2020	O
EAOE05	Normal Additions and Replacements- Tools a	191026	0		0	Closed 2/2020	O
EAOE06	Purchase and Replace Tools for New Truck #	191018	0		0.4	Closed 2/2020	O
EAOE07	Purchase Tools for New Back Yard Lift	191019	0		2.9	Closed 10/2020	O
EAOE10	Normal additions & replacement - tools & equ	181010	0		0	Closed 1/2020	O
	Sub-Totals:		0	4.5	3.8		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	

Electric Category	2019

Budget Category

CONSTRUCTION BUDGET 2020 UES Seacoast
12 MONTHS ACTUAL AND 0 MONTHS ESTIMATED

BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	Electric Category
	LABORATORY GENERAL						
EBBE01	Lab Equipment - Normal Additions and Repla	201013	7		0	Active	O
EBBE03	Lab Equipment - Normal Additions and Repla	201013	0	7	6.3	Cancelled 5/2020	O
EBOE01	Lab Equipment - Normal Additions and Repla	191011	0		0	Closed 2/2020	O
EBOE02	Purchase Meter Shop Test Station	191012	0	53.5	0	Closed 3/2020	O
	Sub-Totals:		7	60.5	6.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE ELECTRIC						
EDEE01	Office Furniture & Equipment – Normal Addit	201023	3.5	3.5	0.3	Active	O
	Sub-Totals:		3.5	3.5	0.3		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	OFFICE GENERAL						
EDOE01	Office Furniture and Equipment Replacemen	191028	0		0	Closed 3/2020	O
	Sub-Totals:		0	0	0		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	STRUCTURES GENERAL						
GPBE01	Normal Improvements to Seacoast DOC Fac	201014	8	8	0.3	Active	O
GPCE01	Acquisition of New DOC & Sale of Existing D	181054	0		0	Cancelled 5/2020	O
GPCE03	Legal . Insurance, Permitting & Misc	191060	10,000.00	15,931.50	13,585.00	Active	O
GPOE01	Normal Improvements to Seacoast DOC Fac	191027	0		0	Closed 10/2020	O
GPOE02	Acquisition of New DOC & Sale of Existing D	191035	0	1,200.00	31.7	Active	O
GPOE03	Plaistow Garage - Roof improvements	191043	0		0	Closed 2/2020	O
	Sub-Totals:		10,008.00	17,139.50	13,617.00		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	SUBSTATION ELECTRIC						
SPBE01	Substation Stone Installation, Various Locatic	201026	36.1	36.1	12.2	Completed 12/2020	O
SPBE03	Mill Lane Multi-Drop Replacement	201057	48.8	48.8	36.8	Completed 11/2020	O
SPBE04	Guinea Substation, Hampton - Upgrade Site	201055	78.5	78.5	11.2	Active	O
SPBE06	Kingston - Modifications & Additions	191071	0	56.3	28.1	Completed 11/2020	I
SPNE01	Replace Failed RTU at Westville	201078	0	47.5	13.9	Active	M
SPNE03	Replace Failed BT-3A Switch at Hampton Be	201080	0		39	Closed 11/2020	M
SPNE04	Replace Failed PT at Guinea S/S	201081	0		50.3	Closed 11/2020	M
SPNE05	Replace failed RTU at Hampton	201084	0		32.1	Closed 11/2020	M
SPNE06	Replaced Failed Regulator on 47X1	201085	0		43.3	Closed 11/2020	M
SPNE07	Replace Failed Regulator & Bypass/DX Switc	201086	0		42.9	Closed 11/2020	M
SPNE08	Replace Remaining Multi-Drop Telephone La	201089	0	110	3	Active	M
SPOE01	Kingston Substation-System Supply	13184	0	12,705.60	0.3	Closed 10/2020	I
SPOE02	Install Crushed Stone at Mill Lane Tap	191037	0		63.4	Closed 2/2020	M
SPOE03	Replace Fence at Timberlane S/S	191038	0		1.8	Closed 2/2020	M
SPOE04	Replace Substation Locks	191021	0		0	Closed 10/2020	M
SPOE05	Stard Road - Replace SCADA RTU	191023	0	50.2	2.2	Closed 5/2020	M
SPOE06	Hampton Beach - 13kV Additions and other n	181047	0		6.2	Closed 10/2020	I
SPOE07	Replace Fence at Dow's Hill Substation	181024	0		0	Completed 2/2020	M
	Sub-Totals:		163.4	13,132.90	386.7		
BUDGET NUMBER	DESCRIPTION	AUTH NUMBER	BUDGETED AMOUNT	AUTH AMOUNT	PROJECTED AMOUNT	PROJECT STATUS	
	TRANSPORTATION ELECTRIC						
FEBE01	Replace Pick Up Truck #12 - Electric Ops (Prmry Stndb		0			Active	
FEBE02	Replace Pick-up Truck #14 - Electric Ops (2nd Standby		0			Active	
FEBE03	Replace Bucket Truck #25 - Electric Ops		0			Active	
FEBE04	Purchase New Forklift (Electric)		0			Active	
FEBE05	Replace Wire Reel Trailer #T12 - Electric Ops -		0			Active	
FEBE06	Replace Pole Trailer #T8 - Electric Ops - (Large Pole Tr		0			Active	
FEBE07	Purchase GPS Tracking Devices for Contractor Crews		2.1			Active	
	Sub-Totals:		2.1	0			
	Grand Totals:		20,462.20	59,292.30	23,187.90		

Electric Category	2019

Budget Category

Capital Budget 2021 UES Capital								
Code	#	Blankets:Electric	2021	2022	2023	2024	2025	Category
BAB		T&D Improvements	1,166,794	1,189,415	1,402,806	1,411,121	1,485,285	M
BAC		T&D Improvements, Carryover	26,359	27,532	33,415	33,368	35,033	M
BBB		New Customer Additions	401,738	419,379	506,495	515,845	548,486	C
BBC		New Customer Additions, Carryover	42,112	33,102	40,164	39,967	42,128	C
BCB		Outdoor Lighting	103,410	107,039	128,591	128,711	135,288	M
BCC		Outdoor Lighting, Carryover	4,224	4,404	5,337	5,326	5,595	M
BDB		Emergency & Storm Restoration	663,545	670,469	784,617	789,690	832,080	M
BDC		Emergency & Storm Restoration, Carryover	11,306	11,332	13,313	13,371	14,201	M
BEB		Billable work	214,031	219,163	262,793	267,266	282,079	M
BEC		Billable work, Carryover	8,525	8,576	9,985	10,062	10,608	M
BFB		Transformers Company/Conversions	88,611	90,761	104,702	107,281	112,772	I
BFC		Transformers Company/Conversions, Carryover	0	0	0	0	0	I
BGB		Transformer Customer Requirements	746,373	761,551	878,086	904,942	956,308	C
BGC		Transformer Customer Requirements, Carryover	79,772	81,449	93,137	96,242	101,032	C
BHB		Meters Company Requirements	176,203	176,249	199,467	203,077	212,269	M
BIB		Meters Customer Requirements	405,171	467,905	531,000	540,174	558,477	C
		Sub-Totals:	4,138,174	4,268,326	4,993,908	5,066,443	5,331,641	
Code	#	Communications:Electric	2021	2022	2023	2024	2025	
ECE	1	Two Way Radio Replacements	2,500	0	0	0	0	O
ECE	21	Two Way Radio Replacements	0	5,000	0	0	0	O
ECE	22	Field Area Network (Grid Mod)	0	350,000	0	0	0	O
ECE	41	Two Way Radio Replacements	0	0	5,000	0	0	O
ECE	42	Field Area Network (Grid Mod)	0	0	350,000	0	0	O
ECE	61	Two Way Radio Replacements	0	0	0	5,000	0	O
ECE	62	Field Area Network (Grid Mod)	0	0	0	200,000	0	O
ECE	81	Two Way Radio Replacements	0	0	0	0	5,000	O
ECE	82	Field Area Network (Grid Mod)	0	0	0	0	200,000	O
EEC	1	Radio Upgrade Project	175,000	0	0	0	0	O
EEC	2	Upgrade TS2 to PLX Infrastructure Carryover	13,000	0	0	0	0	O
		Sub-Totals:	190,500	355,000	355,000	205,000	205,000	
Code	#	Distribution:Electric	2021	2022	2023	2024	2025	
DAB	20	Overhead Line Extensions	29,709	0	0	0	0	C
DAB	20	Overhead Line Extensions	0	29,163	0	0	0	C
DAB	40	Overhead Line Extensions	0	0	36,510	0	0	C
DAB	60	Overhead Line Extensions	0	0	0	36,172	0	C
DAB	80	Overhead Line Extensions	0	0	0	0	38,707	C
DAC	20	Overhead Line Extensions - Carryover	5,343	0	0	0	0	C
DAC	20	Overhead Line Extensions - Carryover	0	5,328	0	0	0	C
DAC	40	Overhead Line Extensions - Carryover	0	0	6,731	0	0	C
DAC	60	Overhead Line Extensions - Carryover	0	0	0	6,688	0	C
DAC	80	Overhead Line Extensions - Carryover	0	0	0	0	7,139	C
DBB	20	Underground Line Extensions	203,057	0	0	0	0	C
DBB	20	Underground Line Extensions	0	208,709	0	0	0	C
DBB	40	Underground Line Extensions	0	0	267,783	0	0	C
DBB	60	Underground Line Extensions	0	0	0	272,343	0	C
DBB	80	Underground Line Extensions	0	0	0	0	291,540	C
DBC	20	Underground Line Extensions, Carryover	35,769	0	0	0	0	C
DBC	20	Underground Line Extensions, Carryover	0	35,971	0	0	0	C
DBC	40	Underground Line Extensions, Carryover	0	0	45,305	0	0	C
DBC	60	Underground Line Extensions, Carryover	0	0	0	45,332	0	C
DBC	80	Underground Line Extensions, Carryover	0	0	0	0	48,358	C
DCB	20	Street Light Projects	4,024	0	0	0	0	M
DCB	20	Street Light Projects	0	4,096	0	0	0	M
DCB	40	Street Light Projects	0	0	4,875	0	0	M
DCB	60	Street Light Projects	0	0	0	4,865	0	M
DCB	80	Street Light Projects	0	0	0	0	5,130	M
DCC	20	Street Light Projects - Carryover	633	0	0	0	0	M
DCC	20	Street Light Projects - Carryover	0	641	0	0	0	M
DCC	40	Street Light Projects - Carryover	0	0	762	0	0	M
DCC	60	Street Light Projects - Carryover	0	0	0	760	0	M
DCC	80	Street Light Projects - Carryover	0	0	0	0	799	M
DDB	20	Telephone Company Requests	13,365	0	0	0	0	M
DDB	20	Telephone Company Requests	0	17,310	0	0	0	M
DDB	40	Telephone Company Requests	0	0	20,638	0	0	M
DDB	60	Telephone Company Requests	0	0	0	20,553	0	M
DDB	80	Telephone Company Requests	0	0	0	0	21,660	M
DDC	20	Telephone Company Request - Carryover	0	0	0	0	0	M
DDC	20	Telephone Company Request - Carryover	0	1,675	0	0	0	M
DDC	40	Telephone Company Request - Carryover	0	0	2,027	0	0	M
DDC	60	Telephone Company Request - Carryover	0	0	0	2,027	0	M
DDC	80	Telephone Company Request - Carryover	0	0	0	0	2,128	M
DEB	20	Highway Projects	78,378	0	0	0	0	H
DEB	20	Highway Projects	0	79,290	0	0	0	H
DEB	40	Highway Projects	0	0	93,617	0	0	H

Electric Category	2021	2022	2023	2024	2025
Growth					
Customer Additions (C)	1,949,044	2,042,557	2,405,211	2,457,705	2,592,175
Subtotal Growth	1,949,044	2,042,557	2,405,211	2,457,705	2,592,175
Non-Growth					
Reliability (R)	460,939	375,000	375,000	446,457	375,000
Maintenance Replacement (M)	5,523,440	4,575,162	4,568,604	4,144,280	4,267,500
Mandated (H)	107,722	90,338	106,916	764,239	782,460
System Improvement (I)	1,903,451	2,659,532	1,984,344	1,179,531	2,711,194
Grid Modernization (G)	0	1,044,671	2,300,478	2,314,446	5,311,438
Other (O)	833,899	840,385	853,734	865,106	743,025
Subtotal Non-Growth	8,829,451	9,585,088	10,189,076	9,714,059	14,190,617
Total	10,778,495	11,627,645	12,594,287	12,171,764	16,782,792
	10,778,495	11,627,645	12,594,287	12,171,764	16,782,792
	0	0	0	0	0

Budget Category					
Annual Requirements Blankets	**2021**	**2022**	**2023**	**2024**	**2025**
T&D Improvements	1,193,153	1,216,947	1,436,221	1,444,489	1,520,318
New Customer Additions	443,850	452,481	546,659	555,812	590,614
Outdoor Lighting	107,634	111,443	133,928	134,037	140,883
Emergency & Storm Restoration	674,851	681,801	797,930	803,061	846,281
Billable work	222,556	227,739	272,778	277,328	292,687
Transformers	914,756	933,761	1,075,925	1,108,465	1,170,112
Meters	581,374	644,154	730,467	743,251	770,746
Sub-Totals:	**4,138,174**	**4,268,326**	**4,993,908**	**5,066,443**	**5,331,641**
Distribution					
Overhead Line Extensions over $20,000	35,052	34,491	43,241	42,860	45,846
Underground Line Extensions over $20,000	238,826	244,680	313,088	317,675	339,898
Street Light Projects	4,657	4,737	5,637	5,625	5,929
Telephone Company Requests	13,365	18,985	22,665	22,580	23,788
Highway Projects	107,722	90,338	106,916	764,239	782,460
Distribution Pole Replacements	685,200	726,824	885,353	920,026	976,788
Specific Projects: Distribution	4,050,725	2,606,465	1,692,851	3,167,340	6,474,267
Sub-Totals:	**5,135,547**	**3,726,520**	**3,069,751**	**5,240,345**	**8,648,976**
Substation					
Specific Projects: Substation	1,093,974	2,919,799	3,810,128	1,133,476	2,195,675
Sub-Totals:	**1,093,974**	**2,919,799**	**3,810,128**	**1,133,476**	**2,195,675**
Communications	**190,500**	**355,000**	**355,000**	**205,000**	**205,000**
Tools, Shop, Garage	**152,300**	**121,500**	**67,000**	**68,000**	**68,000**
Laboratory	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**
Office	**3,000**	**3,500**	**3,500**	**3,500**	**3,500**
Structures	**58,000**	**226,000**	**288,000**	**448,000**	**323,000**
Distribution Totals:	**10,778,495**	**11,627,645**	**12,594,287**	**12,171,764**	**16,782,792**

Capital Budget 2021 UES Capital								
DEB	60	Highway Projects	0	0	0	732,136	0	H
DEB	80	Highway Projects	0	0	0	0	748,543	H
DEC	20	Highway Projects, Carryover	29,344	0	0	0	0	H
DEC	20	Highway Projects, Carryover	0	11,048	0	0	0	H
DEC	40	Highway Projects, Carryover	0	0	13,299	0	0	H
DEC	60	Highway Projects, Carryover	0	0	0	32,103	0	H
DEC	80	Highway Projects, Carryover	0	0	0	0	33,917	H
DPB	1	Distribution Pole Replacement	685,200	0	0	0	0	M
DPB	2	Porcelain Cutout Replacements	223,010	0	0	0	0	M
DPB	3	37 Line - Reconductor Penacook to Maccoy St Tap	1,041,622	0	0	0	0	I
DPB	4	Replace Direct Buried URD Cable Rocky Point Dr, Bow	87,560	0	0	0	0	M
DPB	5	Perform Cable Injection Fairfield St. Concord	169,738	0	0	0	0	M
DPB	6	Cable Injection - 129 Fisherville Rd, Concord	75,229	0	0	0	0	M
DPB	7	38 Line Spacer Reconductoring	248,476	0	0	0	0	I
DPB	8	Perform Cable Injection on Cambridge Dr. Canterbury	28,404	0	0	0	0	M
DPB	9	Arc Hazard Mitigation - 374X1 Tap	112,556	0	0	0	0	M
DPB	10	Replace 33 Line Structure	160,499	0	0	0	0	M
DPB	11	36 Line River Crossing Replacement	369,534	0	0	0	0	M
DPB	12	38 Line River Crossing Replacement	369,713	0	0	0	0	M
DPB	20	Distribution Unspecified	0	0	0	0	0	I
DPB	21	Distribution Pole Replacement	0	726,824	0	0	0	M
DPB	22	Perform Cable Injection New Meadow Rd. Concord	0	84,140	0	0	0	M
DPB	23	Perform Cable Injection E.Ricker Rd. Chichester	0	27,652	0	0	0	M
DPB	24	Transfer Load from 24H1 to 8H1	0	70,164	0	0	0	I
DPB	25	374X1 Spacer Cable Replacement	0	42,944	0	0	0	M
DPB	26	Replace Direct Buried URD Cable Rocky Point Dr, Bow phase 2	0	144,300	0	0	0	M
DPB	27	Replace Direct Buried Cable - Profile Ave	0	36,026	0	0	0	M
DPB	28	2H2 Spacer Cable Replacement	0	435,151	0	0	0	M
DPB	29	Convert 1H2 and 1H3 for Bridge St Rebuild	0	914,067	0	0	0	I
DPB	30	VVO Implementation - 8X5	0	417,021	0	0	0	G
DPB	31	Electric Vehicle Make Ready Program	0	60,000	0	0	0	G
DPB	40	Distribution Unspecified	0	0	0	0	0	I
DPB	41	Distribution Pole Replacement	0	0	885,353	0	0	M
DPB	42	Replace spacer cable on 8H1	0	0	217,373	0	0	M
DPB	43	VVO Implementation - Bow Junction circuits	0	0	700,478	0	0	G
DPB	44	Electric Vehicle Make Ready Program	0	0	400,000	0	0	G
DPB	60	Distribution Unspecified	0	0	0	1,072,250	0	I
DPB	61	Distribution Pole Replacement	0	0	0	920,026	0	M
DPB	62	15W2 Spacer Cable Replacement	0	0	0	257,119	0	M
DPB	63	Electric Vehicle Make Ready Program	0	0	0	460,000	0	G
DPB	64	VVO Implementation - 6X3	0	0	0	912,671	0	G
DPB	65	VVO Implementation -23T	0	0	0	90,300	0	G
DPB	80	Distribution Unspecified	0	0	0	0	2,598,422	I
DPB	81	Distribution Pole Replacement	0	0	0	0	976,788	M
DPB	82	14X3 Spacer Cable Replacement	0	0	0	0	69,746	M
DPB	83	22W2 Spacer Cable Replacement	0	0	0	0	99,661	M
DPB	86	Electric Vehicle Make Ready Program	0	0	0	0	460,000	G
DPB	87	VVO Implementation - Penacook circuits	0	0	0	0	1,435,719	G
DPB	88	VVO Implementation - Gulf Street circuits	0	0	0	0	1,435,719	G
DPC	1	Extend Brown Hill Rd, Bow - 22W3	354,435	0	0	0	0	O
DPC	2	374 Line Rebuild with 15kV Underbuild	144,071	0	0	0	0	I
DPC	3	Manhole improvements MH 6	204,939	0	0	0	0	M
DRB		Reliabilty Projects	460,939	0	0	0	0	R
DRB	20	Reliability Projects	0	375,000	0	0	0	R
DRB	40	Reliability Projects	0	0	375,000	0	0	R
DRB	60	Reliability Projects	0	0	0	375,000	0	R
DRB	80	Reliability Projects	0	0	0	0	375,000	R
		Sub-Totals:	5,135,547	3,726,520	3,069,751	5,240,345	8,648,976	
Code	#	Tools, Shop, Garage:Electric	2021	2022	2023	2024	2025	
EAE	1	Purchase and Replace Rubber Goods	6,000	0	0	0	0	O
EAE	2	Purchase and Replace Hot Line Tools	4,000	0	0	0	0	O
EAE	3	Tools, Shop & Garage - Normal Additions and Replacements	14,500	0	0	0	0	O
EAE	4	Normal additions & replacement - tools & equipment Metering	7,000	0	0	0	0	O
EAE	5	Normal Additions and Replacements - Tools and Equipment - Substation	12,000	0	0	0	0	O
EAE	7	Purchase OMICRON ARCO Recloser Test Set	31,800	0	0	0	0	O
EAE	8	Purchase Omicron Power Factor Test Set	77,000	0	0	0	0	O
EAE	21	Purchase and Replace Rubber Goods	0	6,000	0	0	0	O
EAE	22	Purchase and Replace Hot Line Tools	0	4,000	0	0	0	O
EAE	23	Tools, Shop & Garage - Normal Additions and Replacements	0	14,500	0	0	0	O
EAE	24	Normal additions & replacement - tools & equipment Metering	0	7,000	0	0	0	O
EAE	25	Normal Additions and Replacements - Tools and Equipment - Substation	0	12,000	0	0	0	O
EAE	26	Tools - Unspecified	0	16,000	0	0	0	O
EAE	27	Purchase Oil Filter Unit	0	56,000	0	0	0	O

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EAE	41	Purchase and Replace Rubber Goods	0	0	6,000	0	0	O
EAE	42	Purchase and Replace Hot Line Tools	0	0	4,500	0	0	O
EAE	43	Tools, Shop & Garage - Normal Additions and Replacements	0	0	15,000	0	0	O
EAE	44	Normal additions & replacement - tools & equipment Metering Normal Additions and Replacements - Tools and Equipment -	0	0	7,000	0	0	O
EAE	45	Substation	0	0	12,000	0	0	O
EAE	46	Tools - Unspecified	0	0	16,500	0	0	O
EAE	47	Purchase tools for new Digger Truck # 31	0	0	6,000	0	0	O
EAE	61	Normal additions & replacement - tools & equipment Metering Normal Additions and Replacements - Tools and Equipment -	0	0	0	7,000	0	O
EAE	62	Substation	0	0	0	12,000	0	O
EAE	63	Purchase and Replace Rubber Goods	0	0	0	6,500	0	O
EAE	64	Purchase and Replace Hot Line Tools	0	0	0	4,500	0	O
EAE	65	Tools, Shop & Garage - Normal Additions and Replacements	0	0	0	15,000	0	O
EAE	66	Tools - Unspecified	0	0	0	16,500	0	O
EAE	81	Normal additions & replacement - tools & equipment Metering Normal Additions and Replacements - Tools and Equipment -	0	0	0	0	7,000	O
EAE	82	Substation	0	0	0	0	12,000	O
EAE	83	Purchase and Replace Rubber Goods	0	0	0	0	6,500	O
EAE	84	Purchase and Replace Hot Line Tools	0	0	0	0	4,500	O
EAE	85	Tools, Shop & Garage - Normal Additions and Replacements	0	0	0	0	15,000	O
EAE	86	Tools - Unspecified	0	0	0	0	16,500	O
		Sub-Totals:	152,300	115,500	67,000	61,500	61,500	
Code	#	Tools, Shop, Garage:General	2021	2022	2023	2024	2025	
EAC	21	Purchase tools for new Bucket trk # 22	0	6,000	0	0	0	O
EAC	61	Purchase tools for new Bucket trk # 21	0	0	0	6,500	0	O
EAC	81	Purchase tools for new Bucket trk # 20	0	0	0	0	6,500	O
		Sub-Totals:	0	6000	0	6500	6500	
Code	#	Laboratory:General	2021	2022	2023	2024	2025	
EBB	1	Lab Equipment - Normal Additions and Replacements	7,000	0	0	0	0	O
EBB	21	Lab Equipment - Normal Additions and Replacements	0	7,000	0	0	0	O
EBB	41	Lab Equipment - Normal Additions and Replacements	0	0	7,000	0	0	O
EBB	61	Lab Equipment - Normal Additions and Replacements	0	0	0	7,000	0	O
EBB	81	Lab Equipment - Normal Additions and Replacements	0	0	0	0	7,000	O
		Sub-Totals:	7,000	7,000	7,000	7,000	7,000	
Code	#	Office:Electric	2021	2022	2023	2024	2025	
EDE	1	Office Furn & Equip - Normal Replacement & Additions	3,000	0	0	0	0	O
EDE	21	Office Furniture & Equipment-Normal Additions and Replacements	0	3,500	0	0	0	O
EDE	41	Office Furniture & Equipment-Normal Additions and Replacements	0	0	3,500	0	0	O
EDE	61	Office Furniture & Equipment-Normal Additions and Replacements	0	0	0	3,500	0	O
EDE	81	Office Furniture & Equipment-Normal Additions and Replacements	0	0	0	0	3,500	O
		Sub-Totals:	3,000	3,500	3,500	3,500	3,500	
Code	#	Structures:General	2021	2022	2023	2024	2025	
GPB	1	Normal Improvements to Capital Facility	18,000	0	0	0	0	O
GPB	3	Electric Vehicle Charging Stations – Capital	40,000	0	0	0	0	O
GPB	21	Normal Improvements to Capital Facility	0	18,000	0	0	0	O
GPB	22	Replace Dock Leveler - Capital	0	18,000	0	0	0	O
GPB	23	Building Intrusion Detection System Installation	0	50,000	0	0	0	O
GPB	24	Capital Fire Alarm System	0	140,000	0	0	0	O
GPB	41	Normal Improvements to Capital Facility	0	0	18,000	0	0	O
GPB	42	Replace Generator - Capital	0	0	120,000	0	0	O
GPB	43	Building Electrical System Replacements	0	0	150,000	0	0	O
GPB	61	Normal Improvements	0	0	0	18,000	0	O
GPB	62	Replace Asphalt Shingle Roof - Capital	0	0	0	30,000	0	O
GPB	63	Improvements to Pole Yard Roadway & Pole Yard	0	0	0	200,000	0	O
GPB	64	Site Lighting and Infrastructure Improvements	0	0	0	200,000	0	O
GPB	81	Window Replacements & Building Envelope Improvements	0	0	0	0	250,000	O
GPB	82	Replace Front Entrance Doors - Capital	0	0	0	0	55,000	O
GPB	83	Normal Improvements	0	0	0	0	18,000	O
		Sub-Totals:	58,000	226,000	288,000	448,000	323,000	
Code	#	Substation:Electric	2021	2022	2023	2024	2025	
SPB	1	Garvins - Replace SCADA RTU	45,555	0	0	0	0	M
SPB	2	Terrill Park - Replace SCADA RTU and Upgrade Equipment	290,233	0	0	0	0	M
SPB	3	Bridge Street Substation Upgrades	0	0	0	0	0	I
SPB	4	Langdon Avenue - Replace SCADA RTU	49,295	0	0	0	0	M
SPB	8	Replace Fence Sections at Langdon, Boscawen and Penacook S/S	68,664	0	0	0	0	O
SPB	9	Iron Works 22W1 Control Replacement	34,159	0	0	0	0	M
SPB	10	Replace 13W2 Circuit Position Regulators	264,346	0	0	0	0	I
SPB	20	Substation Projects, Unspecified	0	0	0	0	0	O
SPB	21	Substation Yard Improvements	0	82,839	0	0	0	O
SPB	22	West Portsmouth Street - Replace RTU and Upgrade Equipment	0	215,042	0	0	0	M
SPB	23	Bow Bog Upgrades	0	120,824	0	0	0	I
SPB	24	Iron Works Road - Transformer High-Side Protection	0	206,664	0	0	0	I
SPB	25	Storrs Street Upgrades	0	351,944	0	0	0	I
SPB	26	ABB PCD Relay & Recloser Replacement Project	0	127,487	0	0	0	M

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SPB	27	OCB Replacement Project: 0374 Breaker at Bridge St S/S	0	229,602	0	0	0	M
SPB	28	5 MVA Mobile S/S - Upgrade Protective Relaying	0	44,546	0	0	0	O
SPB	29	Form 3A Relay Replacement Project	0	68,093	0	0	0	M
SPB	30	Rebuild Bridge St S/S	0	905,108	0	0	0	I
SPB	31	Install SCADA for VVO (Grid Mod)	0	567,650	0	0	0	G
SPB	40	Substation Projects, Unspecified	0	0	0	0	0	I
SPB	41	Substation Yard Improvements	0	0	133,234	0	0	O
SPB	42	Pleasant Street - Replace RTU and Upgrade Equipment	0	0	190,810	0	0	M
SPB	43	OCB Replacement Project: 0375 Breaker at Bridge St S/S	0	0	257,745	0	0	M
SPB	44	Form 3A Relay Replacement Project	0	0	77,233	0	0	M
SPB	45	ABB PCD Relay & Recloser Replacement Project	0	0	71,464	0	0	M
SPB	46	Install SCADA for VVO (Grid Mod)	0	0	1,200,000	0	0	G
SPB	60	Substation Projects, Unspecified	0	0	0	0	0	I
SPB	61	ABB PCD Relay & Recloser Replacement Project	0	0	0	71,457	0	R
SPB	62	Substation Yard Improvements	0	0	0	133,606	0	O
SPB	63	Form 3A Relay Replacement Project	0	0	0	76,938	0	M
SPB	64	Install SCADA for VVO (Grid Mod)	0	0	0	851,475	0	G
SPB	80	Substation Projects, Unspecified	0	0	0	0	0	I
SPB	81	Substation Yard Improvements	0	0	0	0	136,525	O
SPB	82	Form 3A Relay Replacement Project	0	0	0	0	79,150	M
SPB	83	Install SCADA for VVO (Grid Mod)	0	0	0	0	1,980,000	G
SPC	1	Bow Junction - Transformer High-Side Protection	116,325	0	0	0	0	I
SPC	2	West Concord - Replace RTU and Upgrade Equipment	225,397	0	0	0	0	M
SPC	41	Rebuild Bridge St S/S	0	0	1,879,642	0	0	I
		Sub-Totals:	1,093,974	2,919,799	3,810,128	1,133,476	2,195,675	
Code	#	Transportation:Electric	2021	2022	2023	2024	2025	
FEB	1	Replace pickup truck #48 - Substation	1	0	0	0	0	
FEB	2	Replace pickup truck #54 - Standby	1	0	0	0	0	
FEB	3	Replace Electric fork lift-#3	1	0	0	0	0	
FEB	21	Replace pick up #40 - Meter	0	1	0	0	0	
FEB	22	Replace Bucket Truck #22	0	1	0	0	0	
FEB	23	Replace pick up #54 - Standbyc2nd	0	1	0	0	0	
FEB	41	Replace plow/stockroom vehicle #52	0	0	1	0	0	
FEB	42	Replace pickup #42-Meter Mechanic	0	0	1	0	0	
FEB	43	Replace pickup #41- Meter Mechanic	0	0	1	0	0	
FEB	44	Replace #51 - Plow Truck Substations	0	0	1	0	0	
FEB	45	Replace Digger truck #31	0	0	1	0	0	
FEB	61	Replace pick up #6	0	0	0	1	0	
FEB	62	Replace pick up #55	0	0	0	1	0	
FEB	63	Replace Bucket truck #21	0	0	0	1	0	
FEB	81	Replace pick up #11	0	0	0	0	1	
FEB	82	Replace pick up #15	0	0	0	0	1	
FEB	83	Replace pick up #14	0	0	0	0	1	
FEB	84	Replace bucket truck #20	0	0	0	0	1	
		Totals:	10,778,495	11,627,645	12,594,287	12,171,764	16,782,792	

Capital Budget 2021 UES Seacoast

Code	#	Blankets:Electric	2021	2022	2023	2024	2025	Category
BAB		T&D Improvements	1,606,711	1,632,520	1,923,933	1,944,855	2,043,855	M
BAC		T&D Improvements, Carryover	78,204	45,913	55,339	55,129	57,992	M
BBB		New Customer Additions	494,236	511,304	615,340	625,424	669,476	C
BBC		New Customer Additions, Carryover	19,089	20,140	25,146	24,937	26,432	C
BCB		Outdoor Lighting	149,558	159,237	196,083	195,786	205,079	M
BCC		Outdoor Lighting, Carryover	10,520	10,743	12,699	12,878	13,666	M
BDB		Emergency & Storm Restoration	646,645	654,122	770,850	772,280	813,969	M
BDC		Emergency & Storm Restoration, Carryover	17,728	18,232	21,599	21,981	23,320	M
BEB		Billable work	454,353	455,819	536,232	535,219	564,933	M
BEC		Billable work, Carryover	0	0	0	0	0	M
BFB		Transformers Company/Conversions	66,811	194,524	78,061	78,282	80,008	M
BFC		Transformers Company/Conversions, Carryover	194,521	193,256	214,010	215,185	219,486	M
BGB		Transformer Customer Requirements	1,108,673	1,126,900	1,303,494	1,342,895	1,419,776	C
BGC		Transformer Customer Requirements, Carryover	149,631	133,901	152,548	157,793	165,567	C
BHB		Meters Company Requirements	353,861	343,123	399,989	401,924	419,042	M
BIB		Meters Customer Requirements	531,536	560,133	632,797	642,190	663,044	C
		Sub-Totals:	5,882,077	6,059,867	6,938,120	7,026,758	7,385,645	
Code	#	Communications:Electric	2021	2022	2023	2024	2025	
ECE	1	Two Way Radio Replacements	2,500	0	0	0	0	O
ECE	21	Two Way Radio Replacements	0	6,000	0	0	0	O
ECE	22	Field Area Network	0	350,000	0	0	0	O
ECE	41	Two Way Radio Replacements	0	0	6,000	0	0	O
ECE	42	Field Area Network	0	0	350,000	0	0	O
ECE	61	Two Way Radio Replacements	0	0	0	6,000	0	O
ECE	62	Field Area Network	0	0	0	200,000	0	O
ECE	81	Two Way Radio Replacements	0	0	0	0	6,000	O
ECE	82	Field Area Network	0	0	0	0	200,000	O
		Sub-Totals:	2,500	356,000	356,000	206,000	206,000	
Code	#	Distribution:Electric	2021	2022	2023	2024	2025	
DAB		Overhead Line Extensions	56,186	0	0	0	0	C
DAB	20	Overhead Line Extensions - New Projects	0	56,285	0	0	0	C
DAB	40	Overhead Line Extensions - New Projects	0	0	74,136	0	0	C
DAB	60	Overhead Line Extensions - New Projects	0	0	0	75,813	0	C
DAB	80	Overhead Line Extensions - New Projects	0	0	0	0	82,841	C
DAC		Overhead Line Extensions, Carryover	23,777	0	0	0	0	C
DAC	20	Overhead Line Extensions, Carryover	0	25,622	0	0	0	C
DAC	40	Overhead Line Extensions, Carryover	0	0	31,355	0	0	C
DAC	60	Overhead Line Extensions, Carryover	0	0	0	31,885	0	C
DAC	80	Overhead Line Extensions, Carryover	0	0	0	0	33,923	C
DBB		Underground Line Extensions	397,458	0	0	0	0	C
DBB	20	Underground Line Extensions - New Projects	0	401,869	0	0	0	C
DBB	40	Underground Line Extensions - New Projects	0	0	516,495	0	0	C
DBB	60	Underground Line Extensions - New Projects	0	0	0	523,612	0	C
DBB	80	Underground Line Extensions - New Projects	0	0	0	0	574,852	C
DBC		Underground Line Extensions, Carryover	330,636	0	0	0	0	C
DBC	20	Underground Line Extensions, Carryovers	0	347,461	0	0	0	C
DBC	40	Underground Line Extensions, Carryovers	0	0	418,861	0	0	C
DBC	60	Underground Line Extensions, Carryovers	0	0	0	425,032	0	C
DBC	80	Underground Line Extensions, Carryovers	0	0	0	0	452,186	C
DCB		Street Light Projects	0	0	0	0	0	M
DCC		Street Light Projects, Carryover	0	0	0	0	0	M
DEB		Highway Projects	210,862	0	0	0	0	H
DEB	20	Highway Projects	0	207,474	0	0	0	H
DEB	40	Highway Projects	0	0	245,675	0	0	H
DEB	60	Highway Projects	0	0	0	248,340	0	H
DEB	80	Highway Projects	0	0	0	0	260,791	H
DEC		Highway Projects, Carryover	0	0	0	0	0	H
DEC	20	Highway Projects, Carryover	0	0	0	0	0	H
DEC	40	Highway Projects, Carryover	0	0	0	0	0	H
DEC	60	Highway Projects, Carryover	0	0	0	0	0	H
DEC	80	Highway Projects, Carryover	0	0	0	0	0	H
DPB	1	Distribution Pole Replacements	865,971	0	0	0	0	M
DPB	2	Reconstruct the 3348/50 Sub-Transmission Lines	5,237,092	0	0	0	0	M
DPB	4	23X1 – Install Stepdowns and Add Primary on New Amesbury Rd/Highland Rd, South Hampton	96,763	0	0	0	0	I
DPB	5	15X1 – Upgrade Stepdown Transformer, Pine St, Seabrook	10,010	0	0	0	0	I
DPB	7	Circuit 6W1 - Convert Jewell St. South Hampton to 8 kV	391,838	0	0	0	0	I

Electric Category	2021	2022	2023	2024	2025
Growth					
Customer Additions (C)	3,111,222	3,183,615	3,770,172	3,849,581	4,088,097
Subtotal Growth	3,111,222	3,183,615	3,770,172	3,849,581	4,088,097
Non-Growth					
Reliability (R)	716,346	375,000	375,000	375,000	375,000
Maintenance Replacement (M)	11,025,194	10,800,614	6,654,392	7,065,312	6,284,094
Mandated (H)	210,862	207,474	245,675	248,340	260,791
System Improvement (I)	927,730	3,167,717	5,279,000	5,683,500	5,810,812
Grid Modernization (G)	0	3,935,306	5,003,559	5,699,054	5,139,237
Other (O)	1,136,475	761,289	569,434	420,006	422,925
Subtotal Non-Growth	14,016,607	19,247,400	18,127,060	19,491,212	18,292,859
Total	17,127,829	22,431,015	21,897,232	23,340,793	22,380,956
	17,127,829	22,431,015	21,897,232	23,340,793	22,380,956
	0	0	0	0	0

Budget Category					
Annual Requirements Blankets	**2021**	**2022**	**2023**	**2024**	**2025**
T&D Improvements	1,684,915	1,678,433	1,979,272	1,999,984	2,101,847
New Customer Additions	513,325	531,444	640,486	650,361	695,908
Outdoor Lighting	160,078	169,980	208,782	208,664	218,745
Emergency & Storm Restoration	664,373	672,354	792,449	794,261	837,289
Billable work	454,353	455,819	536,232	535,219	564,933
Transformers	1,519,636	1,648,581	1,748,113	1,794,155	1,884,837
Meters	885,397	903,256	1,032,786	1,044,114	1,082,086
Sub-Totals:	**5,882,077**	**6,059,867**	**6,938,120**	**7,026,758**	**7,385,645**
Distribution					
Overhead Line Extensions over $20,000	79,963	81,907	105,491	107,698	116,764
Underground Line Extensions over $20,000	728,094	749,330	935,356	948,644	1,027,038
Street Light Projects	-	-	-	-	-
Telephone Company Requests	-	-	-	-	-
Highway Projects	210,862	207,474	245,675	248,340	260,791
Distribution Pole Replacements	865,971	1,082,560	1,267,836	1,294,946	1,357,779
Specific Projects: Distribution	8,140,374	11,304,783	9,357,889	10,867,954	9,344,749
Sub-Totals:	**10,025,264**	**13,426,054**	**11,912,247**	**13,467,582**	**12,107,121**
Substation					
Specific Projects: Substation	605,788	2,495,594	2,610,665	2,560,053	2,601,790
Sub-Totals:	**605,788**	**2,495,594**	**2,610,665**	**2,560,053**	**2,601,790**
Communications	**2,500**	**356,000**	**356,000**	**206,000**	**206,000**
Tools, Shop, Garage	**62,200**	**73,000**	**59,700**	**59,900**	**59,900**	
Laboratory	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**
Office	**1,000**	**3,500**	**3,500**	**3,500**	**3,500**
Structures	**542,000**	**10,000**	**10,000**	**10,000**	**10,000**
Distribution Totals:	**17,127,829**	**22,431,015**	**21,897,232**	**23,340,793**	**22,380,956**

Capital Budget 2021 UES Seacoast								
DPB	8	Arc Hazard Mitigation - 27X1 - Trundlebed Road, Kensington	271,587	0	0	0	0	M
DPB	9	Arc Hazard Mitigation - 56X1 - Newton Junction Road, Kingston	271,587	0	0	0	0	M
DPB	10	Arc Hazard Mitigation - 46X1 - Winnacunnet Road Tap, Hampton	271,587	0	0	0	0	M
DPB	11	Arc Hazard Mitigation - 5X3 - Stepdowns, Witch Lane, Plaistow	112,556	0	0	0	0	M
DPB	12	Porcelain Cutout Replacements, Various Locations	229,607	0	0	0	0	M
DPB	20	Distribution Projects, Unspecified	0	1,522,000	0	0	0	I
DPB	21	Distribution Pole Replacements	0	1,082,560	0	0	0	M
DPB	22	Circuit 56X1 - Convert Route 125, Kingston	0	424,123	0	0	0	I
DPB	23	Circuit 6W1 - Convert Main Ave. South Hampton to 8 kV	0	310,540	0	0	0	I
DPB	24	3342 & 3353 Lines - Replace Crossarms	0	355,566	0	0	0	M
DPB	25	20T1 Transformer: Transfer Load to 28X1	0	793,434	0	0	0	I
DPB	26	Circuit 27X1 – Re-conductor Drinkwater Rd	0	117,620	0	0	0	I
DPB	27	VVO Implementation - 19X2, 19X3	0	1,063,651	0	0	0	G
DPB	28	VVO Implementation - 11X - Portsmouth Ave.	0	1,025,805	0	0	0	G
DPB	29	Electric Vehicle Make Ready Program	0	120,000	0	0	0	G
DPB	40	Distribution Projects, Unspecified	0	0	5,279,000	0	0	I
DPB	41	Distribution Pole Replacements	0	0	1,267,836	0	0	M
DPB	43	VVO Implementation - Hampton Beach 3T3	0	0	864,207	0	0	G
DPB	44	VVO Implementation - 58X1	0	0	1,264,711	0	0	G
DPB	45	Electric Vehicle Make Ready Program	0	0	400,000	0	0	G
DPB	46	VVO Implementation - 18X1	0	0	1,174,971	0	0	G
DPB	60	Distribution Projects, Unspecified	0	0	0	5,683,500	0	I
DPB	61	Distribution Pole Replacements	0	0	0	1,294,946	0	M
DPB	62	VVO Implementation - 15X1	0	0	0	675,066	0	G
DPB	64	VVO Implementation - 47X1	0	0	0	546,731	0	G
DPB	65	VVO Implementation - 59X1	0	0	0	1,564,012	0	G
DPB	66	Electric Vehicle Make Ready Program	0	0	0	460,000	0	G
DPB	67	VVO Implementation - 2X2 and 2X3	0	0	0	1,563,645	0	G
DPB	80	Distribution Projects, Unspecified	0	0	0	0	5,810,812	I
DPB	81	Distribution Pole Replacements	0	0	0	0	1,357,779	M
DPB	83	Electric Vehicle Make Ready Program	0	0	0	0	520,000	G
DPB	89	VVO Implementation - High Street circuits	0	0	0	0	1,435,719	G
DPB	90	VVO Implementation - 43X1	0	0	0	0	1,203,218	G
DPC	1	Distribution Pole Replacements	96,587	0	0	0	0	I
DPC	3	Circuit 58X1, Convert Main St, Plaistow	332,532	0	0	0	0	I
DPC	3	Town of Exeter, Sidewalk Installations, Relocate Poles	57,393	0	0	0	0	O
DPC	4	18X1 R2 Recloser Replacement, Timberswamp Rd, Hampton	44,889	0	0	0	0	M
DPC	21	3348/50 Lines - Rebuild	0	5,197,044	0	0	0	M
DRB		Reliabilty Projects	339,657	0	0	0	0	R
DRB	20	Reliability Projects, Unspecified	0	375,000	0	0	0	R
DRB	40	Reliability Projects, Unspecified	0	0	375,000	0	0	R
DRB	60	Reliability Projects, Unspecified	0	0	0	375,000	0	R
DRB	80	Reliability Projects, Unspecified	0	0	0	0	375,000	R
DRC	1	Circuit 43X1 – Install Reclosers and Implement Distribution Automation	350,011	0	0	0	0	R
DRC	2	Circuit 19X2 - Distribution Automation Scheme with Portsmouth Ave	26,678	0	0	0	0	R
		Sub-Totals:	10,025,264	13,426,054	11,912,247	13,467,582	12,107,121	
Code	#	Tools, Shop, Garage:Electric	2021	2022	2023	2024	2025	
EAE	1	Tools, Shop & Garage – Normal Additions and Replacements	14,500	0	0	0	0	O
EAE	2	Purchase and Replace Rubber Goods	6,000	0	0	0	0	O
EAE	3	Purchase and Replace Hot Line Tools	4,500	0	0	0	0	O
EAE	4	Normal additions & replacement - tools & equipment Meter and Services	7,000	0	0	0	0	O
EAE	5	Normal Additions and Replacements- Tools and Equipment Substation	12,000	0	0	0	0	O
EAE	6	Purchase Power Back	3,200	0	0	0	0	O
EAE	21	Tools, Shop & Garage – Normal Additions and Replacements	0	14,700	0	0	0	O
EAE	22	Purchase and Replace Rubber Goods	0	6,100	0	0	0	O
EAE	23	Purchase and Replace Hot Line Tools	0	4,700	0	0	0	O
EAE	24	Normal additions & replacement - tools & equipment Meter and Services	0	7,000	0	0	0	O
EAE	25	Normal Additions and Replacements- Tools and Equipment Substation	0	12,000	0	0	0	O
EAE	26	Tools - Line Department, Unspecified	0	15,000	0	0	0	O
EAE	27	Purchase and Replace Tools for New Truck #2	0	7,500	0	0	0	O
EAE	28	Purchase and Replace Tools for New Truck #11	0	6,000	0	0	0	O
EAE	41	Tools, Shop & Garage – Normal Additions and Replacements	0	0	14,800	0	0	O
EAE	42	Purchase and Replace Rubber Goods	0	0	6,100	0	0	O
EAE	43	Purchase and Replace Hot Line Tools	0	0	4,800	0	0	O
EAE	44	Normal additions & replacement - tools & equipment Meter and Field Services	0	0	7,000	0	0	O
EAE	45	Normal Additions and Replacements- Tools and Equipment Substation	0	0	12,000	0	0	O
EAE	46	Tools - Line Department, Unspecified	0	0	15,000	0	0	O
EAE	61	Tools, Shop & Garage – Normal Additions and Replacements	0	0	0	14,800	0	O

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EAE	62	Purchase and Replace Rubber Goods		0	0	0	6,200	0	O
EAE	63	Purchase and Replace Hot Line Tools		0	0	0	4,900	0	O
EAE	64	Normal additions & replacement - tools & equipment Meter and Services		0	0	0	7,000	0	O
EAE	65	Normal Additions and Replacements- Tools and Equipment Substation		0	0	0	12,000	0	O
EAE	66	Tools - Line Department, Unspecified		0	0	0	15,000	0	O
EAE	69	Purchase Toolng for New Bucket Truck		15,000	0	0	0	0	O
EAE	81	Tools, Shop & Garage – Normal Additions and Replacements		0	0	0	0	14,800	O
EAE	82	Purchase and Replace Rubber Goods		0	0	0	0	6,200	O
EAE	83	Purchase and Replace Hot Line Tools		0	0	0	0	4,900	O
EAE	84	Normal additions & replacement - tools & equipment Meter and Services		0	0	0	0	7,000	O
EAE	85	Normal Additions and Replacements- Tools and Equipment Substation		0	0	0	0	12,000	O
EAE	86	Tools - Line Department, Unspecified		0	0	0	0	15,000	O
			Sub-Totals:	62,200	73,000	59,700	59,900	59,900	
Code	#	Laboratory:General		2021	2022	2023	2024	2025	
EBB	1	Lab Equipment - Normal Additions and Replacements		7,000	0	0	0	0	O
EBB	21	Lab Equipment - Normal Additions and Replacements		0	7,000	0	0	0	O
EBB	41	Lab Equipment - Normal Additions and Replacements		0	0	7,000	0	0	O
EBB	61	Lab Equipment - Normal Additions and Replacements		0	0	0	7,000	0	O
EBB	81	Lab Equipment - Normal Additions and Replacements		0	0	0	0	7,000	O
			Sub-Totals:	7,000	7,000	7,000	7,000	7,000	
Code	#	Office:Electric		2021	2022	2023	2024	2025	
EDE	1	Office Furniture & Equipment – Normal Additions & Replacements		1,000	0	0	0	0	O
EDE	21	Office Furniture & Equipment – Normal Additions and Replacements		0	3,500	0	0	0	O
EDE	41	Office Furniture & Equipment – Normal Additions and Replacements		0	0	3,500	0	0	O
EDE	61	Office Furniture & Equipment – Normal Additions and Replacements		0	0	0	3,500	0	O
EDE	81	Office Furniture & Equipment – Normal Additions and Replacements		0	0	0	0	3,500	O
			Sub-Totals:	1,000	3,500	3,500	3,500	3,500	
Code	#	Structures:General		2021	2022	2023	2024	2025	
GPB	1	Normal Improvements to Seacoast DOC Facilities		7,500	0	0	0	0	O
GPB	2	Plaistow Garage Improvements		27,000	0	0	0	0	O
GPB	21	Normal Improvements to Seacoast DOC Facility		0	10,000	0	0	0	O
GPB	41	Normal Improvements to Seacoast Facility		0	0	10,000	0	0	O
GPB	61	Normal Improvements to Seacoast DOC Facility		0	0	0	10,000	0	O
GPB	81	Normal Improvements to Seacoast DOC Facility		0	0	0	0	10,000	O
GPC	1	Construct New NH Seacoast Region Facility, Carryover		500,000	0	0	0	0	O
GPC	2	Sale of Kensington DOC Facility, Carryover		7,500	0	0	0	0	O
			Sub-Totals:	542,000	10,000	10,000	10,000	10,000	
Code	#	Substation:Electric		2021	2022	2023	2024	2025	
SPB	1	Replace Fence at Gilman Lane Substation		83,628	0	0	0	0	O
SPB	2	High Street Substation, Hampton - Replace 17W1 & 17W2 Relays		52,094	0	0	0	0	M
SPB	4	Guinea Substation, Hampton - Install Time Keeping System		13,916	0	0	0	0	O
SPB	5	Munt Hill Substation - Replace 28X1 Recloser		64,086	0	0	0	0	M
SPB	7	Rebuild Mill Lane Tap		257,557	0	0	0	0	O
SPB	8	Substation Stone Installation, Various Locations		49,295	0	0	0	0	O
SPB	21	Substation Yard Improvements		0	119,961	0	0	0	O
SPB	22	Exeter Substation, Replace Fence		0	82,839	0	0	0	O
SPB	23	OCB Replacement Project: 3342 Breaker at Guinea Switching S/S		0	296,422	0	0	0	M
SPB	24	Hampton Substation - Replace 2X2 & 2X3 Recloser		0	127,487	0	0	0	M
SPB	25	Form 3A Relay Replacement Project		0	34,046	0	0	0	M
SPB	26	Install SCADA for VVO (Grid Mod)		0	1,725,850	0	0	0	G
SPB	41	Substation Yard Improvements		0	0	133,234	0	0	O
SPB	42	Guinea - Replace EM Relaying		0	0	703,181	0	0	M
SPB	43	ABB PCD Relay & Recloser Replacement Project		0	0	142,928	0	0	M
SPB	45	OCB Replacement Project: 3359 Breaker at Guinea Switching S/S		0	0	331,652	0	0	M
SPB	47	Install SCADA for VVO (Grid Mod)		0	0	1,299,670	0	0	G
SPB	61	Substation Yard Improvements		0	0	0	133,606	0	O
SPB	62	OCB Replacement Project: 3343 Breaker at Guinea Switching S/S		0	0	0	331,931	0	M
SPB	63	ABB PCD Relay & Recloser Replacement Project		0	0	0	142,914	0	M
SPB	64	Install SCADA for VVO (Grid Mod)		0	0	0	889,600	0	G
SPB	81	Substation Yard Improvements		0	0	0	0	136,525	O
SPB	82	ABB PCD Relay & Recloser Replacement Project		0	0	0	0	146,360	M
SPB	83	OCB Replacement Project: 3354 Breaker at Guinea Switching S/S		0	0	0	0	338,605	M
SPB	84	Install SCADA for VVO (Grid Mod)		0	0	0	0	1,980,300	G
SPC	2	Replace Remaining Multi-Drop Telephone Landline Services		59,986	0	0	0	0	O
SPC	6	Westville Substation, Plaistow - Replace SCADA RTU		25,226	0	0	0	0	M
SPC	21	Rebuild Mill Lane Tap		0	108,989	0	0	0	O
SPC	61	Guinea - Replace EM Relaying		0	0	0	1,062,002	0	M
			Sub-Totals:	605,788	2,495,594	2,610,665	2,560,053	2,601,790	

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Code	#	Transportation:Electric	2021	2022	2023	2024	2025
FEB	1	Replace Pick up Truck #26 - Metering	1	0	0	0	0
FEB	2	Replace Pick Up Truck #30	1	0	0	0	0
FEB	3	Replace Pick Up Truck #24	1	0	0	0	0
FEB	21	Replace substation truck #5	0	1	0	0	0
FEB	22	Replace pick up #16	0	1	0	0	0
FEB	24	Replace pick up #34	0	1	0	0	0
FEB	25	Replace Digger Truck #11	0	1	0	0	0
FEB	31	Purchase New Bucket Truck	1	0	0	0	0
FEB	41	Replace Pick Up Truck #18- Project Leader	0	0	1	0	0
FEB	42	Replace Pick Up Truck #15-Field Services Supervisor	0	0	1	0	0
FEB	43	Replace Pick Up Truck #31 - Stock Room/Plow Truck	0	0	1	0	0
FEB	61	Replace pick up #3	0	0	0	1	0
FEB	62	Replace pick up #4	0	0	0	1	0
FEB	63	Replace pick up #7	0	0	0	1	0
FEB	64	Replace pick up #36	0	0	0	1	0
FEB	81	Replace Pick Up Truck #22 - Substation	0	0	0	0	1
FEB	82	Replace pick up #35-Line supervisor	0	0	0	0	1
		Totals:	17,127,829	22,431,015	21,897,232	23,340,793	22,380,956

	Capital Budget Spending															
	Actual											Forecast				
Electric Category	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Growth																
Customer Additions (C)	2,928,000	3,197,600	3,599,600	3,754,100	4,227,000	3,612,300	4,030,800	4,496,900	5,924,000	5,450,400	5,682,300	5,060,266	5,226,172	6,175,383	6,307,286	6,680,272
Subtotal Growth	2,928,000	3,197,600	3,599,600	3,754,100	4,227,000	3,612,300	4,030,800	4,496,900	5,924,000	5,450,400	5,682,300	5,060,266	5,226,172	6,175,383	6,307,286	6,680,272
Non-Growth																
Reliability (R)	484,700	316,000	821,000	594,800	137,300	608,900	346,100	667,000	740,000	920,500	867,600	1,177,285	750,000	750,000	821,457	750,000
Maintenance Replacement (M)	6,707,400	6,586,800	3,960,400	6,491,000	7,063,200	7,307,400	6,359,800	8,823,800	8,617,600	11,149,200	9,048,800	16,548,634	15,375,776	11,222,996	11,209,592	10,551,594
Mandated (H)	-87,400	828,100	409,700	30,900	251,800	1,014,600	1,361,200	154,900	582,400	23,500	333,600	318,584	297,812	352,591	1,012,579	1,043,251
System Improvement (I)	2,115,300	3,216,300	2,103,000	4,509,100	5,626,700	9,595,700	10,692,900	6,106,700	967,900	4,509,900	5,629,400	2,831,181	5,827,249	7,263,344	6,863,031	8,522,006
Grid Modernization (G)								0	0	0	0	0	4,979,977	7,304,037	8,013,500	10,450,675
Other (O)	1,291,300	2,396,000	2,072,600	791,900	2,224,200	1,266,900	396,900	3,500,100	1,455,200	7,015,300	15,684,100	5,650,327	5,069,579	3,909,635	3,925,711	3,467,395
Subtotal Non-Growth	10,511,300	13,343,200	9,366,700	12,417,700	15,303,200	19,793,500	19,156,900	19,252,500	12,363,100	23,618,400	31,563,500	26,526,011	32,300,393	30,802,603	31,845,870	34,784,921
Total	13,439,300	16,540,800	12,966,300	16,171,800	19,530,200	23,405,800	23,187,700	23,749,400	18,287,100	29,068,800	37,245,800	31,586,277	37,526,565	36,977,986	38,153,156	41,465,193
							23,187,700									
% Growth	22%	19%	28%	23%	22%	15%	17%	19%	32%	19%	15%	16%	14%	17%	17%	16%
% Non-Growth	78%	81%	72%	77%	78%	85%	83%	81%	68%	81%	85%	84%	86%	83%	83%	84%

	Low	High
% Growth	15%	32%
% Non-Growth	68%	85%

	Capital Budget Spending															
	Actual											Forecast				
Electric Category	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Growth																
Customer Additions (C)	2,928	3,198	3,600	3,754	4,227	3,612	4,031	4,497	5,924	5,450	5,682	5,060	5,226	6,175	6,307	6,680
Subtotal Growth	2,928	3,198	3,600	3,754	4,227	3,612	4,031	4,497	5,924	5,450	5,682	5,060	5,226	6,175	6,307	6,680
Non-Growth																
Reliability (R)	485	316	821	595	137	609	346	667	740	921	868	1,177	750	750	821	750
Maintenance Replacement (M)	6,707	6,587	3,960	6,491	7,063	7,307	6,360	8,824	8,618	11,149	9,049	16,549	15,376	11,223	11,210	10,552
Mandated (H)	-87	828	410	31	252	1,015	1,361	155	582	24	334	319	298	353	1,013	1,043
System Improvement (I)	2,115	3,216	2,103	4,509	5,627	9,596	10,693	6,107	968	4,510	5,629	2,831	5,827	7,263	6,863	8,522
Grid Modernization (G)	0	0	0	0	0	0	0	0	0	0	0	0	4,980	7,304	8,014	10,451
Other (O)	1,291	2,396	2,073	792	2,224	1,267	397	3,500	1,455	7,015	15,684	5,650	5,070	3,910	3,926	3,467
Subtotal Non-Growth	10,511	13,343	9,367	12,418	15,303	19,794	19,157	19,253	12,363	23,618	31,564	26,526	32,300	30,803	31,846	34,785
Total	13,439	16,541	12,966	16,172	19,530	23,406	23,188	23,749	18,287	29,069	37,246	31,586	37,527	36,978	38,153	41,465
% Growth	22%	19%	28%	23%	22%	15%	17%	19%	32%	19%	15%	16%	14%	17%	17%	16%
% Non-Growth	78%	81%	72%	77%	78%	85%	83%	81%	68%	81%	85%	84%	86%	83%	83%	84%

	Capital Budget Spending															
	Actual											Forecast				
Electric Category	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
T&D Improvements	2,090,600	1,572,700	2,241,100	2,037,800	2,695,600	2,590,000	2,629,900	3,379,100	3,010,300	2,466,000	2,758,700	2,878,068	2,895,380	3,415,493	3,444,473	3,622,165
New Customer Additions	700,300	588,600	691,800	694,600	920,400	1,041,100	856,800	986,600	1,064,300	888,100	1,366,900	957,175	983,925	1,187,145	1,206,173	1,286,522
Outdoor Lighting	391,300	346,900	354,300	353,500	309,300	329,200	389,500	305,200	295,700	309,600	248,700	267,712	281,423	342,710	342,701	359,628
Emergency & Storm Restoration	796,800	910,000	728,900	908,700	900,200	949,700	748,500	2,031,000	1,220,600	2,315,600	(81,700)	1,339,224	1,354,155	1,590,379	1,597,322	1,683,570
Billable work	183,400	193,300	704,300	819,200	611,600	521,300	575,900	480,500	591,200	383,900	637,000	676,909	683,558	809,010	812,547	857,620
Transformers	1,650,300	2,015,700	2,736,700	2,172,300	2,186,400	2,061,800	1,794,100	2,342,000	3,748,400	2,938,700	3,367,900	2,434,392	2,582,342	2,824,038	2,902,620	3,054,949
Meters	326,700	368,900	358,800	567,100	503,200	579,100	864,600	1,062,500	1,401,400	1,462,300	1,622,000	1,466,771	1,547,410	1,763,253	1,787,365	1,852,832
Sub-Totals:	**6,139,400**	**5,996,100**	**7,815,900**	**7,553,200**	**8,126,700**	**8,072,200**	**7,859,300**	**10,586,900**	**11,331,900**	**10,764,200**	**9,919,500**	**10,020,251**	**10,328,193**	**11,932,028**	**12,093,201**	**12,717,286**
Distribution																
Overhead Line Extensions	66,700	190,100	120,900	255,800	39,700	63,600	103,000	78,400	151,600	173,200	140,900	115,015	116,398	148,732	150,558	162,610
Underground Line Extensions	309,400	374,500	482,300	591,100	671,700	765,900	855,400	511,000	780,400	987,500	452,500	966,920	994,010	1,248,444	1,266,319	1,366,936
Street Light Projects	-	28,000	-	4,300	-	3,500	(1,300)	-	-	-	-	4,657	4,737	5,637	5,625	5,929
Telephone Company Requests	69,600	-	-	-	81,800	1,003,100	301,200	668,300	267,200	-	-	13,365	18,985	22,665	22,580	23,788
Highway Projects	(111,600)	828,100	409,700	30,900	170,000	11,500	1,060,000	(519,400)	315,200	23,500	333,600	318,584	297,812	352,591	1,012,579	1,043,251
Distribution Pole Replacements	698,500	599,100	975,400	1,168,500	1,577,900	1,310,000	1,437,500	1,522,200	1,614,000	2,285,500	3,335,000	1,551,171	1,809,384	2,153,189	2,214,972	2,334,567
Specific Projects: Distribution	5,197,200	2,615,100	2,432,700	4,328,400	1,993,500	2,841,100	1,492,200	4,929,900	2,077,200	6,311,800	4,314,900	12,191,099	13,911,248	11,050,740	14,035,294	15,819,016
Sub-Totals:	**6,229,800**	**4,634,900**	**4,421,000**	**6,379,000**	**4,534,600**	**5,998,700**	**5,248,000**	**7,190,400**	**5,205,600**	**9,781,500**	**8,576,900**	**15,160,811**	**17,152,574**	**14,981,998**	**18,707,927**	**20,756,097**
Substation																
Specific Projects: Substation	423,800	1,727,400	578,200	2,044,400	5,177,300	8,774,600	9,615,900	2,748,000	614,000	2,848,300	3,212,700	1,699,762	5,415,393	6,420,793	3,693,529	4,797,465
Sub-Totals:	**423,800**	**1,727,400**	**578,200**	**2,044,400**	**5,177,300**	**8,774,600**	**9,615,900**	**2,748,000**	**614,000**	**2,848,300**	**3,212,700**	**1,699,762**	**5,415,393**	**6,420,793**	**3,693,529**	**4,797,465**
Communications	483,500	3,956,600	(19,200)	(57,600)	1,449,800	360,300	310,000	2,767,800	836,700	1,803,900	1,763,400	3,872,953	4,178,905	3,197,467	3,051,599	2,712,445
Tools, Shop, Garage	127,600	94,900	89,600	81,500	169,900	111,200	117,200	115,100	114,600	188,700	108,700	214,500	194,500	126,700	127,900	127,900
Laboratory	10,100	25,200	14,200	17,700	11,300	55,200	13,400	23,900	11,800	61,500	10,100	14,000	14,000	14,000	14,000	14,000
Office	4,500	7,200	2,000	2,200	5,000	700	4,300	5,000	10,000	25,500	1,300	4,000	7,000	7,000	7,000	7,000
Structures	20,600	98,500	64,600	151,400	55,600	32,900	19,600	312,300	162,500	3,595,200	13,653,200	600,000	236,000	298,000	458,000	333,000
Distribution Totals:	**13,439,300**	**16,540,800**	**12,966,300**	**16,171,800**	**19,530,200**	**23,405,800**	**23,187,700**	**23,749,400**	**18,287,100**	**29,068,800**	**37,245,800**	**31,586,277**	**37,526,565**	**36,977,986**	**38,153,156**	**41,465,193**

5-Year Capital Budget

Budget Category	Actual Spending											5-Year Budget Forecast				
Annual Requirements Blankets: Electric	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
T&D Improvements	2,090,600	1,572,700	2,241,100	2,037,800	2,695,600	2,590,000	$ 2,629,900	$ 3,379,100	$ 3,010,300	$ 2,466,000	$ 2,758,700	$ 2,878,068	$ 2,895,380	$ 3,415,493	$ 3,444,473	$ 3,622,165
New Customer Additions	700,300	588,600	691,800	694,600	920,400	1,041,100	856,800	986,600	1,064,300	888,100	1,366,900	957,175	983,925	1,187,145	1,206,173	1,286,522
Outdoor Lighting	391,300	346,900	354,300	353,500	309,300	329,200	389,500	305,200	295,700	309,600	248,700	267,712	281,423	342,710	342,701	359,628
Emergency & Storm Restoration	796,800	910,000	728,900	908,700	900,200	949,700	748,500	2,031,000	1,220,600	2,315,600	(81,700)	1,339,224	1,354,155	1,590,379	1,597,322	1,683,570
Billable work	183,400	193,300	704,300	819,200	611,600	521,300	575,900	480,500	591,200	383,900	637,000	676,909	683,558	809,010	812,547	857,620
Transformers	1,650,300	2,015,700	2,736,700	2,172,300	2,186,400	2,061,800	1,794,100	2,342,000	3,748,400	2,938,700	3,367,900	2,434,392	2,582,342	2,824,038	2,902,620	3,054,949
Meters	326,700	368,900	358,800	567,100	503,200	579,100	864,600	1,062,500	1,401,400	1,462,300	1,622,000	1,466,771	1,547,410	1,763,253	1,787,365	1,852,832
Sub-Totals:	**$ 6,139,400**	**$ 5,996,100**	**$ 7,815,900**	**$ 7,553,200**	**$ 8,126,700**	**$ 8,072,200**	**$ 7,859,300**	**$10,586,900**	**$11,331,900**	**$10,764,200**	**$ 9,919,500**	**$10,020,251**	**$ 10,328,193**	**$ 11,932,028**	**$ 12,093,201**	**$ 12,717,286**
Distribution: Electric																
Overhead Line Extensions over $20,000	66,700	190,100	120,900	255,800	39,700	63,600	103,000	78,400	151,600	173,200	140,900	115,015	116,398	148,732	150,558	162,610
Underground Line Extensions over $20,000	309,400	374,500	482,300	591,100	671,700	765,900	855,400	511,000	780,400	987,500	452,500	966,920	994,010	1,248,444	1,266,319	1,366,936
Street Light Projects	-	28,000	-	4,300	-	3,500	(1,300)	-	-	-	-	4,657	4,737	5,637	5,625	5,929
Telephone Company Requests	69,600	-	-	-	81,800	1,003,100	301,200	668,300	267,200	-	-	13,365	18,985	22,665	22,580	23,788
Highway Projects	(111,600)	828,100	409,700	30,900	170,000	11,500	1,060,000	(519,400)	315,200	23,500	333,600	318,584	297,812	352,591	1,012,579	1,043,251
Distribution Pole Replacements	698,500	599,100	975,400	1,168,500	1,577,900	1,310,000	1,437,500	1,522,200	1,614,000	2,285,500	3,335,000	1,551,171	1,809,384	2,153,189	2,214,972	2,334,567
Specific Projects: Distribution	5,197,200	2,615,100	2,432,700	4,328,400	1,993,500	2,841,100	1,492,200	4,929,900	2,077,200	6,311,800	4,314,900	12,191,099	13,911,248	11,050,740	14,035,294	15,819,016
Sub-Totals:	**$ 6,229,800**	**$ 4,634,900**	**$ 4,421,000**	**$ 6,379,000**	**$ 4,534,600**	**$ 5,998,700**	**$ 5,248,000**	**$ 7,190,400**	**$ 5,205,600**	**$ 9,781,500**	**$ 8,576,900**	**$15,160,811**	**$ 17,152,574**	**$ 14,981,998**	**$ 18,707,927**	**$ 20,756,097**
Substation:Electric																
Specific Projects: Substation	423,800	1,727,400	578,200	2,044,400	5,177,300	8,774,600	9,615,900	2,748,000	614,000	2,848,300	3,212,700	1,699,762	5,415,393	6,420,793	3,693,529	4,797,465
Sub-Totals:	**$ 423,800**	**$ 1,727,400**	**$ 578,200**	**$ 2,044,400**	**$ 5,177,300**	**$ 8,774,600**	**$ 9,615,900**	**$ 2,748,000**	**$ 614,000**	**$ 2,848,300**	**$ 3,212,700**	**$ 1,699,762**	**$ 5,415,393**	**$ 6,420,793**	**$ 3,693,529**	**$ 4,797,465**
Communications	**483,500**	**3,956,600**	**(19,200)**	**(57,600)**	**1,449,800**	**360,300**	**$ 310,000**	**$ 2,767,800**	**$ 836,700**	**$ 1,803,900**	**$ 1,763,400**	**$ 3,872,953**	**$ 4,178,905**	**$ 3,197,467**	**$ 3,051,599**	**$ 2,712,445**
Tools, Shop, Garage	**127,600**	**94,900**	**89,600**	**81,500**	**169,900**	**111,200**	**$ 117,200**	**$ 115,100**	**$ 114,600**	**$ 188,700**	**$ 108,700**	**$ 214,500**	**$ 194,500**	**$ 126,700**	**$ 127,900**	**$ 127,900**
Laboratory	**10,100**	**25,200**	**14,200**	**17,700**	**11,300**	**55,200**	**$ 13,400**	**$ 23,900**	**$ 11,800**	**$ 61,500**	**$ 10,100**	**$ 14,000**	**$ 14,000**	**$ 14,000**	**$ 14,000**	**$ 14,000**
Office	**4,500**	**7,200**	**2,000**	**2,200**	**5,000**	**700**	**$ 4,300**	**$ 5,000**	**$ 10,000**	**$ 25,500**	**$ 1,300**	**$ 4,000**	**$ 7,000**	**$ 7,000**	**$ 7,000**	**$ 7,000**
Structures	**20,600**	**98,500**	**64,600**	**151,400**	**55,600**	**32,900**	**$ 19,600**	**$ 312,300**	**$ 162,500**	**$ 3,595,200**	**$13,653,200**	**$ 600,000**	**$ 236,000**	**$ 298,000**	**$ 458,000**	**$ 333,000**
Distribution Totals:	**$13,439,300**	**$16,540,800**	**$12,966,300**	**$16,171,800**	**$19,530,200**	**$23,405,800**	**$23,187,700**	**$23,749,400**	**$18,287,100**	**$29,068,800**	**$37,245,800**	**$31,586,277**	**$ 37,526,565**	**$ 36,977,986**	**$ 38,153,156**	**$ 41,465,193**

5 Year Budget Starting 2021 • Unitil Service Corp													UES Allocations				
Priority •	Status	Code	Item	2021	2022	2023	2024	2025	Sub-Total	Catgory	Division	2021	2022	2023	2024	2025
3 •	[**A**] Accepted	GSC01	Replace and Upgrade Gas SCADA Master	0	0	0	0	0	0	S	Gas	-	-	-	-	-
3 •	[**A**] Accepted	GSC02	2021 General Software Enhancements	75,000	0	0	0	0	75,000	S	All	24,000	-	-	-	-
2 •	[**A**] Accepted	GSC04	Reporting Blanket	100,000	0	0	0	0	100,000	S	All	32,000	-	-	-	-
2 •	[**A**] Accepted	GSC05	2021 Regulatory Work Blanket	22,000	0	0	0	0	22,000	S	All	7,040	-	-	-	-
1 •	[**A**] Accepted	GSC06	2021 Customer Facing Enhancements	1,067,465	0	0	0	0	1,067,465	S	All	341,589	-	-	-	-
1 •	[**A**] Accepted	GSC08	Metersense Upgrade 2021	18,800	0	0	0	0	18,800	S	All	6,016	-	-	-	-
1 •	[**A**] Accepted	GSC09	AMI Command Center Upgrade to 8.0	35,000	0	0	0	0	35,000	S	All	11,200	-	-	-	-
2 •	[**A**] Accepted	GSC10	Close - Workflow & Electronic Review	50,000	0	0	0	0	50,000	S	All	16,000	-	-	-	-
1 •	[**A**] Accepted	GSC11	FERC to XBRL	138,000	0	0	0	0	138,000	S	All	44,160	-	-	-	-
3 •	[**A**] Accepted	GSC14	Virtual Payables - Credit Card	3,000	0	0	0	0	3,000	S	All	960	-	-	-	-
2 •	[**A**] Accepted	GSC15	Web Ops Modernization	200,000	0	0	0	0	200,000	S	All	64,000	-	-	-	-
2 •	[**A**] Accepted	GSC16	Advanced Distribution Management System (ADMS) - Grid Mod	1,030,000	0	0	0	0	1,030,000	G	Electric	710,700	-	-	-	-
2 •	[**A**] Accepted	GSC17	Unitil website upgrade - Year 2 of 2	170,000	0	0	0	0	170,000	S	All	54,400	-	-	-	-
2 •	[**A**] Accepted	GSC19	Modernize GTRAC & CSI	72,000	0	0	0	0	72,000	S	All	23,040	-	-	-	-
2 •	[**A**] Accepted	GSC21	Customer Experience Mgmt Project - Year 2 of 3	2,665,000	0	0	0	0	2,665,000	S	All	852,800	-	-	-	-
1 •	[**A**] Accepted	GSC22	Customer exports used for Gas Engineering CMM Module	20,400	0	0	0	0	20,400	S	Gas	-	-	-	-	-
2 •	[**A**] Accepted	GSC25	GTI / Pxio VR Training Project	135,000	0	0	0	0	135,000	S	Gas	-	-	-	-	-
1 •	[**A**] Accepted	GSC26	Command Center Upgrade to Cellular	68,000	0	0	0	0	68,000	S	All	21,760	-	-	-	-
1 •	[**A**] Accepted	GSC27	TOU Testing	375,950	0	0	0	0	375,950	S	Electric	259,406	-	-	-	-
2 •	[**A**] Accepted	GSC28	Cloud Data Warehouse, Carryover	50,000	0	0	0	0	50,000	S	All	16,000	-	-	-	-
2 •	[**A**] Accepted	GSC29	DevOps Implementation Project, Carryover	150,000	0	0	0	0	150,000	S	All	48,000	-	-	-	-
2 •	[**A**] Accepted	GSC30	Damage Assessment Mobile Platform - Grid Mod, Carry Over	125,000	0	0	0	0	125,000	G	Electric	86,250	-	-	-	-
2 •	[**A**] Accepted	GSC31	Ubisense Custom Enhancements, Carryover	155,059	0	0	0	0	155,059	S	Gas	-	-	-	-	-
1 •	[**A**] Accepted	GSC32	USC Time & Billing Upgrade/Replacement, Carryover	50,000	0	0	0	0	50,000	S	All	16,000	-	-	-	-
3 •	[**A**] Accepted	GSC33	ADP Modules - Data Cloud, Time Off and Time Entry, Carryover	141,000	0	0	0	0	141,000	S	All	45,120	-	-	-	-
2 •	[**A**] Accepted	GSC35	Ring Central Phase II	76,600	0	0	0	0	76,600	S	All	24,512	-	-	-	-
2 •	[**A**] Accepted	GSC36	Data Sharing: Unitil Core Platform Design	600,000	0	0	0	0	600,000	G	Electric	414,000	-	-	-	-
2 •	[**A**] Accepted	GSC37	S&S Oracle Upgrade Test Environment	200,000	0	0	0	0	200,000	S	All	64,000	-	-	-	-
2 •	[**A**] Accepted	GSC38	Data Sharing: Community Aggregation Module	200,000	0	0	0	0	200,000	G	Electric	138,000	-	-	-	-
2 •	[**A**] Accepted	GSC39	Grid Mod: AMI/OMS Phase 2 Collector Integration	100,000	0	0	0	0	100,000	G	Electric	69,000	-	-	-	-
2 •	[A] Accepted	GSC01	GIS Upgrade to Utility Network	0	395,000	0	0	0	395,000	S	All	-	126,400	-	-	-
3 •	[A] Accepted	GSC02	2022 General Software Enhancements	0	217,799	0	0	0	217,799	S	All	-	69,696	-	-	-
2 •	[A] Accepted	GSC03	CMS Enhancements - Yr 4 CMS Reporting	0	50,000	0	0	0	50,000	S	All	-	16,000	-	-	-
2 •	[A] Accepted	GSC05	Reporting Blanket	0	60,000	0	0	0	60,000	S	All	-	19,200	-	-	-
2 •	[A] Accepted	GSC06	Regulatory Work Blanket	0	100,000	0	0	0	100,000	S	All	-	32,000	-	-	-
1 •	[**A**] Accepted	GSC07	2022 Customer Facing Enhancements	0	500,000	0	0	0	500,000	S	All	-	160,000	-	-	-
1 •	[**A**] Accepted	GSC10	MV-90xi Upgrade V6.0 to X.X 2022	0	90,000	0	0	0	90,000	S	Electric	-	62,100	-	-	-
2 •	[A] Accepted	GSC12	Cloud Discovery and Migration Work	0	500,000	0	0	0	500,000	S	All	-	160,000	-	-	-
3 •	[**A**] Accepted	GSC12	Create new Electric Estimating Model	0	59,500	0	0	0	59,500	S	Electric	-	41,055	-	-	-
2 •	[A] Accepted	GSC13	Cognos Upgrade to V11 Analytics	0	72,220	0	0	0	72,220	S	All	-	23,110	-	-	-
2 •	[A] Accepted	GSC13	Web Ops Modernization	0	200,000	0	0	0	200,000	S	All	-	64,000	-	-	-
2 •	[A] Accepted	GSC13	TOU and Advanced Rate Design Implementation	0	500,000	0	0	0	500,000	S	Electric	-	345,000	-	-	-
2 •	[A] Accepted	GSC14	Customer Experience Mgmt Project Year 3 of 3	0	########	0	0	0	1,940,000	S	All	-	620,800	-	-	-
2 •	[A] Accepted	GSC15	Distributed Energy Resource Management System (DERMS) - Grid Mod	0	475,000	0	0	0	475,000	G	Electric	-	327,750	-	-	-
1 •	[**A**] Accepted	GSC16	AMI Command Center Upgrade - 2022	0	92,000	0	0	0	92,000	S	All	-	29,440	-	-	-
2 •	[A] Accepted	GSC17	Advanced Distribution Management System (ADMS) - Grid Mod	0	640,000	0	0	0	640,000	G	Electric	-	441,600	-	-	-
2 •	[A] Accepted	GSC18	Flexi Upgrade	0	75,000	0	0	0	75,000	S	All	-	24,000	-	-	-
2 •	[A] Accepted	GSC18	Utility Bill Redesign	0	171,575	0	0	0	171,575	S	All	-	54,904	-	-	-
2 •	[A] Accepted	GSC19	Smart Speaker Integration	0	150,000	0	0	0	150,000	S	All	-	48,000	-	-	-
1 •	[**A**] Accepted	GSC20	Metersense Upgrade 2022	0	50,000	0	0	0	50,000	S	All	-	16,000	-	-	-
2 •	[A] Accepted	GSC21	Payment Alternatives	0	150,000	0	0	0	150,000	S	All	-	48,000	-	-	-
2 •	[A] Accepted	GSC24	Construction QA Manager System	0	205,000	0	0	0	205,000	S	Gas	-	-	-	-	-
2 •	[A] Accepted	GSC36	Gas EDI/Complete Billing	0	0	0	0	0	0	S	Gas	-	-	-	-	-
2 •	[A] Accepted	GSC44	Flexi Migration to Cloud	0	50,000	0	0	0	50,000	S	All	-	16,000	-	-	-
3 •	[**A**] Accepted	GSC47	Capital Budget System	0	450,000	0	0	0	450,000	S	All	-	144,000	-	-	-
2 •	[A] Accepted	GSC48	Data Sharing: Behind the Meter Module	0	105,000	0	0	0	105,000	G	Electric	-	72,450	-	-	-
2 •	[A] Accepted	GSC01	Distributed Energy Resource Management System (DERMS) - Grid Mod	0	0	275,000	0	0	275,000	G	Electric	-	-	189,750	-	-
3 •	[**A**] Accepted	GSC01	Power Plan Upgrade	0	0	295,000	0	0	295,000	S	All	-	-	94,400	-	-
3 •	[**A**] Accepted	GSC02	2023 General Software Enhancements	0	0	250,469	0	0	250,469	S	All	-	-	80,150	-	-
2 •	[A] Accepted	GSC02	Work Order Job Scheduler	0	0	350,000	0	0	350,000	S	All	-	-	112,000	-	-
2 •	[A] Accepted	GSC03	CMS Enhancements - Yr 5 Inspection Rewrite	0	0	100,000	0	0	100,000	S	Gas	-	-	-	-	-

5 Year Budget Starting 2021 •													**UES Allocations**				
Unitil Service Corp																	
Priority •	Status	Code	Item	2021	2022	2023	2024	2025	Sub-Total	Catgory	Division		2021	2022	2023	2024	2025
2 •	[A] Accepted	GSC04	Reporting Blanket	0	0	48,750	0	0	48,750	S	All		-	-	15,600	-	-
2 •	[A] Accepted	GSC05	Regulatory Work Blanket	0	0	100,000	0	0	100,000	S	All		-	-	32,000	-	-
1 •	[**A**] Accepted	GSC06	2023 Customer Facing Enhancements	0	0	########	0	0	1,012,958	S	All		-	-	324,147	-	-
1 •	[**A**] Accepted	GSC07	Metersense Upgrade 2023	0	0	50,000	0	0	50,000	S	All		-	-	16,000	-	-
1 •	[**A**] Accepted	GSC08	AMI Command Center Upgrade - 2023	0	0	92,000	0	0	92,000	S	All		-	-	29,440	-	-
2 •	[A] Accepted	GSC10	Personalized selling / next best action	0	0	500,000	0	0	500,000	s	All		-	-	160,000	-	-
2 •	[A] Accepted	GSC11	Cloud Discovery and Migration Work	0	0	600,000	0	0	600,000	S	All		-	-	192,000	-	-
2 •	[A] Accepted	GSC12	Web Ops Modernization	0	0	200,000	0	0	200,000	S	All		-	-	64,000	-	-
2 •	[A] Accepted	GSC15	DevOps Implementation Project	0	0	232,500	0	0	232,500	S	All		-	-	74,400	-	-
2 •	[A] Accepted	GSC16	Customer Experience System Phase 2	0	0	600,000	0	0	600,000	S	All		-	-	192,000	-	-
2 •	[A] Accepted	GSC17	Advanced Distribution Management System (ADMS) - Grid Mod	0	0	275,000	0	0	275,000	G	Electric		-	-	189,750	-	-
3 •	[**A**] Accepted	GSC20	Capital Budget System	0	0	470,000	0	0	470,000	S	All		-	-	150,400	-	-
2 •	[A] Accepted	GSC21	Data Sharing: System Data Module	0	0	75,000	0	0	75,000	G	Electric		-	-	51,750	-	-
2 •	[A] Accepted	GSC01	Flexi Upgrade	0	0	0	75,000	0	75,000	S	All		-	-	-	24,000	-
1 •	[**A**] Accepted	GSC03	Metersense Upgrade 2024	0	0	0	50,000	0	50,000	S	All		-	-	-	16,000	-
1 •	[**A**] Accepted	GSC04	AMI Command Center Upgrade - 2024	0	0	0	92,000	0	92,000	S	All		-	-	-	29,440	-
3 •	[**A**] Accepted	GSC05	2024 General Software Enhancements	0	0	0	350,000	0	350,000	S	All		-	-	-	112,000	-
2 •	[A] Accepted	GSC06	Reporting Blanket	0	0	0	48,750	0	48,750	S	All		-	-	-	15,600	-
2 •	[A] Accepted	GSC08	Web Ops Modernization	0	0	0	500,000	0	500,000	S	All		-	-	-	160,000	-
2 •	[A] Accepted	GSC09	Cloud Discovery and Migration Work	0	0	0	500,000	0	500,000	S	All		-	-	-	160,000	-
2 •	[A] Accepted	GSC10	DevOps Implementation Project	0	0	0	482,500	0	482,500	S	All		-	-	-	154,400	-
1 •	[**A**] Accepted	GSC12	Artificial Intelligence Enterprise Solution	0	0	0	150,000	0	150,000	G	All		-	-	-	48,000	-
2 •	[A] Accepted	GSC14	Customer Engagement Vision Items	0	0	0	200,000	0	200,000	S	All		-	-	-	64,000	-
2 •	[A] Accepted	GSC16	Advanced Distribution Management System (ADMS) - Grid Mod	0	0	0	175,000	0	175,000	G	Electric		-	-	-	120,750	-
2 •	[A] Accepted	GSC23	AOC Click to Report System	0	0	0	180,000	0	180,000	S	All		-	-	-	57,600	-
1 •	[**A**] Accepted	GSC45	FCS Upgrade	0	0	0	15,000	0	15,000	S	All		-	-	-	4,800	-
2 •	[A] Accepted	GSC46	Locusview Mobile / CMS Integration	0	0	0	30,000	0	30,000	S	Gas		-	-	-	-	-
1 •	[**A**] Accepted	GSC47	enQuesta Ver. 6.0 Upgrade	0	0	0	########	0	3,281,279	S	All		-	-	-	1,050,009	-
2 •	[A] Accepted	GSC48	Regulatory Work Blanket	0	0	0	100,000	0	100,000	S	All		-	-	-	32,000	-
1 •	[**A**] Accepted	GSC02	Metersense Upgrade 2025	0	0	0	0	50,000	50,000	S	All		-	-	-	-	16,000
1 •	[**A**] Accepted	GSC03	AMI Command Center Upgrade - 2025	0	0	0	0	92,000	92,000	S	All		-	-	-	-	29,440
2 •	[A] Accepted	GSC07	Regulatory Work Blanket	0	0	0	0	100,000	100,000	S	All		-	-	-	-	32,000
1 •	[**A**] Accepted	GSC22	enQuesta Ver. 6.0 Upgrade	0	0	0	0	########	1,640,641	S	All		-	-	-	-	525,005
3 •	[**A**] Accepted	GSC23	2025 General Software Enhancements	0	0	0	0	350,000	350,000	S	All		-	-	-	-	112,000
2 •	[A] Accepted	GSC24	Reporting Blanket	0	0	0	0	48,750	48,750	S	All		-	-	-	-	15,600
2 •	[A] Accepted	GSC25	Web Ops Modernization	0	0	0	0	500,000	500,000	S	All		-	-	-	-	160,000
2 •	[A] Accepted	GSC26	Cloud Discovery and Migration Work	0	0	0	0	500,000	500,000	S	All		-	-	-	-	160,000
2 •	[A] Accepted	GSC27	DevOps Implementation Project	0	0	0	0	482,500	482,500	S	All		-	-	-	-	154,400
3 •	[**A**] Accepted	GSC28	Blanket Data Project	0	0	0	0	########	1,000,000	S	All		-	-	-	-	320,000
2 •	[A] Accepted	GSC29	Customer Engagement Marketplace	0	0	0	0	250,000	250,000	S	All		-	-	-	-	80,000
2 •	[A] Accepted	GSC30	Grid Mod Improvements	0	0	0	0	500,000	500,000	G	Electric		-	-	-	-	345,000
Sub-Totals:				8,093,274	########	########	########	########					3,389,952	2,961,505	1,967,787	2,048,599	1,949,445
1 •	[**A**] Accepted	GPC01	2021 Cyber Security Enhancements	45,000	0	0	0	0	45,000	N	All		14,400	-	-	-	-
2 •	[**A**] Accepted	GPC02	2021 Infrastructure PC and Network	855,252	0	0	0	0	855,252	N	All		273,681	-	-	-	-
2 •	[**A**] Accepted	GPC04	Gas SCADA Communications Upgrade	0	0	0	0	0	0	N	Gas		-	-	-	-	-
2 •	[**A**] Accepted	GPC05	Windows Server Upgrades	6,000	0	0	0	0	6,000	N	All		1,920	-	-	-	-
1 •	[A] Accepted	GPC01	2022 Cyber Security Enhancements	0	100,000	0	0	0	100,000	N	All		-	32,000	-	-	-
2 •	[A] Accepted	GPC02	2022 Infrastructure PC and Network	0	########	0	0	0	1,322,500	N	All		-	423,200	-	-	-
3 •	[A] Accepted	GPC03	Network Segmentation	0	160,000	0	0	0	160,000	N	All		-	51,200	-	-	-
1 •	[A] Accepted	GPC01	2023 Cyber Security Enhancements	0	0	100,000	0	0	100,000	N	All		-	-	32,000	-	-
2 •	[A] Accepted	GPC02	2023 Infrastructure PC and Network	0	0	########	0	0	1,520,875	N	All		-	-	486,680	-	-
2 •	[A] Accepted	GPC01	2024 Infrastructure PC and Network	0	0	0	########	0	1,750,000	N	All		-	-	-	560,000	-
1 •	[A] Accepted	GPC02	2024 Cyber Security Enhancements	0	0	0	100,000	0	100,000	N	All		-	-	-	32,000	-
3 •	[A] Accepted	GPC01	2025 Cyber Security Enhancements	0	0	0	0	100,000	100,000	N	All		-	-	-	-	32,000
2 •	[A] Accepted	GPC02	2025 Infrastructure PC and Network	0	0	0	0	########	1,000,000	N	All		-	-	-	-	320,000
Sub-Totals:				906,252	########	########	########	########	7,059,627				290,001	506,400	518,680	592,000	352,000
Totals:				8,999,526	########	########	########	########	#########				**3,679,953**	**3,467,905**	**2,486,467**	**2,640,599**	**2,301,445**

Category	2021	2022	2023	2024	2025
Software/Systems Upgrades (S)	6,038,274	6,078,094	4,901,677	5,904,529	5,013,891
Computer, Network, & Office Equipment (N)	906,252	1,582,500	1,620,875	1,850,000	1,100,000
Grid Mod (G)	2,055,000	1,220,000	625,000	325,000	500,000
Total	8,999,526	8,880,594	7,147,552	8,079,529	6,613,891
Building Improvements & Furniture	467,002	1,172,503	569,503	357,505	362,904
USC/URC Total	9,466,528	10,053,097	7,717,055	8,437,034	6,976,795

This comes from Accounting -- "Master Allocation Guidelines - Special Purpose Allocators"
Each colored section has been linked to the tab where the file has been copied to.

2020

Linked to "Special Purpose Allocators" Tab

ALL COMPANIES WITH GRANITE	
UES	31%
FGE	25%
NU-NH	19%
NU-ME	23%
GRANITE	2%
	100%

ALL COMPANIES SPLIT BY DIVISION	
UES	31%
FGE-E	14%
FGE-G	11%
NU-NH	19%
NU-ME	23%
GRANITE	2%
	100%

Linked to "Special Purpose Allocators" Tab

GAS ONLY WITH GST	
FGE	20%
NU-NH	32%
NU-ME	43%
GRANITE	5%
	100%

GAS ONLY NO GST	
FGE	21%
NU-NH	34%
NU-ME	45%
	100%

JUST ELECTRIC	
UES	69%
FGE	31%
	100%

ALL COMPANIES WITHOUT GRANITE	
UES	32%
FGE	25%
NU-NH	19%
NU-ME	24%
	100%

FGE & UES Only

FGE	55.36%
UES	44.64%
	100.00%

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Unitil Energy Systems, Inc.

Grid Modernization Plan

March 2021

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LIST OF ACRONYMS

ADMS	Advanced Distribution Management System
ADRP	Active Demand Response Program
AMF	Advanced Metering Functionality
AMI	Automated Metering Infrastructure
AO	Application Owner
API	Application Programming Interface
BCA	Benefit Cost Analysis
BIA	Business Impact Analysis
C&I	Commercial & industrial
CEM	Customer Engagement Management
CHP	Combined Heat and Power
CIA	Confidentiality, Integrity, and Availability
CIP	Critical Infrastructure Protection
CIS	Customer Information System
CISO	Chief Information Security Officer
CKAIDI	Circuit SAIDI
CKAIFI	Circuit SAIFI
CMS	Compliancy Management System
CO_2	Carbon Dioxide
COE	Company Owned Equipment
CPP	Critical Peak Pricing
CSV	Comma-Separated Values
DA	Distribution Automation
DC	Direct Current
DER	Distributed Energy Resource
DERMS	Distributed Energy Resource Management System
DG	Distributed Generation
DIMP	Distribution Integrity Management Program
DMV	Department of Motor Vehicles
EE	Energy Efficiency
EEI	Edison Electric Institute
E-ISAC	Electricity Information Sharing and Analysis Center
ESPI	Energy Service Provider Interface
ETL	Extract, Transform, Load
EV	Electric Vehicle
FAN	Field Area Network
FLISR	Fault location, isolation, and service restoration
FOCI	Foreign-Owned, Controlled, or Influenced
GBC	Green Button Connect
GHG	Greenhouse Gas
GIS	Geographic Information System
GMP	Grid Modernization Plan

GWhr	Gigawatt Hours
ICS-CERT	Industrial Control Systems Cyber Emergency Response Team
ISA	Interconnection Service Agreement
ISO-NE	Independent System Operator – New England
IT	Information Technology
KW	Kilowatt
KWh	Kilowatt-hours
LCIRP	Least Cost Integrated Resource Plan
LTC	Load Tap Changer
M&V	Measurement and Verification
MA	Massachusetts
MIMS	Mobile Information Management System
MDMS	Meter Data Management System
MW	Megawatt
MWh	Megawatt-hours
NAESB	North American Energy Standards Board
NERC	North American Electric Reliability Corporation
NH	New Hampshire
NIST	National Institute of Standards and Technology
NISTIR	National Institute of Standards and Technology Interagency or Internal Reports
NWA	Non-Wires Alternative
OMS	Outage Management System
OT	Operations Technology
PCI	Payment Card Industry
PII	Personally Identifiable Information
PLC	Power Line Carrier
PUC	Public Utilities Commission
PV	Photovoltaics
REST	Representational State Transfer
RFP	Request for Proposal
RSA	Revised Statutes Annotated
RTU	Remote Terminal Unit
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
T&D	Transmission and Distribution
TIMP	Transmission Integrity Management Program
TOU	Time-of-Use
TVR	Time varying rates
UES	Unitil Energy Systems, Inc.
VAr	Volt-Ampere Reactive
VVO	Volt/VAr Optimization
WISP	Written Information Security Plan

XML	eXtensible Markup Language

1 EXECUTIVE SUMMARY

Grid Modernization investments cover "foundational" and "geographical" investments. "Foundational" grid modernization projects are designed to facilitate implementation of base functionality required to advance the grid. "Geographic" grid modernization investments target specific locational constraints on the distribution system to alleviate capacity concerns by introducing more distributed energy resources in a specific geographic area.

This plan represents "foundational" grid modernization investments. This plan describes Unitil Energy Systems, Inc.'s ("UES" or the "Company") vision of the advanced grid as an enabling platform that allows and encourages new and different use cases. These use cases cannot be supported without specific technology building blocks that will provide the ability for increased grid intelligence and data sharing.

This plan presents a series of eight objectives that together ensure support of a modern energy ecosystem. Our objectives are crafted with guidance from the United States Department of Energy, Massachusetts Department of Public Utilities, and New Hampshire Public Utilities Commission, and are used to identify the investments and technologies that best serve this new era. The eight key objective and areas of interest are: 1) Environmentally Friendly; 2) Safety and Reliability; 3) Customer Service; 4) Security; 5) Flexibility; 6) Affordability; 7) Demand and Asset Optimization; and 8) Technology Innovation. Balancing all eight objectives is the key to unlocking an electric utility's future state.

This plan provides a roadmap to the future, and identifies six categories of technologies required to develop the grid as an enabling platform: 1) Grid Intelligence; 2) Advanced Metering; 3) Distributed Energy Resources; 4) Advanced System Planning and Forecasting; 5) Enhanced Customer Services; and 6) Innovative Rate Design. The plan maps projects and functionalities to the categories and objects to provide transparency.

The plan continues on to detail specific foundational grid modernization projects required to facilitate the distribution system as an enabling platform. The plan includes a description of the project and provides the project costs, benefits and a timeline for implementation. The projects are presented as a portfolio of projects with a combined benefit cost ratio. A portfolio approach has been used because some projects cannot be accomplished without support from other projects. For instance, Volt/VAr Optimization (VVO) provides an opportunity for demand and energy savings directly to the customer. However, a VVO system cannot be successful without a Field Area Network (FAN) that provides the means to communicate between field devices and the central office. The FAN by itself does not provide any direct benefits, but it is a foundational investment required for VVO.

	Project Costs (000's)										
Projects	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Field Area Network	$ 90	$ 56	$ 127	$ 626	$ 325	$ 463	$ 780	$ 811	$ 640	$ 704	$ 4,622
ADMS and DERMS	$ 668	$ 468	$ 378	$ 298	$ 170	$ -	$ -	$ -	$ -	$ -	$ 1,981
Volt/VAR Optimization	$ -	$ 383	$ 2,000	$ 2,929	$ 2,731	$ 2,862	$ 2,880	$ 3,416	$ 3,488	$ 4,292	$ 24,981
SCADA	$ -	$ 1,530	$ 1,740	$ 760	$ 790	$ 250	$ 340	$ 420	$ 550	$ 760	$ 7,140
Mobile Damage Assessment	$ 449	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 449
AMI/OMS Integration	$ 107	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 107
Data Sharing Platform	$ 449	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 449
Total	$1,763	$2,437	$4,245	$4,612	$4,016	$3,575	$4,000	$4,647	$4,678	$5,756	$ 39,729

Table 1: Grid Modernization Spending Plan

The Company examined the benefits that each project could provide. Some projects were relatively easy to estimate, including those that yield operational or direct customer cost savings. Other project benefits, like those that might improve the satisfaction of customers, are harder to quantify. Benefits that improve the operation of the grid and reduce costs overall are designated as "grid" benefits while those that lower the costs for customers on their bill (reduced energy consumption or capacity), or reduce the effects of outages are designated as customer benefits. The projects presented in this plan provide customers with net benefits using a 15 or 20 year net present value analysis.

	20 Year NPV				15 Year NPV			
Projects	NPV Benefits (000's)	NPV Capital Costs (000's)	NPV O&M Costs (000's)	B/C Ratio	NPV Benefits (000's)	NPV Capital Costs (000's)	NPV O&M Costs (000's)	B/C Ratio
Field Area Network	$0	$2,541	$586	-	$0	$2,541	$430	-
ADMS and DERMS	$0	$1,855	$543	-	$0	$1,855	$451	-
Volt/VAR Optimization	$21,841	$14,985	$0	1.46	$16,500	$14,985	$0	1.10
SCADA	$9,040	$4,816	$0	1.88	$6,806	$4,816	$0	1.41
Mobile Damage Assessment	$8,412	$385	$281	12.63	$7,221	$385	$237	11.61
AMI/OMS Integration	$1,445	$92	$64	9.26	$1,241	$92	$54	8.50
Data Sharing Platform	$0	$385	$329	-	$0	$385	$278	-
Totals	$ 40,739	$ 25,059	$ 1,804	1.52	$31,768	$25,059	$1,450	1.20

Table 2: Benefit Cost Analysis

Metrics provide the opportunity for our customers, stakeholders and the Commission to measure the plan's progress towards grid modernization. The purpose of these metrics is to determine how performance can be changed because of grid modernization activities. Weather, customer behavior, economic conditions and other factors will have a significant influence on the parameters being measured under these metrics. As the Company begins to implement its grid modernization plan, the changes resulting from grid modernization may be subtle and difficult to detect. The use of baselines against which to measure ongoing performance will help develop an understanding of how the Company's grid modernization efforts are "moving the needle" in terms of progressing towards the achievement of the Commission's Grid Modernization objectives.

The plan describes how cyber security, privacy and data access challenges will be addressed. The plan details an approach to stakeholder involvement and annual reporting requirements designed to update and refocus the plan on an annual basis to meet the need of our stakeholders.

This plan is a starting point. It defines some critical foundational grid modernization investments that are required to develop the grid into an enabling platform. The plan is the start of a long journey towards an advanced grid that provides customers with the ability to maximize the benefits of their investments. Least Cost Integrated Resource Planning is designed to identify the geographical investments focused on alleviating locational constraints of the system. However, these foundational investments are required to maximize the value of the geographical investments.

2 ADVANCING THE GRID VISION

Electricity is the lifeblood of modern civilization. It powers homes, businesses, industrial production and even cars. It powers the basic necessities of heat, light, refrigeration and cooking, as well as computers, networks, communication services and entertainment. It keeps us connected. It is essential to our growth, prosperity, standard of living and sense of well-being. Without it, modern society grinds to a halt. Everything runs on electricity. And yet, every kWh of electricity we consume contributes almost a pound of carbon dioxide to the atmosphere.

The global need to reduce carbon emissions has driven an unprecedented transformation of the energy sector. Enormous investments in clean energy and efficient end-use technologies have led to sharp declines in greenhouse gas emissions. Technology innovation has both accelerated and reinforced this transformation as customers now have access to services, markets and home energy technologies previously unimagined. Advancements in technology are driving down the cost of clean energy, making it more affordable for consumers. Energy markets continue to develop as innovators develop new tools to control and manage energy usage and market new energy services directly to end-use customers.

As customers adopt new technologies, and as distributed energy resources are increasingly connected to the distribution system, the fundamental architecture of the electricity delivery system (the "grid") must change. The 20th Century electric grid, originally designed to distribute power from large centralized generating plants, must now integrate a wide array of distributed load, storage and generation resources. A grid that was designed for "one way" power flow must now accommodate two-way power flow, increasing the need for sophisticated protection, communication, metering, and intelligence. The grid must also provide opportunities for customers to understand and actively participate in energy markets to enhance efficient utilization and consumption of electricity, while delivering improved reliability and power quality.

Utility operations are transitioning away from the traditional model of energy delivery, to one that integrates and optimizes the needs and interests of consumers, producers, markets, service providers and other participants. New markets and new technologies are rapidly emerging in response to changing policies, climate action, and the changing preferences of customers. We are seeing a significant transformation in how customers are powering their homes and businesses, including the ability to generate and store their own electricity. More recently, the promise of affordable electric vehicles has moved from niche to mainstream. Implementing enabling technologies and programs to facilitate these activities will make the electric system more efficient, economic and environmentally friendly.

For over a decade, the Company has visualized the utility of the future as an enabling platform with the capabilities to unlock the full potential of today's customers, markets and technologies. Our Vision is to transform the way people meet their evolving energy needs to create a clean and sustainable future. We are at a tipping point where the time to achieve this vision is now.

2.1 Enabling Platform for the 21st Century

A reliable, affordable and fully modernized electric grid is an essential pillar of modern society. It will power the basic necessities of life while supporting new technologies, services and interactivity. It will operate more efficiently, optimize grid-connected resources and enable dramatic expansion of clean energy to protect and preserve the environment. It will foster innovation and enable new markets by optimizing benefits to customers, service providers and other stakeholders. At its fullest potential, it will harness technology innovation to connect customers, markets, solution providers and new technologies to achieve the full potential of an advanced 21st Century energy system.

Over the years this vision has been variously referred to as Grid Modernization, or the Modern Grid, and even the Smart Grid. But what is a Modernized Grid exactly? What does a Smart Grid look like? Is it the poles, wires and electrical infrastructure of the utility? Is it an intelligent, highly digitized electricity network that forms the basis for a "smart" power delivery system? Does it refer to the utility system, or the broader integration of customers, markets, solution providers, and others? If you ask ten different people, you will get ten different answers.

To achieve the promise of a fully modernized grid, the Company views the electric grid and the devices connected to it as a communicating, intelligent grid-connected ecosystem of people, devices, information and services. The grid is only a part of this larger energy ecosystem, but it is the foundation upon which everything is built. The role of utility in this context is to enable seamless grid access, link participants, optimize resources and foster technology innovation. The modern grid isn't just an electrical network, it's a community of grid-connected and grid-enabled customers and third parties.

To provide a simple analogy, one could ask – what is the internet? In strictly technical terms the internet is a global system of interconnected computer networks that use a standard Internet protocol suite (TCP/IP) to link billions of devices worldwide. But ask any non-technical person what the internet is, and they will describe a vast world of services and information where they can access online shopping, banking, news, social media and entertainment services. It's where people go to trade stocks, make dinner reservations, download books, and connect with other people. The internet is the primary source of information, entertainment content and interactive services for most people in the 21st Century.

From a user perspective, the internet isn't communication infrastructure and it isn't the network of their Internet Service Provider. Instead, the internet is defined by its content, services, connectivity and interactivity. It connects billions of people and devices to an unlimited universe of services and information, and is a platform for endless innovation. The Internet of Things has quickly transitioned to the Internet of Everything.

The modern grid can be thought of in similar terms. The utility grid is clearly the foundation upon which a more advanced energy ecosystem will be built. But from a user perspective, the critical ingredient to achieve the promise of a "Smart Grid" is not electricity, but information. The grid of the future will provide seamless two-way flows of both energy and information. It will be defined not by the electricity it carries, but by the information, functionality and interactive services it provides. In fact, this vision is a part of what has become known as Internet of Energy (IoE).

2.2 Merging Power and Information

The advanced grid will be much more than a "poles and wires" delivery system for electricity. It will enable electrical, informational and financial transactions among customers, grid operators, service providers, markets, and other stakeholders. In doing so, it will improve load factor, lower system losses, optimize asset utilization and avoid

investments driven by "peaky" load and poor utilization. Planners and engineers will have the information to build what is needed, when it is needed, while more effectively managing capacity and resources on a day-to-day basis. Reliability will be improved through advanced outage management, distribution management and automation systems, geographical information systems and other technologies.

Achieving this vision requires a paradigm shift in what has traditionally been viewed as grid infrastructure, as well as the types of investments needed to achieve advanced functionality. Traditional utility investments focused primarily on upgrading and maintaining "electrical" infrastructure to ensure safety and reliability, increase capacity, and expand service to new customers. Customers were viewed as consumers of electricity, and the grid was designed to distribute power from large centralized generating plants to end-use consumers. Assets and investments have traditionally consisted of poles, wires, substations, and electrical equipment.

To achieve the promise of the Eco-Grid, investments in Information Technology (IT) and Operational Technology (OT) are needed to create an open, flexible platform integrating customers, competitive markets and service providers. Collectively known as "intelligence" infrastructure, these investments will include communication networks, sensors and control devices, and advanced information and management systems. Under this vision the Eco-Grid is not simply a newer, upgraded version of the legacy electric system, nor is it a specific technology or suite of technologies layered onto the existing utility systems. The Eco-Grid is instead the foundation of a larger ecosystem of customers, competitive markets and service providers who are interacting with the utility electric grid and the utility's information systems. Information and the exchange of information will be the lifeblood of this grid-connected ecosystem.

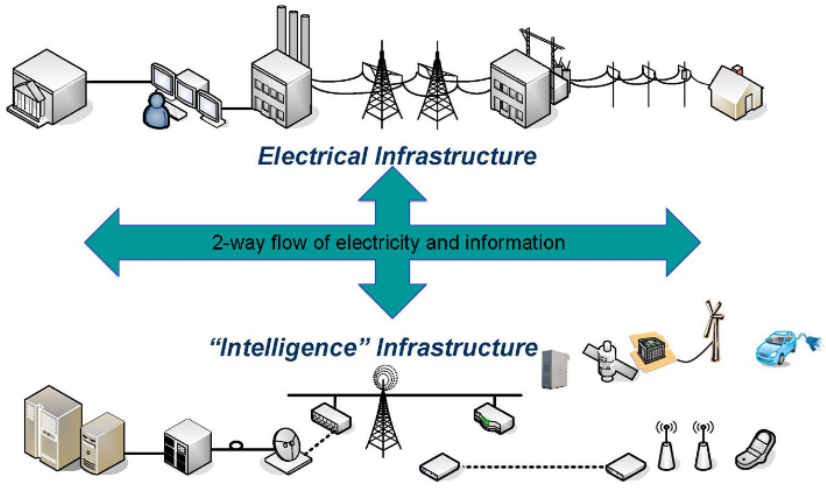

Figure 1: Electrical vs. Intelligence Infrastructure

2.3 Enabling Markets

As customers increasingly adopt new technologies including behind-the-meter generation, storage and energy management systems, the relationship between the utility and the consumer is changing. Customers are increasingly empowered to manage their energy use by taking full advantage of the information, market mechanisms, energy efficient technologies, diverse fuel sources, and transportation options available to them. In turn, our understanding of a utility "customer" must expand to encompass consumers, generators, prosumers (customers who consume electricity from and produce electricity onto the electric system), and other grid participants receiving or providing ancillary

services. The Eco-Grid will support the creation of new electricity markets from home energy management systems in customers' homes, to technologies that allow consumers and third parties to bid their energy resources into wholesale markets.

Innovation will be the driving force behind new electricity markets and services, and will develop from information collected and maintained by the utility and shared externally with customers and service providers. The availability of this information will be crucial to the development of a more efficient and environmentally friendly grid. The Eco-Grid will provide a platform for customers to understand and actively participate in energy markets in order to enhance efficient utilization and consumption of electricity, while also supporting diverse activities by third parties. Grid operators will treat willing consumers as resources in the day-to-day operation of the grid. Well-informed consumers will modify consumption based on the balancing of their demands and resources with the electric system's capability to meet those demands.

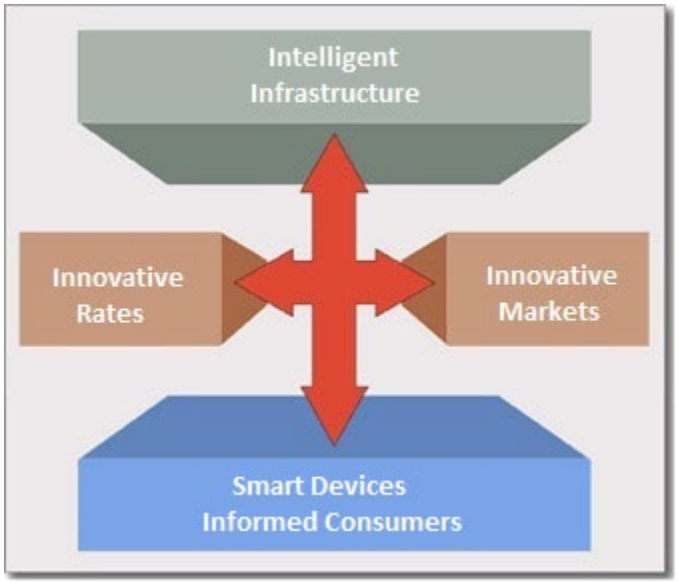

Figure 2: Enabling Markets

The grid of the future will be the foundation for a holistic energy ecosystem consisting of customers, competitive markets, third party providers and new technologies working together to achieve the promise of a clean energy future. Our vision is to create an ecosystem of innovation.

3 FOUNDATIONAL OBJECTIVES

So what will an advanced grid do differently than the legacy electric system of the past century?

- Deliver safe and reliable service meeting the expectations of today's customers, and the needs of a 21st Century economy.
- Engage customers and encourage their active participation in energy markets by enabling the easy adoption of new technologies and services so they can better manage their energy needs.
- Reduce the environmental impact of electricity generation by seamless integrating all types of generation and storage options, and by improving efficiency and optimizing demand.

- Support the interconnection and business models of third parties and encourage innovation.

The Company has identified a series of eight objectives that together ensure support of a modern energy ecosystem. Our objectives are crafted with guidance from the United States Department of Energy, New Hampshire Public Utilities Commission and Massachusetts Department of Public Utilities and are used to identify the investments and technologies that best serve this new era.

Examining these agencies and their goals revealed an emerging consensus around eight key areas of interest:

Objective 1: Environmentally Friendly – We must firmly support the region's goals in reducing emissions in the battle against climate change.

The Company unilaterally supports our region's stated goals to reduce emissions in supports of the battle against climate change. We believe utilities must enable the integration of renewable energy projects that will deliver emission-free solar, wind and hydro power to our region. We must also support energy efficiency and time-of-use initiatives which allow customers to take control of their own usage, further lowering emissions. We must educate and empower customers to shift their energy usage away from peak times of need, an action that not only provides substantial environmental benefits, but reduces overall demand and allows the system as a whole to operate more efficiently.

Objective 2: Safety and Reliability – We must continuously improve safety, reliability and resilience while reducing the effects of outages.

Providing safe and reliable service at an affordable cost to all customers is central to the Company's *Company Mission. The grid must be operated in a manner that ensures public and employee safety. Electricity must be delivered at a safe, stable, consistent voltage optimized for use by homes and businesses, and outages must be kept to a minimum. When storms do occur, the system must be built in a way that restoration can occur rapidly and efficiently.*

Objective 3: Customer Service – We must improve and embrace customer empowerment, engagement, and education. We must give the customer the tools they need to understand and control both their own energy usage and energy matters in the region.

As more and more at-home innovations evolve the way we use electricity, there is a growing customer need for a trusted energy advisor. Access to personal data on energy usage will help to empower customers to actively manage and understand their own technology and usage decisions, resulting in lower bills. Electric vehicles, heat pumps, smart appliances and energy management systems are changing the manner in which customers utilize energy and interact with the system. Home energy management systems require real-time information to help customers make decisions on how to optimize energy usage at home. Electric vehicle rate structures will help customers program when charging occurs and plan accordingly.

Objective 4: Security – We must ensure the cyber and physical security of the grid remains strong.

Strong cyber and physical security are cornerstones in ensuring the safety and reliability central to our Mission. The modern grid must reduce physical and cyber vulnerabilities while also enabling rapid recovery from disruptions. The secure sharing and rapid analyzation of accurate information will be central to a modernized energy ecosystem and the

development of new energy markets and services. Data security and customer privacy must be carefully integrated into existing operational practices.

Objective 5: Flexibility – We must ensure the grid remains flexible enough to accommodate and integrate all types of new energy sources.

Small scale and large scale renewable energy projects are making the flow of electricity in cities and neighborhoods more complex. Managing this flow will require a smart, flexible system that not only makes interconnections easier for end-users, but allow system operators to rapidly switch over to utility-scale, reliability focused energy suppliers when required.

Objective 6: Affordability – Energy for life must remain affordable for all.

Ensuring fair prices is central to any modern grid design model. By ensuring our system infrastructure is a flexible, enabling platform, we are able to integrate customers with competitive markets and other service providers to enable the delivery of affordable energy choices for all. Such a system gives customers the opportunity to make decisions on how they use the grid, when they use the grid, and how best to maximize value.

Objective 7: Demand and Asset Optimization – The grid must be designed to get the most out of the tools and resources interconnected in order to best serve the region.

When renewable energy systems are connected to the system, we want to ensure interconnections are optimized for both the generator and end-users. The modern grid has advanced tools and technology in place to optimize system performance and improve the grid's performance from reliability, environmental, efficiency and economic perspectives. System demand is reduced through greater efficiency to control total system costs for generation, transmission and distribution. Advanced system planning tools will integrate the benefits of distributed energy resources and identify locations where these assets can be optimized. The objective here is to not necessarily operate all equipment to their ratings or limits. Rather, assets will be managed to only deliver what is required at the time. Real-time data will provide the information required to reduce operating and maintenance costs along with the environmental benefits associated with improved efficiency and fewer failures.

Objective 8: Technology Innovation – The grid must enable the easy adoption of new technologies as they are developed to further support customer choice and system operations.

Effective technology and secure data sharing is crucial to operating a transparent and open energy system. Customers and other users want to make informed decisions on their energy needs, and data from the Energy Hub makes sharing simple and intuitive. Developers, meanwhile, need clear rules for how to interconnect renewable energy projects as well as an understanding of where interconnections would maximize the value to the system.

There are inherent complexities and challenges associated with supporting each objective individually without considering the whole. Offering customers more technologies and increased data sharing can potentially increase risk of cyberattacks, which in turn creates security challenges. The early adoption of some emerging technologies can come at a premium, and associated costs create conflicts with the goal of keeping energy affordable. The intermittent nature of some forms of renewable energy sources can be at odds with the reliable service our customers expect. The list goes on.

It is in recognizing the push and pull these objectives have on one another where the maximum benefit to all customers can be found. The system must be operated in a manner which optimizes the benefits for all while ensuring all voices and viewpoints are heard and represented. Balancing all objectives is the key to unlocking this utility future state we aspire towards.

4 ROADMAP TO THE FUTURE

The roadmap to the future is a journey that must be planned carefully and executed in a precise manner. It is not a sprint to implement technology just to have that technology become obsolete in two years. Some technology will serve as a foundation to other technologies. Implementing the building block of the advanced grid in a well thought out manner creates the enabling platform that is the basis for the Company's vision.

The Company has identified six categories of technologies required to develop the grid as an enabling platform.

1. Grid Intelligence
2. Advanced Metering
3. Distributed Energy Resources
4. Advanced System Planning and Forecasting
5. Enhanced Customer Services
6. Innovative Rate Design

Figure 3: Advancing the Grid Categories

4.1 Category 1 - Grid Intelligence

The modern electric system is changing at a rapid pace with the integration of distributed, variable and renewable resources combined with the focus on electrification of the transportation and heating sectors. New and different users are connecting to the system every day. The ever increasing levels of these resources will have a significant impact on the safe, reliable and cost effective operation of the distribution system. Increased visibility and control deep into the distribution system is quickly becoming a necessity. System optimization and efficient use of the grid resources is increasingly more important in providing a safe, reliable, sustainable and cost effective electric system.

Grid Intelligence technologies rely upon a safe and reliable advanced communications system to provide communications for the monitoring and control of field devices. The Company's Grid Intelligence vision consists of centralized software systems and the installation of field devices for Advanced Distribution Management System (ADMS), Distributed Energy Resource Management System (DERMS), Outage Management System (OMS), Supervisory Control and Data Acquisition (SCADA), Volt/VAr Optimization (VVO) and further integration of the Advanced Metering Infrastructure (AMI).

An **ADMS** is the next step in the evolution of distribution management systems. An ADMS is a complex software platform that will serve as the primary means for managing the distribution system. The ADMS will integrate the Company's previous investments in AMI, OMS, SCADA, Geographic Information System (GIS), Customer Information System (CIS), Meter Data Management System (MDMS), circuit analysis, and load flow analysis systems together to provide all of the information in one location. An ADMS integrates a comprehensive set of monitoring, analysis, control, planning, and informational tools that work together with one common network model to provide real-time status and control of the distribution system and the resources connected to it.

A **DERMS** provides the Company with the ability to monitor and control certain distributed energy resource (DER) installations across our service territory. This technology is implemented as a module within the ADMS. The technology improves real-time situational awareness and operational intelligence for this increasingly important resource. The DERMS is used by grid operators and engineers for efficient grid operations and planning by providing real-time information resulting in an increased amount of DER which can be safely interconnected to the system.

An **OMS** is the primary system the Company uses to monitor and coordinate the Company's response to outage conditions. This technology is implemented as a module within the ADMS. The OMS collects customer outage tickets and uses an algorithm to predict the size of the outage, the customers involved in the outage and the predicted device that isolated the fault. The OMS also estimates estimated restoration times and provide outage and restoration estimate to customers as well as the customer outage map. The OMS is the Company's primary communication to customers during an outage event.

SCADA provides the Company with the means to centrally monitor system operating conditions in real-time and remotely control field devices. SCADA at the distribution level is implemented as a module within the ADMS. The industry has historically had good SCADA coverage of transmission systems and substations but less comprehensive SCADA deployment on distribution systems. Grid modernization of the distribution system will require more extensive real-time monitoring and remote control throughout the distribution system.

VVO is a technology applied on the distribution system to monitor and control system voltage within a smaller range resulting in energy and demand savings for customers. This technology is implemented as a module within the ADMS. VVO uses real-time system data to control voltage regulators and capacitor banks to fine-tune distribution voltages across the system. VVO's ability to monitor the grid conditions also improves the ability to reliability and cost effectively interconnect wind, photovoltaics (PV), electric vehicles (EV) and other DER to the electric system. VVO technology

provides a unique type of energy efficiency and demand reduction which does not require the customer to take any action or change their usage behaviors to experience the benefits. Studies have shown that effective VVO installations can reduce energy consumption and demand by 2-4 %, which translates to savings in transmission and generation charges as well as deferral of capacity related distribution improvements.

The Company's **AMI** system provides information on outages for every meter on the system. Improved integration of outage information from AMI meters into the OMS outage prediction engine improves the outage prediction process, reduces false positives and improves the ability to identify the location of nested outages. The Company is developing a piece of configurable "middleware" (i.e. software) to analyze AMI status changes along with additional relevant data points, and computing an "AMI Confidence Score" for AMI based customer outage reporting. Based on the configuration of the middleware, suspected outages above the allowed "score threshold" will be treated as "real outages" and reported to OMS as such. Those that fall below the threshold will be logged and sent to OMS for view only. The system will leverage a set of correlating data inputs such as historical outages, low level signal data, and weather data along with machine learning models to assist in computing outage confidence.

The implementation of a **FAN** is an enabling technology that is a critical component in enabling the benefits associated with grid modernization. A FAN provides the Company with the communications backbone to install many of the grid modernization initiatives being considered. The FAN will provide the customer benefits of reduce outage frequency and duration, enhanced security, improved visibility and allow the integration of DER. The FAN enables a diverse set of grid modernization technologies such as ADMS, VVO, SCADA, demand response, DERMS, EV charging stations, data sharing as well as other technologies.

The **mobile platform damage assessment system** will be an application based system that will replace existing paper based damage assessment and inspections presently used by the Company. This system will allow damage to be collected on the mobile application including the location, the type of damage and pictures. This data will automatically be transferred back to the back end system portal in the office where ETRs and work packages can be developed, issued for repair, tracked until completion.

The safe and reliable operation of the electric system has become more challenging. **Distribution Automation (DA)** has become more popular with the changing landscape of intermittent loads and generation sources connecting to the disturbing system. DA refers to the intelligence of the distribution system that uses information from other devices on the distribution system to identify problems and take action to alleviate the concern. DA can take the form of automated switching and self-healing routines to restore power following an outage. DA can be used to reconfigure the system to optimize system loading and reduce losses. DA is used to manage power factor compliance and improve power quality. DA can take a lot of different forms, but it requires field edge equipment in communication with centralized software to implement the system changes.

4.2 Category 2 - Advanced Metering

The information age has given us the ability to have data in the palm of our hands and when we want it. The satisfaction of having a world of information at our fingertips has changed the way we communicate, surf the web and shop. We have become accustomed to get news alerts as events are unfolding, up to date stock trading information, and accurate weather forecasts. The world is driven by data.

The modern electric system is also driven by data and information. Customers need data to inform their usage decisions. They need flexible pricing options that allow them to take advantage of their investments. Customers need to know how much electricity they are using and when that electricity is being used. Customers are willing to reduce their peak hour usage as long as they have the knowledge and tools to achieve the benefits. Timely and user-friendly

data starts with a metering system that can accurately and automatically gather granular usage data, store the data in a meter data management system where it can be pushed to customers in a timely manner.

Advanced Metering Functionality (AMF) refers to the capabilities provided by the metering system. AMF provides the platform for the Company to measure and provide detailed and granular interval metering data of each individual customer. AMF may provide data in real-time or near real-time, or on a daily or monthly basis. AMF data provides the information necessary for demand management programs, time of use or time varying rates, and other customized programs focused on controlling or reducing energy consumption.

AMI allows the Company to continue to achieve savings in reduced staffing, provide more timely and accurate bills, eliminates the need for additional truck rolls to read meters, allows for virtual turn-ons and turn-offs which reduces labor costs, results in fewer billing complaints and allows disputes to be resolved faster, provides timely outage information which reduces overall restoration time, and its tamper and theft related tools reduces the cost of lost revenue. These cost savings have been and continue to be shared with customers on an annual basis.

The Meter Data Management system collects, organizes and presents a vast and diverse set of metering data. Customer usage patterns can vary with the time of day, day of the week, and time of the year. Load can be influenced by weather or by the economy. Every customer is different, and the granular data provided by interval metering is helpful for customer engagement efforts and developing products and programs to benefit the customer and the system by adjusting usage patterns. AMF can empower customers to take control of their own usage through bill alerts or individualized customer education.

4.3 Category 3 - Distributed Energy Resources

The growing penetration of variable loads and intermittent renewable resources creates a challenge for the electric system if the grid is not prepared to accept these resources. The Company's vision of the advanced grid is an enabling platform with the ability to interconnect a large quantity of renewable resources and other Distributed Energy Resources.

New Hampshire (NH) has not experienced the quantity of Distributed Energy Resource interconnections that Massachusetts has. In Massachusetts (MA), the Company's affiliate Fitchburg Gas and Electric Light Company ("FG&E") continues to experience a high penetration of DERs. DERs are electricity producing resources or controllable loads that are connected to the distribution system. The quantity and capacity of DERs across the service territory has created reverse power flow conditions that require system improvements for capacity and system protection. Across our service territories in MA and NH combined, the penetration of generation is approaching 25% of peak load and 80% of light load. Generation accounts for over 50% of the peak load, and totals over 160% of the measured light load when focusing on our Massachusetts service territory alone. The Company expects to see an increased interest in interconnections in its New Hampshire service territories in the near future and is implementing advanced monitoring and control technology solutions (such as ADMS and DERMS) to enable this large amount of DERs and operate a safe and reliable system. There may be other projects that are required to address DER reverse power flow and sustained energization mitigations.

The Company's affiliate, FG&E, owns one utility scale solar installation, Solar Way, located in Massachusetts. Solar Way, a 1.3MW solar facility, provides enough electricity to serve an equivalent of over 800 residential homes. FG&E is using this installation as a pilot and continues to evaluate opportunities to install additional utility scale solar in areas of the system that may benefit from the additional capacity.

FG&E is currently installing a 2 MW/4MWh utility scale energy storage system at a substation in its Massachusetts service territory to defer the need for a costly substation expansion. The energy storage system has the ability to serve over 1,300 homes for over two hours. This energy storage system is designed to reduce peak loading on the substation equipment, as well as provide voltage regulation and frequency regulation to the market. This is a significant size energy storage device measuring over 2% of the system peak for the Massachusetts service territory. FG&E is using this installation as a pilot and continues to evaluate opportunities to install additional utility scale energy storage in areas of the system that may benefit from the additional capacity.

Energy Efficiency (EE) also plays a key role in an environmentally friendly grid. The energy efficiency programs the Company offers to its customers are developed as part of a comprehensive, statewide approach to optimizing energy use by electricity and natural gas customers. These efforts aim to transform the marketplace for energy-using services and equipment in the built environment by working with distributors and retailers, building and installation contractors, and end use customers in the commercial, industrial, and residential sectors. The Company has pursued cost effective EE in support of annual energy saving goals established through a robust stakeholder process. EE programs are informed by nearly two decades of experience working with stakeholders, consultants, our colleagues at the other gas and electric utilities, as well as our customers. Our internal EE staff of more than a dozen planners, implementers and administrators work across jurisdictions (i.e., in Massachusetts as well as New Hampshire) and is supported by a broad complement of vendors, contractors, builders and evaluation firms, all with in depth knowledge of demand side efficiency and conservation. By moving consumers and contractors away from less efficient products and appliances, our incentives continue to transform the market for lighting and equipment and train customers to consider not just up-front cost but lifecycle costs.

The Advanced Grid has the ability to plan for, monitor and control a diverse set of distributed assets on the system all designed to support the safe and reliable operation of the electric system. Advanced monitoring and control technology evaluates the system in real-time and issues control commands to optimize the system. An environmentally friendly grid is one that is optimized for interconnection and use of renewable resources while optimizing the system demand at all times of the year. The Advanced Grid needs to be flexible enough to integrate increased amounts of renewable energy and use these resources to optimize the system and minimize GHG emissions.

4.4 Category 4 - Advanced Planning and Forecasting

The growing penetration of variable loads and intermittent renewable resources creates a challenge for the electric system if the grid is not prepared to accept these resources. The Company's vision of the advanced grid is an enabling platform with the ability to interconnect a large quantity of renewable resources and other DERs. Advanced system planning forms the foundation for an enabling platform able and ready to accept DERs and other electrification technologies.

Advanced system planning begins with an accurate system model. Geographic Information Systems that are maintained on a timely basis form the network model used in Advanced System Planning. A complete and detailed network connectivity models is essential and is used across multiple platforms allows for consistent results for real-time operation of the electric system.

Real-time system planning is foundational to the optimization of the electric system. The modern grid is constantly changing. Intermittent generation resources and added loads from electrification can drastically change operating conditions within moments. Real-time system planning provides grid operators the tools to make the necessary

adjustments to optimize the system. Real-time system planning increases the safety, reliability and security of the electric system.

Forecasting is a critical component of advanced system planning. DER interconnections can be a challenge to the electric system if they are not planned for. DER forecasting enables the electric system to take advantage of DERs for the operation of the system. DER forecasting can identify the real cost of DERs in comparison to traditional alternatives and drive a lower cost and improved affordability across the system. Electrification has the potential to double the electric loads on the electric system. Increased adoption rates of electric vehicles and heat pumps have the opportunity to have a negative effect on the electric system if the loads are not accurately forecast and included in system design and operation considerations.

DERs can be a challenge and a benefit to the electric system. Advanced system planning reduces the risk associated with DER interconnections and enables the benefits to be realized by the system and customers. Hosting capacity and locational value analysis are tools that can be used to identify the optimal locations for DER interconnections maximizing the benefits to the customers and the system. Understanding the value and benefits of DERs will allow utilities to plan for and rely-on cost effective DER solutions to defer distribution system upgrades.

4.5 Category 5 - Enhanced Customer Services

Superior customer service is fundamental to the Unitil Corporation's Vision, Mission and Values. In 2020, Unitil Corporation's 93% overall customer satisfaction results were the highest in our history and significantly higher than most of our peers. From a benchmarking comparison perspective, we ranked 10th out of 114 measured utilities nationally, 2nd out of 23 utilities in the Eastern Region and the 1st rated utility out of our peers in the Northeast. We earned these high levels of satisfaction by recognizing our customers' increasingly diverse and complex needs.

Our energy efficiency programs help customers make smart financial decisions by reducing energy usage during periods of peak demand. By reducing our customers' overall energy consumption and demand during peak periods, our EE programs contribute to the reduction of greenhouse gas emissions within the communities we serve.

Looking forward, we will continue to invest in technologies designed to support our commitment to the customers experience and to their satisfaction in all facets of that experience. We will strengthen current service offerings, make enhancements to our customer web portal, and add self-service options that enable customers to better manage their energy usage and accounts. These planned enhancements include a mobile app, artificial intelligence and chat features, and a robust notification engine to proactively alert customers regarding payment activity, changes in usage patterns, outages, and scheduled appointments.

4.6 Category 6 - Innovative Rate Design

The Company strongly believes the overarching objective of rate redesign should be the development of pricing for grid services that adhere to the principles of fairness, transparency and economic efficiency.

Only through transparent and economically efficient pricing structures will a viable and sustainable long term model be developed that provides sufficient revenue to support the significant investments needed to modernize the grid, while encouraging appropriate behaviors and assuring fairness and equity among customers. We continue to review how rate design must evolve to enable customers to more effectively manage their energy needs.

We are also reviewing programs that will best support our customers' requirements as we continue to advance the electric grid. Time-of-Use (TOU) and Distributed Generation (DG) rate structures, for example, may support future rate reform. Innovative rate designs will afford our customers the opportunity to adopt new technologies, manage their energy consumption and actively participate in energy markets to enhance efficient utilization and consumption of electricity and save money. Implementing technologies and programs to facilitate these activities will make the electric system more efficient, economic and environmentally friendly.

5 MAPPING OF CATEGORIES AND PROJECTS/FUNCTIONALITIES TO OBJECTIVES

The next step of this plan is to map the categories and projects/functionalities to the objectives that have been presented in the previous section of this report. This mapping process is a key component to ensure the projects being recommended directly support the defined objectives. Appendix A of this plan maps the categories and projects/functionalities to the objectives. This mapping ensures that the functionalities of the distribution system are tied back to specific objectives. This section of the report will further describe each category and how the projects and functionalities map back to the objectives.

5.1 Grid Intelligence

The modern electric system is changing at a rapid pace with the integration of distributed, variable and renewable resources combined and the focus on electrification of the transportation and heating sectors. New and different users are connecting to the system every day. The ever increasing levels of these resources will have a significant impact on the safe, reliable and cost effective operation of the distribution system. Increased visibility and control deep into the distribution system is quickly becoming a necessity. System optimization and efficient use of the grid resources is increasingly more important in providing a safe, reliable, sustainable and cost effective electric system.

Grid Intelligence technologies rely upon a safe and reliable advanced communications system to provide communications for the monitoring and control of field devices. The Company's Grid Intelligence vision consists of centralized software systems and the installation of field devices for ADMS, DERMS, OMS, SCADA, VVO and further integration of AMI.

5.1.1 DESCRIPTION

The Company manages its distribution system with limited control and visibility beyond the distribution substations. Limited tools are available to monitor and control the influx of intermittent renewable resources causing two-way power flows. These resources have a substantial impact on reliable operation of the system. This limitation is not congruent with the needs of real time grid operations and distributed resources on the network. The Company's Grid Intelligence vision includes the technology to provide real-time visibility into the vast majority of the distribution resources connected to the network.

The Company's Grid Intelligence vision consists of the following technology advancements: FAN, ADMS, DERMS, OMS, SCADA, VVO, and further integration of AMI and OMS.

5.1.1.1 Field Area Network

There are many different technology options for a FAN such as wireless mesh, point-to-point fiber, point-to-point POTS line, radio, and microwave, and carrier networks. The Company has evaluated the strengths and benefits of the different types of communication technologies.

Based upon the bidding evaluation, the Company decided on the carrier solution for our field communications. The Company will utilize the AT&T FirstNet network in New Hampshire and Massachusetts. AT&T FirstNet is a nationwide high-speed wireless network reserved for use by public safety and emergency first responders. It is designed to allow essential workers and emergency first responders the ability to communicate across a network that is separate from the communication paths used by the general public. This network also comes with a higher service level agreement that gives it priority if repairs are required. For applications where reliability and redundancy is critical, the Company has an existing contract with another carrier vendor for private area network services and would install redundant communications at these locations. The implementation of the communications network can be accomplished over time, which aligns well with the Company's approach to grid modernization.

5.1.1.2 Advanced Distribution Management System

An ADMS system provides many different functions such as (but not limited to) self-healing automation, control for distributed energy resources, additional SCADA functions across the distribution system, real-time load flow and circuit analysis, demand response, outage restoration, direct load control, network configuration, and integration of outside data sources such as real-time weather and VVO. The ADMS provides the visibility and control required to operate a safe and reliable electric system. The ADMS also provides valuable information during outage events and enhance situational awareness resulting in shorter outage durations.

The Company's ADMS system will be implemented with the following functionalities:

- GIS editor to transfer the network model from the GIS system to the ADMS system on a routine basis as changes to the network topology are made in GIS
- Verification of network connectivity
- Integration with existing OMS and SCADA systems
- Switching manager and simulation module
- Volt/VAr Optimization
- Crew assignments
- Engineering based load flow and circuit analysis tools
- Hardware, software, and training

An ADMS system is closely integrated with other enterprise systems to realize its full potential, such as the FAN to provide communication to field devices, the installation of field devices that have the ability to be controlled and a DERMS that provides the monitoring and control of DERs connected to the system.

This complex project will take several years to implement, but it will serve as one of the foundational technologies to achieving the objectives described below.

5.1.1.3 Distribution Energy Resource Management System

DERMS functionality can be implemented as part of an ADMS or as a separate stand-alone system. The Company is already implementing an ADMS system that has the capability to offer DERMS functionality. One benefit to integrating the ADMS and the DERMS is to have one system and one network model used to operate and optimize the system.

DERMS technology will improve situational awareness and operational intelligence for this increasingly important resource. DERMS will be used by grid operators and engineers for efficient grid operations and planning.

DERMS would use real-time information communicated across the FAN to monitor, control, and manage distribution assets across the electric system. These resources include: large scale as well as residential solar installations, wind, energy storage, microgrids, demand response and other DER connected to the system. The DERMS will have the capability to control grid connected devices by changing voltage and power flow settings in individual devices. These types of devices can include: voltage regulators, smart inverters, capacitor banks, load tap changers, electric vehicle charging, and controllable end-user loads.

This project consists of developing a DERMS to monitor and manage DER across its service territory. The technology will improve situational awareness and operational intelligence for this increasingly important resource. Currently, the Company does not know when individual DERs are operating, since many of these installations are net metered rather than having their generation metered separately. This dynamic makes it difficult to develop accurate models for engineering analysis and planning. DERMS will be used by grid operators and engineers for efficient grid operations and planning.

DERMS functionality can be used to control and optimize small localized segments of the electric system or entire feeders at a time. For example, the DERMS will monitor every segment of the electric system to determine if the system has too many DERs or could accommodate, more DERs depending on the time of year and system loads. The system will know exactly what actions to take to alleviate the situation.

Smart inverter standards and technology has made huge strides in the past several years. Smart inverters allow real-time control of voltage output, power output, power factor and even frequency. A DERMS has the ability to dynamically control these settings to optimize system operations.

5.1.1.4 Outage Management System

The Company implemented an OMS many years ago. In evaluating the implementation of an ADMS, the Company decided that implementing a single platform that integrates the various technologies would be the most efficient and effective way of managing the system. The Company selected the vendor of its OMS system to provide the ADMS system.

The OMS uses the same detailed network model as ADMS, DERMS and VVO. This ensures that the model is consistent and the systems can operate with the most up to date data. OMS systems are designed to reduce outage duration due to faster restoration based upon outage predictions, prioritizes outages for restoration, improves customer satisfaction due to an increase awareness of restoration progress and restoration times, improved customer and municipal relations by providing accurate and timely outage information, and reduced outage frequency due to the use of outage statistics to implement reliability improvements.

The OMS uses a combination of customer calls from the IVR system, web based outage reports and SCADA information to predict where the outage is located, which customers are affected and estimate an ETR based upon similar outages in the past. The Company reports outage information directly to customers and to the public through email, text and a live web based outage map.

Model accuracy is important to ensure the prediction engine will provide accurate outage predictions. The Company ensures the accuracy of its OMS through software integrations with many other enterprise systems. The Company's OMS system is integrated with: 1) GIS to provide the electric system network topology; 2) CIS system to provide customer related information; 3) IVR system to receive customer outage calls; 4) ADMS to provide system modeling for

outage restoration; 5) SCADA to provide outage information and remote switching capability; 6) AMI to provide outage information to better inform the prediction engine; 7) outage reporting web map for public facing outage information; 8) web based outage reporting for those who do not wish to call into the IVR system; and 9) reliability reporting system.

5.1.1.5 Supervisory Control and Data Acquisition

SCADA is a control system architecture that allows the Company to monitor system conditions and operate field devices from the central office. SCADA uses the advanced communications network as the means of passing commands to and receiving data from devices located throughout the distribution system. The SCADA system provides real-time monitoring of system conditions and alarms when an abnormal event has occurred such as an unexpected overload or outage.

The Company has historically installed SCADA on its transmission and substation infrastructure but has limited SCADA installed on the distribution system. The Company will transition its SCADA system to the ADMS to provide consistency in the user interface for system operators as well as the confidence in model accuracy because all systems will be using the same network model. The Company's vision is to continue to expand SCADA across the distribution system where it makes sense when installing VVO and distribution automation schemes.

Cyber security of the SCADA system is of critical importance to the safety and reliability of the electric grid. More expansive deployment of SCADA functionality and integration of SCADA with other systems increases the potentials for cyber security risk. The risk could be direct control of field devices by unauthorized access or an altering of real-time information from the field to the central office resulting in an inaccurate evaluation of the current status of the grid. The reliable function of the SCADA system is critical to public safety and reliability of the grid. The Company has designed the SCADA system with appropriate cyber protections to support the security and resilience of the SCADA system. This same cyber design extends to all the ADMS modules as well.

5.1.1.6 Volt/VAr Optimization

Utilities have traditionally used local control to operate voltage regulators, substation Load Tap Changers (LTCs), and distribution capacitor banks to control voltage and power factor across the distribution system. These devices incorporate inputs from locally available measurements and accommodate a wide range of operating conditions from peak load conditions to light load conditions. These devices act independently of other devices on a given circuit or feeder, which may result in suboptimal affects across the circuit.

There are three primary aspects to implementing a VVO program: communications, software intelligence and field equipment. A robust communications network is the foundation for a successful VVO program. A communications network will be designed to support the VVO program and the software intelligence will be provided as part of the ADMS. The field equipment will be equipped with controls which will allow the VVO system to monitor and control those devices.

Technology has improved to the point where implementing VVO equipment and software can reduce line losses, energy consumption and demand by optimizing the distribution system voltage. Circuit optimization is affected by many different factors across the circuit such as substation bus voltage, end of line voltage, types and sizes of loads, length of feeder and type of conductors, as well as the size, quantity and type of DER located on the circuit. The ever-changing load and DER conditions make optimizing a circuit very challenging.

VVO utilizes dynamic operating model of the system in conjunction with real-time information from the field and analyzes this information through a complex algorithm to optimize the performance of the distribution system. The system model and algorithm combined with real-time field measurements and control enable the circuit to be optimized based upon minimizing power loss or demand while maintaining acceptable voltage profiles on each distribution circuit.

5.1.1.7 OMS/AMI Integration

The Company's OMS system relies on customer outage calls processed by the IVR system, web outage form entries, and manual entries of customer and municipal calls to predict the location and extent of outages. Most outages are reported by only a small percentage of customers contributing to the outage information (typically, only 1-2% of the customers notify The Company when they are out of power). This small percentage of customer notifications may lead to an erroneous outage location and extent, or delay the field trouble shooting process.

The Company's AMI system is currently integrated with OMS as a “view only” overlay. The AMI system communicates with all meters through a parallel channel powerline carrier system. Essentially, the system continuously communicates with all the meters on the system while data collectors in the substations transmit meter status to the head end software system called the Command Center. Changes in meter status are shared through live integration with the OMS where they can be visually represented. Communication with meters could be lost for reasons other than an outage (e.g., noise on power line, loss of AMI network communications). Therefore, the Company does not use this information in the algorithm for modeling outages in OMS. Instead, the visual AMI information is presented in OMS to help determine the extent of the outage (i.e. all outage meters go "lost" or red when they lose power) and the extent of restoration (i.e. all restored meters restored become "found" or green).

This project combines AMI status information, modem status information, and current outage input data (IVR, Web, and manual entries), and process this information through a series of software filters and logic to allow AMI information to be used in the outage prediction algorithm. The goal is to develop a filter to the point at which there is high confidence in the result (i.e., the AMI status change is a result of an actual outage). If a high confidence is achieved, the AMI data will allow the Company to determine the probable location and extent of an outage in a shorter timeframe, resulting in improvements in outage response time estimates and related customer communications.

5.1.1.8 Mobile Damage Assessment

This project is to implement a Mobile Damage Assessment Platform to enable quicker, better-informed decisions to ensure operational efficiency and maintain strong restoration performance by significantly reducing the amount of time for field information to be relayed. This would allow for faster and more accurate situational awareness during large scale weather events.

The project team developed an RFP and received proposals from 13 vendors which were discussed and evaluated. The application will expedite damage data acquisition, develop faster ETR’s, enhance overall situational awareness and produce more efficient work packages that will, in turn, expedite the overall restoration.

The mobile platform damage assessment system will be an application based system that will replace existing paper based damage assessment and inspections presently used by the Company. This system will allow damage to be collected on the mobile application including the location, the type of damage and pictures. This data will automatically be transferred back to the back end system portal in the office where ETRs and work packages can be developed, issued for repair, tracked until completion.

5.1.1.9 Distribution Automation (DA)

The safe and reliable operation of the electric system has become more challenging. Distribution Automation (DA) has become more popular with the changing landscape of variable loads and intermittent generation sources connecting to the distribution system. DA refers to the intelligence of the distribution system that uses information from other devices on the distribution system to identify problems and take action to alleviate the concern. DA can take the form of automated switching and self-healing routines to restore power following an outage. DA can be used to reconfigure the system to optimize system loading and reduce losses. DA is used to manage power factor compliance and improve

power quality. DA can take a lot of different forms, but it requires field edge equipment in communication with centralized software to implement the system changes.

5.1.2 MAPPING TO OBJECTIVES

The Company has developed a set of objectives influenced by the United States Department of Energy, Massachusetts Department of Public Utilities and New Hampshire Public Utilities Commission. Examining guidance provided by these agencies reveals an emerging consensus around certain key areas of interest. The benefits and values achieved from the modern grid can result in cost savings for all users. This section identifies how the Grid Intelligence vision supports the objectives established by the Company.

Project/Functionality	Existing / Planned	Safety and Reliability	Customer Enablement	Security	Flexibility	Affordability	Demand and Asset Optimization	Technical Innovation	Environmentally Friendly
Field Area Network	Planned	X	X	X	X	X	X	X	X
Advanced Distribution Management System (ADMS)	Planned	X	X	X	X	X	X	X	X
Distributed Energy Resource Management System (DERMS)	Planned	X	X	X	X	X	X	X	X
Outage Management System (OMS)	Existing	X	X					X	
Supervisory Control and Data Acquisition (SCADA)	Existing	X	X	X	X	X	X	X	X
Volt/VAr Optimization	Planned	X	X		X	X	X	X	X
OMS/AMI Integration	Planned	X	X					X	
Mobile Damage Assessment	Planned	X				X	X	X	
Distribution Automation	Planned	X	X	X	X	X	X	X	X

Table 3: Grid Intelligence Mapping

5.1.2.1 Safety and Reliability

Grid Intelligence is a critical element to operating a safe and reliable distribution system. Information and communication technologies are used to optimize the system and support decision making to improve system performance. Grid Intelligence of the distribution system voltage will improve the overall safety and reliability of the distribution system. Grid Intelligence technology will assist operators, as the system becomes more complex and less predictable, to interpret data and information, predict conditions and make quicker decisions to ensure the reliability and safety of the electric system.

The growing penetration of variable loads and renewable intermittent generation assets creates a challenge for the electric system. Grid Intelligence systems have the ability to manage and compensate for loads and intermittent resources connected to the system. Grid Intelligence systems are capable of managing load to control or prevent reverse power flow conditions and reduce the opportunity for protection issues related to ground overvoltage conditions. Real-time monitoring will provide for improved situational awareness. Forecasting and modeling capabilities will allow operators to plan for near term and longer term system requirements. Remote switching and fault

locating capabilities can reduce the overall size and duration of an outage to minimize impact to customers. Grid Intelligence systems become the primary tool of the system operators to monitor the overall health and condition of the electric system and the ability to safely and reliably respond to events that could pose a risk to the system or its customers.

5.1.2.2 Customer Enablement

Grid Intelligence is a critical component to enabling the continued growth of DERs and the two-way power flows while maintaining a safe and reliable system. In addition, Grid Intelligence provides the real-time situational awareness to support and facilitate an increased amount of DERs on the electric system.

Grid Intelligence system are designed to optimize system voltage and power factor to reduce system losses, customer consumption and demand. Grid Intelligence also allows for improved voltage control while supporting two-way power flows. Grid Intelligence will provide the optimization and control required to support the interconnection of intermittent renewable resources as well as additional electrification opportunities. Grid Intelligence is a completely transparent way for customers to achieve energy savings without taking any action.

Grid Intelligence will empower customer choice and demand side flexibility such as PV, energy storage systems, electric vehicles and demand response resources. Grid Intelligence will support the electrification of the transportation and heating sectors providing the operators the ability to monitor and control power flows to optimize the system resources.

Grid Intelligence systems provide valuable information to support data sharing between the utility and its customers to empower the customers to change their usage behaviors that will benefit the system and reduce overall costs. Grid Intelligence will help to facilitate energy markets at the distribution level by operating the system in a manner that optimizes the performance and reduces costs.

5.1.2.3 Security

Grid Intelligence is designed to maintain physical and cyber security for the electric system and its customers. Capacity ratings specify the physical limitations of the distribution equipment. Grid Intelligence will control the amount of power flow allowed through every device to physically protect the system from overloads. The Grid Intelligence systems are also designed to identify and report tamper or physical attacks on the system, notifying the operator to take action. Grid Intelligence relies on wide area and field area networks to enable the monitoring and control functionality of field devices. Introducing DERs and customer loads exposes more points of potential cyber risk. Grid Intelligence will be implemented with comprehensive cyber-security measures built into the architecture and integrated into operational procedures to quickly identify, isolate and minimize any cyber threats.

5.1.2.4 Flexibility

The electric grid will be designed in a flexible manner allowing the interconnection of renewable intermittent resources in a safe and reliable manner. An over-abundance of renewable generation can, from time to time, cause voltage fluctuations and result in high voltage for certain parts of the system. Grid Intelligence provides the ability to monitor, control and compensate for the intermittent nature of renewable resources and optimize their benefits to the system and lower the overall operating costs. The automation afforded by the DERMS and ADMS allows the system flexibility to interconnect and safely control a large set of diverse resources. Grid Intelligence empower customer choice and demand side flexibility such as PV, energy storage systems, electric vehicles and demand response resources. Grid Intelligence has the flexibility to support operations and allowing for secure local and remote access if necessary.

Optimized electric systems have the flexibility and responsiveness needed as the distribution systems evolve towards an architecture that encourages DG adoption. Grid Intelligence has the ability to optimize the distributed assets on the system to optimize the system and support the requirements of the system. The VVO system will provide the control

and stability to react to varying usage characteristics while maintaining the flexibility to alleviate location specific power quality concerns at any given time of day, week or year. More efficient system operations provide the system operators with a greater flexibility to address grid resilience.

5.1.2.5 Affordability

In the near future, the distribution system will see some major changes in the products and services it provides. Markets and pricing mechanisms will be in place for customers to receive payments or credits for allowing their equipment to participate or be controlled in certain programs aimed at optimizing the system. Grid Intelligence solutions will continue to adapt to gain the most value out of DERs connected to the system. Grid Intelligence solutions position the Company to participate in the new business models and policy changes that are on the horizon. Grid Intelligence reduces the cost of ownership through improvements to reliability, efficiency and system optimization and provides customer access to a larger market at the distribution level.

VVO is a cost-effective way to provide energy efficiency benefits to customers without the need to recruit participants. VVO produces benefits on the customer side of the meter as well as on the distribution system. One of the primary benefits of a VVO system is the ability to reduce consumption, demand and losses. The VVO system provides direct and immediate savings on customer bills due to the reduced consumption and reduced transmission and generation charges. Optimizing the system will have a tendency to reduce and shift the peak loads and defer the need for capacity related system improvements. The system's ability to allow increased DG penetration on the system will provide customers with the ability to make their own choices.

The distribution system must be operated in an optimized manner to gain the most value while also making it affordable. Grid Intelligence is the platform to optimize and maximize the performance of the system at the lowest cost. Grid Intelligence is designed to improve reliability and minimizing the impact of outages resulting in reducing the costs associated with outages.

5.1.2.6 Demand and Asset Optimization

An optimized electric system only uses what it needs at any given moment in time. Grid Intelligence provides system planning tools to integrate the benefits of distributed energy resources and identify the location where these assets can be optimized. Grid Intelligence uses information from grid edge devices and sensors to monitor and reduce system demands where practical to control total system costs for generation, transmission and distribution. Grid Intelligence provides the information and control of the system to manage system loads and optimize the integration of distributed, variable, and renewable resources in a manner to defer traditional investments and to offset the need for the system improvement. Assets in the field are managed in a way to schedule maintenance as needed and avoid unnecessary maintenance. Grid Intelligence provides real-time data to reduce operating and maintenance costa along with the environmental benefit associated with improved efficiency and fewer failures.

The DERMS in conjunction with the ADMS are key components to enabling a system that can be optimized for various different conditions such as voltage, load, losses, renewable generation, energy storage, and achieve the goals for energy savings and peak demand reduction. Power system requirements must be met on a continuous basis, but they can be met in an optimized and economic manner. The DERMS is designed to react to localized constraints and knows exactly what steps to take to achieve an optimized state.

VVO provides the opportunity to optimize the system and result in reducing system losses, energy consumption and demand. The VVO system allows the system to operate at the voltage required at that given moment. Losses are minimized, peak demands are reduced, and the system is optimized which improves the overall life of the distribution assets.

5.1.2.7 Technology Innovation

Technology innovation is changing the manner in which electric utilities operate their systems. Constant and pervasive system monitoring and data gathering facilitated by Grid Intelligence is required to manage the high penetration of renewable resources and other DERs connected throughout the system. SCADA alone does not have the capability nor the intelligence to manage system constraints in an economical manner. Grid Intelligence technology is proven and will continue to be enhanced as new markets and use cases are developed in the industry.

Grid Intelligence in conjunction with the field area network supporting the communications from the field edge devices to the central system collects, analyzes and presents the data in an actionable manner designed to optimize the system based upon current operation conditions and predefined goals. Grid Intelligence allows advanced forecasting and control capabilities that would not be capable without this technology. Grid Intelligence allows the ability to share information with customers, improve access to markets, enable programs such as demand response and reduce peak demand on the system.

Many of the smart grid technologies require customers to install equipment or take action to achieve a benefit. VVO is an innovative technology that will allow utilities to save energy and greatly reduce costs without requiring customers to take any actions. Customers will receive the benefits without having to install equipment or change their usage patterns. VVO technology improves the Company's ability to respond in real-time to match supply and demand by regulating voltage and power factor in response to real-time information.

5.1.2.8 Environmentally Friendly

An environmentally friendly grid is one that is optimized for interconnection and use of renewable resources while optimizing the system demand at all times of the year. Grid Intelligence provides the platform for the operator to minimize GHG emissions by integrating greater renewable energy DER and empowering customer energy options. This will allow the interconnection and operation of a larger percentage of renewable energy resources than otherwise could have been supported. Demand reduction programs supported by Grid Intelligence will lead to the replacement of inefficient end use devices.

VVO provides the opportunity for improved energy efficiency leading to decreases in demand and reduction in greenhouse gas emissions. In addition, the VVO system also enables the Company to manage customer power quality better and allows for a greater penetration of renewable DERs on the system and lead to a further reduction in GHG emissions.

5.1.3 SUMMARY

A modern distribution system is evolving at a rapid pace. Grid Intelligence technologies are foundational investments required for the safe, reliable and cost effective operation of the electric system. Utilities are experiencing extreme pressure to manage the large quantities of DERs coming onto the system in such a short timeframe. The ever increasing interconnection of intermittent resources resulting in two-way power flow is creating challenges for utilities who still are trying to operate the system manually. The intermittent nature of renewable resources are creating system challenges of voltage fluctuations and back flow. The implementation of Grid Intelligence technologies help utilities to address these challenges and continue to operate a safe, reliable, flexible, affordable and environmentally friendly electric systems.

The benefits of the Grid Intelligence investments are to provide greater monitoring, control and optimization of the distribution system and allow of an increased penetration of variable resources. Grid Intelligence quickly adapts to changing system conditions and rapidly recover from outages through an enhanced situational awareness. Grid

Intelligence is proven technology that supports the objectives for a modern electric system and the Company is in a position to maximize previous investments to improve the overall functionality of the system.

5.2 Advanced Metering Functionality

The information age has given us the ability to have data in the palm of our hands and when we want it. The satisfaction of having a world of information at our fingertips has changed the way we communicate, surf the web and shop. We have become accustomed to get news alerts as events are unfolding, up to date stock trading information, and accurate weather forecasts. The world is driven by data.

The modern electric system is also driven by data and information. Customers need data to inform their usage decisions. They need flexible pricing options that allow them to take advantage of their investments. Customers need to know how much electricity they are using and when that electricity is being used. Customers are willing to reduce their peak hour usage as long as they have the knowledge and tools to achieve the benefits. Timely and user-friendly data starts with a metering system that can accurately and automatically gather granular usage data, store the data in a meter data management system where it can be pushed to customers in a timely manner.

Advanced Metering Functionality (AMF) refers to the capabilities provided by the metering system. AMF provides the platform for the Company to measure and provide detailed and granular interval metering data of each individual customer. In some cases AMF provides data in real-time or near real-time and in some case the AMF provides data on a daily or monthly basis. AMF data provides the information necessary for demand management programs, time of use or time varying rates, and other customized programs focused on controlling or reducing energy consumption.

AMI allows the Company to continue to achieve savings in reduced staffing, more timely and accurate bills eliminates the need for additional truck rolls to read meters, virtual turn-ons and turn-offs reduces labor costs, fewer billing complaints allows disputes to be resolved faster, timely outage information reduces overall restoration time and tamper and theft related tools reduces the cost of lost revenue. These cost savings have been and continue to be shared with customers on an annual basis.

The Meter Data Management system collects, organizes and presents a vast and diverse set of metering data. Customer usage patterns can vary with the time of day, day of the week, and time of the year. Load can be influenced by weather or by the economy. Every customer is different and the granular data provided by interval metering is helpful for customer engagement efforts and developing products and programs to benefit the customer and the system by adjusting usage patterns. AMF can empower customers to take control of their own usage through bill alerts or individualized customer education.

5.2.1 DESCRIPTION

Technology innovation is driven by timely and accurate data. Legacy metering systems do not provide the level of granularity and timeliness required for the modern grid. AMF combines the metering systems and database required to measure, collect and present accurate and timely metering information in a manner that is useful to our customers and other stakeholders. The Company's advanced metering functionality vision consists of the following technology advancements: Advanced Metering Infrastructure, Interval Metering and a Meter Data Management System.

5.2.1.1 Advanced Metering Infrastructure (AMI)

Advanced Metering Infrastructure (AMI) is an integrated network of meters, communication systems and data management systems designed to measure and report on electric usage in an automated fashion. AMI has transformed the electric industry's ability to measure generation and load resources. AMI is an important foundational element to

the Company's vision of an enabling platform. AMI provides data in a timely and detailed fashion and is able to be used by the Company and its customers to instruct and manage energy consumption.

The Company installed its first version of AMI over a decade ago. At that time, the Company had a decision to make: Should the Company move to the next generation of meter reading and install an automated meter reading (AMR) system or take a giant leap towards AMI while reducing operating costs, automating existing manual processes, improving data quality and providing the Company and its customers with data to support the advanced grid.

The difference between AMR and AMI is quite simple. AMR requires the meters to collect and store the data until the data is collected by a drive by meter technician. AMR is cost effective because it allows utilities to reduce meter reading staffing but it does not provide any further benefits. AMI on the other hand uses a communication system between the meters, the collectors and a head end database to transmit the data automatically. AMI provides the efficiency of reduced staffing, but it also provides benefits such as of outage reporting, time of use metering, tamper detection, and remote turn-on and turn-off just to name a few.

The Company implemented an automated metering infrastructure system that uses powerline carrier based technology. Powerline carrier uses the electric system primary conductors to communicate commands to the meters and transmits data from the meters back to the head-end system. This two-way communications technology is highly reliable and highly secure.

The Company's original AMI installation was state of the art when it was installed but has been outpaced by new technology that can provide more information in a more timely fashion. The Company recently completed an upgrade of the substation collectors that will allow interval meter readings to be transmitted once an interval meter has been installed. This will support the Company's plan for implementing time-of-use rates for various use cases.

5.2.1.2 Interval Metering

Interval metering is a granular record of energy consumption made in regular intervals throughout the day. Unlike the single monthly reading from days past, interval metering records how much energy was used and exactly when it was used. Energy conservation begins with accurate measurements and is invaluable information to educate customers on how to reduce their overall energy consumption. Interval metering enables the benefits of demand side management and ultimately a competitive distribution market.

Interval metering benefits the customer as well as the system. Consumers with interval metering and the ability and willingness to shift some usage to off peak hours not only benefits the customer through reduced rates, but it also benefits the system by reducing peak demand and deferring increases in capacity. Interval metering supports demand response programs and other energy management activities that rely on automation to reduce their electricity consumption at peak times.

Interval metering can also be used for matching renewable resources with an individual customer load profile to provide the largest benefits by using electricity when it is cheaper and reducing usage when electricity is more expensive. Price and consumption data are critical and time sensitive.

5.2.1.3 Meter Data Management System

Advanced metering functionality has drastically increased the amount of data that is received from each meter on the system. The volume, frequency, and resolution from interval metering, voltage monitoring, outage events, tamper detection and other system data has created the need for a system with the size and capability to manage the vast amount of data. A Meter Data Management System (MDM) processes and manages metering and meter operations

data and facilitates the integration with other systems such as the customer information system, outage management system, GIS, and other customer facing systems.

MDM is the platform for sharing customer information in an accurate, timely and consistent manner. Application Data Interfaces are designed with the ability to transfer the data between software platforms for customers and other third parties to use the data for their benefit. MDMS is designed to improve customer service and response times for customer inquiries by providing the customer service representative an efficient tool get customer information on demand.

MDM is one of the tools that helps utilities to deliver demand response programs such as time-based rates and various load control solutions. MDM enables customers to learn about their energy use, possible rate programs, improves customer communications and increases overall customer satisfaction. MDM increase operational efficiency while improving customer satisfaction.

5.2.2 MAPPING TO OBJECTIVES

The Company has developed a set of objectives influenced by the United States Department of Energy, Massachusetts Department of Public Utilities and New Hampshire Public Utilities Commission. Examining guidance provided by these agencies reveals an emerging consensus around certain key areas of interest. The benefits and values achieved from the modern grid can result in cost savings for all users. This section identifies how the advanced metering functionality vision supports the objectives established by the Company.

Project/Functionality	Existing / Planned	Safety and Reliability	Customer Enablement	Security	Flexibility	Affordability	Demand and Asset Optimization	Technical Innovation	Environmentally Friendly
Advanced Metering Infrastructure (AMI)	Existing	X	X		X	X	X	X	X
Interval Metering	Existing		X		X	X	X	X	X
Meter Data Management System	Existing		X		X	X	X	X	X

Table 4: Advanced Metering Mapping

5.2.2.1 Safety and Reliability

The safety and reliability benefits provided by AMF benefit both the utility and its customers. AMF can be used to support the implementation of VVO that provides the opportunity to actively monitor and control load and power factor to reduce peak capacity during peak demand periods. AMF provide for improved outage management by providing improved outage detection, faster response time and reduced overall outage restoration. Integrating AMF data with the Company's outage management system, outages will be detected quicker, the location of the outage is identified faster and overall restoration will take less time.

5.2.2.2 Customer Enablement

Current pricing models support and inefficient use of the electric system. Rates are developed to recover the investment over all hours of the year even though all hours of the year are not identical. Using pricing structures that reflect the actual costs will drive more efficient use by customers. Variable pricing structures supported by AMF allows the Company to empower the customers with insight into their own usage. Incentivizing customers to use less energy at peak time gives the customer the ability to lower their overall bill while supporting the system. Efficient behaviors help to control rates for all customers.

AMF technology provides the Company with valuable insight into the customer's usage behaviors. Information reduces risk. AMF provides the opportunity to mitigate market and pricing risk for customers who are able to actively control their usages. Better understanding of how electricity is used within the house helps customers to better understand the size of their bill and increases confidence in the billing process overall. Customers who take the time to review and understand their electric usage will be rewarded with lower energy bills.

5.2.2.3 Flexibility

AMF is a foundational element that can be used for all different types of market based programs and opportunities for customers to reduce their overall expense. Rate design is currently limited by the metering information available from legacy metering systems. AMF provides information to allow flexibility in market and rate design to balance the benefits to the system and its customers.

Flexibility of information is key to the development of markets at the distribution level. AMF created opportunities for market providers to offer an array of choices for customers. An offering that works for a residential customer does not work for a commercial customer. Customers with installed DERs should be given the opportunity to maximize their investments.

5.2.2.4 Affordability

In the near future, the distribution system will see some major changes in the products and services it provides. Markets and pricing mechanisms will be in place for customers to receive payments or credits for allowing their equipment to participate or be controlled in certain programs aimed at optimizing the system. Advanced metering functionality provides the data necessary to support market activity.

Remote data collection from AMF replaces manual and error prone work practices with machine to machine data interchange. Data quality is improved, billing errors are minimized and data recording errors are eliminated. AMF is able to read meters in difficult to reach locations that often required multiple trips each month to obtain the reading. Improved meter reading accuracy reduces calls into the call center, the need to investigate and reissue customer bills that may have been printed in error.

5.2.2.5 Demand and Asset Optimization

Capacity constraints on the distribution and transmission systems drive system improvement projects (and thus capital investments), however metering and cost recovery is driven mostly by consumption measurements. Advanced metering functionality provides the data and tools for improving the process of managing customer usage and peak demand.

AMF and the rate structures supported by AMF promote reduction in demand by incentivizing customers to change their usage habits. Active management of peak demand usage reduces transmission and generation costs, defers costly system improvements and allows the system to operate in a more efficient manner. Lower capital expenditures resulting from reduced peak demand improves asset utilization and results in customer bill savings.

AMF and interval metering provides the Company with information to make more educated assumptions about future peak loads and allows the Company to size the system for the load it is serving. AMF is a foundational element of a successful demand management program.

5.2.2.6 Technology Innovation

Technology innovation is about disrupting the old days of doing business and is focused on data. Technology innovation is driven by information. AMF provides timely and accurate information that is used by many system, customer and market facing technologies. Timely and accurate data is key to the advanced grid. AMF supports important functions that are not possible with legacy metering infrastructure such as the ability to remotely measure electricity, connect and disconnect service, identify tampering, report outages, and monitor voltage. AMF also supports grid facing functions such as ADMS, system planning, VVO, and outage management. AMF supports customer facing technologies such as energy management systems, in-home displays, and programmable thermostats. AMF supports market facing functions such as time-based rate and demand response programs. AMF supports the further integration of renewable resources and other DERs designed to improve the efficiency of the distribution system.

5.2.2.7 Environmentally Friendly

The primary environmental benefits associated with AMF relate to the reduction of electricity usages and peak load reduction. The information provided by AMF gives customers the opportunity to take more control over their energy usage leading to reduced emissions. AMF supports reduced overall energy usage through VVO and energy management systems. AMF helps to reduce peak demand by supporting dynamic pricing (such as TOU or TVR), energy management and smart appliances. AMF reduce emissions by eliminating the transportation required for meter reading fleets.

Integrating DERs and other renewable resources into the distribution system is key to an environmentally friendly distribution system. AMF provides the information necessary to match actual load usage curves with the potential DERs supporting the load. In addition, AMF supports demand side management programs which reduces distribution and transmission peaks resulting in lower peak loads, reduces emissions and reduces the need for non-environmentally friendly generation resources.

5.2.3 SUMMARY

A modern distribution system requires data to enable innovative technology. Advanced metering functionality provides accurate, timely and granular data allowing customers the ability to learn about their electricity usage and the opportunities to take control and benefit from changing their usage patterns. The primary benefit to customers is a reduction in their bills for being flexible enough to modify usage during peak times. The primary benefit to the distribution system is a reduction in peak demand and deferral of capacity related distribution and transmission investments. The reduction in peak demand also produces environmental benefits by reducing emissions.

The Company's AMI system has been providing benefits to our customers for more than a decade. Recent technology upgrades to the system now support interval metering which supports the rate programs to support demand response programs and further integration of renewable resources. The Metering Data Management system provides the platform for sharing data with customers and interested third parties and will enable time-based rates. Interval metering will allow customers to manage their own risk and benefits. Advanced metering functionality is proven and a required component to develop the modern grid as an enabling platform.

5.3 Distributed Energy Resources

The growing penetration of variable loads and intermittent renewable resources creates a challenge for the electric system if the grid is not prepared to accept these resources. The Company's vision of the advanced grid is an enabling platform with the ability to interconnect a large quantity of renewable resources and other DERs.

DERs are electricity producing resources or controllable loads that are connected to the distribution system. The Company expects to see an increased interest in interconnections in our New Hampshire service territories in the near future and is implementing advanced monitoring and control technology solutions to enable this large amount of DERs and operate a safe and reliable system.

FG&E owns one utility scale solar installation located in Massachusetts. Solar Way is a 1.3MW solar facility provides enough electricity to serve an equivalent of over 800 residential homes. FG&E is using this installation as a pilot and continues to evaluate opportunities to install additional utility scale solar in areas of the system that may benefit from the additional capacity.

FG&E is currently installing a 2 MW/4MWh utility scale energy storage system at a substation in its Massachusetts service territory to defer the need for a costly substation expansion. The energy storage system has the ability to serve over 1,300 homes for over two hours. This energy storage system is designed to reduce peak loading on the substation equipment as well as provide voltage regulation and frequency regulation to the market. This is a significant size energy storage device equating to over 2% of the system peak for the Massachusetts service territory. FG&E is using this installation as a pilot and continues to evaluate opportunities to install additional utility scale energy storage in areas of the system that may benefit from the additional capacity.

Energy efficiency also plays a key role in an environmentally friendly grid. The energy efficiency ("EE") programs the Company offers to its customers are developed as part of a comprehensive, statewide approach to optimizing energy use by electricity and natural gas customers. These efforts aim to transform the marketplace for energy-using services and equipment in the built environment by working with distributors and retailers, building and installation contractors, and end use customers in the commercial, industrial, and residential sectors. The Company has pursued cost effective EE in pursuit of annual energy saving goals established through a robust stakeholder process. EE programs are informed by nearly two decades of experience working with stakeholders, consultants, our colleagues at the other gas and electric utilities, as well as our customers. Our internal EE staff of more than a dozen planners, implementers and administrators work across jurisdictions (i.e., in Massachusetts as well as New Hampshire) and is supported by a broad complement of vendors, contractors, builders and evaluation firms, all with in depth knowledge of demand side efficiency and conservation. By moving consumers and contractors away from less efficient products and appliances, our incentives continue to transform the market for lighting and equipment and train customers to consider not just up-front cost but lifecycle costs.

The Advanced Grid has the ability to plan for, monitor and control a diverse set of distributed assets on the system all designed to support the safe and reliable operation of the electric system. Advanced monitoring and control technology evaluates the system in real-time and issues control commands to optimize the system. An environmentally friendly grid is one that is optimized for interconnection and use of renewable resources while optimizing the system demand at all times of the year. The Advanced Grid needs to be flexible enough to integrate increased amounts of renewable energy and use these resources to optimize the system and minimize GHG emissions.

5.3.1 DESCRIPTION

The advanced grid will continue to experience a diverse set of users. Traditional users will continue to be consumers on the system. Prosumers who invest in technology will benefit from the investments they have made in technology. DERs are an important resource to a safe, reliable and sustainable electric system. Integrating renewable and intermittent

resources is a challenge for the system that will be met with advanced monitoring and control technology. Non-traditional system improvements and system resources are integrated with a reliability, capacity and availability to be relied upon when planning and operating the system.

5.3.1.1 DER Interconnections

The modern electric system is changing at a rapid pace with the integration of distributed, variable and renewable resources combined and the focus on electrification of the transportation and heating sectors. New and different users are connecting to the system every day. The ever increasing levels of these resources will have a significant impact on the safe, reliable and cost effective operation of the distribution system.

Intermittent, renewable resources play an important role in the clean and sustainable operation of the electric system. Over the past several year, customer interest in rooftop solar installations has increased. These installations provide a benefit to the customers who install them as well as the electric system. Increased visibility and control deep into the distribution system is quickly becoming a necessity. System optimization and efficient use of the grid resources is increasingly more important in providing a safe, reliable, sustainable and cost effective electric system.

Advanced monitoring and control technologies relies upon a safe and reliable advanced communications system to provide communications for the monitoring and control of field devices. Advanced monitoring and control and control will allow an increased amount of DERs to connect to the system than would otherwise be interconnected.

DER interconnections create a challenge for the electric system to overcome. The electric system can experience reverse power flow at time of light load. The electric system has traditionally been designed for one-way power flow with the system protection settings and voltage regulation settings designed to protect the system under those conditions. Electric system designs continue to change to allow for the safe and reliable operation of the electric system under reverse power flow conditions. The Company continues to make system improvements to ensure the safety of the system and its customers.

UES and FG&E continue to experience a high penetration of DERs with over 3,000 interconnections across their service territories, primarily in Massachusetts. Across the Massachusetts and New Hampshire service territories, the penetration of generation is approaching 25% of peak load and approaching 80% of light load. The Company expects to see an increased interest in interconnections and changed its approach to forecasting and planning the electric system. The diversity and penetration of DER installations can have the impact of deferring investments in system capacity.

Hosting capacity analysis identifies portions of the system where DERs can be installed without the need for costly system improvements. The Company has an interactive mapping system designed for customers and developers to see if their potential project is located in an area where system improvements are likely to be needed or if their project can generally proceed without the need for a costly improvement. This empowers customers to make decisions on their investment in technology. The Company's goal is to continue to identify ways to increase the hosting capacity of the system.

Locational value analysis identifies the value that a DER would have to different parts of the system. Locational value analysis is a measure of much traditional system investment in capacity can be deferred through the installation of a DER. Reliability, capacity and availability are important factors to consider in locational value analysis.

The electric system is designed to be an enabling platform for DERs. Each installation is analyzed to ensure the safe and reliable operation of the electric system. A diverse set of distributed resources, when planned accordingly, can provide a benefit to electric system.

5.3.1.2 Utility Scale Solar

FG&E owns and operates a utility scale 1.3MW DC solar facility in its Massachusetts service territory. This ground mounted solar facility is installed on a repurposed brownfield site. The system is comprised of over 3,700 individual solar panels each capable of producing approximately 345 watts and is capable of producing approximately 1MW of AC power or the equivalent of over 800 residential homes. On average the system produces approximately 1,500 MWh of electricity each year. This is energy that is not purchased from the ISO-NE markets resulting in savings to customers.

FG&E uses monitoring infrastructure to conduct real-time oversight of the output and performance of the facility. This type of monitoring positions FG&E to better understand the effects of key factors (such as weather conditions, equipment performance, and operating parameters) and to appropriately address such factors.

Utility scale solar is an effective means for supporting a green and sustainable electric system. The Company continues to evaluate utility scale solar installations as non-wires alternatives to traditional system improvements. One challenge is the peak output of the solar facility which is in the early afternoon, does not match directly with the peak load times of the system which occurs in the early evening. Solar output is almost negligible at the time of the system peak between 6:00-7:00pm. Energy storage technology is needed to store the renewable power and use it at the time that would produce the greatest benefit to the system and its customers.

5.3.1.3 Energy Storage

FG&E is in the process of installing its first utility scale energy storage system in its Massachusetts service territory. The 2MW/4MWh battery-based system is designed to alleviate peak loading on a substation transformer to defer the need for a costly substation expansion and upgrade in capacity. The energy storage system connects directly to the substation and is sized to defer the need for the substation expansion to a timeframe outside of the 10 year planning window.

The energy storage system is designed to dispatch the battery in a manner that provides the most benefit to FG&E and its customers. At the time of system peak, the battery will be discharged to reduce loading on the substation transformer as well as lower the overall system peak which will reduce transmission capacity costs to our customers.

The energy storage system may also be entered into the ISO-NE frequency regulation and capacity markets. ISO-NE will have the ability to dispatch the capacity at the time it needs for frequency regulation as well as reducing our peak hour loading that is used to calculate our capacity charges. The energy storage system produces a revenue (savings) stream that will directly benefit our customers by reducing their bills without needed to take any action on their own.

The energy storage system is the first installed on a Unitil company's system. The Company intends to learn from this non-wires alternative (NWA) project. The Company will learn from the operation of the system and confirm the benefits to the distribution system and its customers. Reliable operation of the energy storage system during the peak hours is important to the deferral of the substation expansion.

Energy storage technology will play an important role in the integration of intermittent renewable resources. Energy storage system provides the energy and capacity when intermittent resources such as solar or wind might be lacking. However, combining renewable generation with an energy storage system will improve the reliability, capacity and availability of the intermittent resources to a point where the system can rely on them when planning the system.

5.3.1.4 Smart Inverters

The installation of a DER with traditional inverters can lead to an increase in system voltage. The increase in system voltage can limit the amount of DERs which can be installed. Smart inverters are designed to help control the voltage. Controlling the voltage can allow an increase in the amount of DERs the system can safely interconnect.

Smart inverters have a robust software infrastructure, bidirectional communications capability and a digital architecture. Smart inverters need to be able to send and received information and commands. They need to monitor and react to system conditions or commands. Smart inverter technology continues to improve and become more cost effective. Many states are requiring smart inverters on new installations. States with renewable generation goals are implementing smart inverter rules to help meet the goals by improving the hosting capacity.

Utilities are required to maintain a certain bandwidth of system voltage. Providing customers voltage that is outside of the standard range can result in damaged equipment. Utility scale voltage regulation is one way to provide the voltage control required to increase hosting capacity. Smart inverter technology can eliminate the need for the distribution system improvements.

Smart inverters will play a large role in the monitoring and control of the electric system. Smart inverters in conjunction to advanced monitoring and control technologies from the utility will integrate to optimize the system and increase the hosting capacity to allow an increased amount of DERs on the system.

5.3.1.5 Electric Vehicles

Electric Vehicle (EV) adoption rates are reaching a tipping point where customer desire will rule over price point. The electric system must be planned to accommodate the additional load while providing incentives and rate mechanisms to encourage customers to charge their vehicles on off peak hours.

The load associated with charging a single electric vehicle roughly doubles the load of a residential house. On its own, it does not pose a problem to the electric system. Now consider two neighbors get EVs as well. Now the secondary conductors and service transformer feeding those houses could experience overloads. If several customers get EVs in a single neighborhood, the primary conductors feeding the neighborhood could too experience overloads. One can see how quickly the adoption rate could drive costly system improvements on the electric system.

The Company's approach to EVs is two-fold. First, effective EV charging rates incent customers to charge their EVs when it is most beneficial to the system during nighttime hours. Improving the load factor during off peak hours allows the system to operate in a more optimized manner. Second, the system needs to be planned in advance for the increase in EVs. System planning that includes the DER generation resources on the system in combination with the controllable loads on the system enable the utility to design and operate a safe and reliable system for all DER interconnections. Controllable loads such as EVs can be a benefit to the system at times of peak PV and low loads during the shoulder months of the year.

5.3.1.6 Demand Response

Demand response or active demand management strategy allows users of the system to actively support the reliable operation of the system while gaining a financial benefit. Over the past several years, the Company has been monitoring demand management demonstrations and programs taking place in other states to advance tailored methodologies for adoption in our service territories.

The goals of active demand offerings are to flatten peak loads, improve system load factors, and reduce costs for all customers. The most recent updates to the Company's energy efficiency plans include proposals for pilots to pursue active demand reductions. The approved pilot targeted C&I customers was expanded to residential customers with wireless thermostats interested in participating in the offering.

The Company implemented an active demand reduction offering, based on evaluated commercial and industrial active demand reduction efforts. The offering was designed to provide incentives to encourage customers to reduce demand

at peak times. By reducing load during the ISO summer peak, the Company can reduce our share of the installed capacity cost allocation, thereby reducing costs for our customers.

The C&I load curtailment pilot was launched in April 2019 utilizing both the Company's existing staff along with support from a third party Curtailment Service Provider ("CSP"). The CSP worked with the Company to identify curtailable load, enroll customers, manage curtailment events and calculate performance and payments. The targeted dispatch load curtailment is operated on a technology agnostic pay-for-performance model in which participating customers are notified the day before the demand response event by 1:00 PM, giving them a chance to prepare to curtail operations.

One important objective of the initiative is to time curtailment events during the ISO-NE ICAP ("ICAP") hour. Because customers' kW usage on the ICAP hour determines the customers' capacity charges for the following year, aligning the event timing with the ICAP hour results in the greatest impact both to the customer and the electric grid. In order to increase the likelihood of achieving this alignment, several events are typically called over the course of the summer, but not so many that customers' are unnecessarily impacted.

Targeted active demand management, as a non-wires alternative to traditional system improvements, can also be used to defer specific distribution system investment. Under the right circumstances, customers may have the desire and the ability to offer to respond to load events by shedding load or increasing generation. The benefit to the system is the deferral of a costly system improvement while the customer can benefit from performing active demand management when the system requires it.

5.3.1.7 Energy Efficiency

The energy efficiency ("EE") programs the Company offers to its customers are developed as part of a comprehensive and collaborative approach to optimizing energy use by electricity and natural gas customers. These efforts aim to transform the marketplace for energy-using services and equipment in the built environment by working with distributors and retailers, building and installation contractors, and end use customers in the commercial, industrial, and residential sectors.

The Company works collaboratively with the state regulatory agencies and interested stakeholders to develop energy efficiency programs designed to meet state goals. The Company pursues cost effective EE in pursuit of annual energy saving goals established through a robust stakeholder process. The Company's energy efficiency programs are informed by nearly two decades of experience working with stakeholders, consultants, our colleagues at the other gas and electric utilities, as well as our customers.

The Company's existing portfolio of electric efficiency programs focuses on customers in three categories: non-low income residential customers, low income residential customers, and commercial and industrial customers. The primary electricity-saving residential offering provides discounted retail pricing to residential customers who purchase high efficiency lighting and electric appliances. The Company collaborates with retailers, distributors and the other electric utilities to ensure that high efficiency products are marketed to customers, and that point-of-sale discounts are provided to customers on high-efficiency promoted products.

By moving consumers and contractors away from less efficient products and appliances, our incentives continue to transform the market for lighting and equipment and train customers to consider not just up-front cost but lifecycle costs. For more substantial and expensive projects involving heat pumps or whole-home weatherization, the Company offers on-bill and third party financing options that allow customers to spread their share of the investment over a longer period of time and experience cash-flow positive savings. For income eligible customers, the Company pays 100% of the cost of energy improvements, eliminating one of the major barriers to participation for these customers.

In the commercial and industrial sector, the Company works closely with retailers and distributors to ensure that high efficiency lighting, motors and drives, HVAC, controls and other equipment are an accessible and attractive choice for contractors, builders and end use customers. By providing both technical assistance and cash incentives, our efficiency programs reduce the barrier that a higher up front cost presents to C&I customers, including municipalities and nonprofit organizations. As in the residential sector, on-bill financing programs allow qualifying commercial and industrial customers to offset some or all of the up-front cost of new or retrofitted equipment that is not covered by the program's cash incentive.

For both residential and commercial and industrial customers, the Company provides technical assistance, training and cash incentives to ensure that new buildings are built and equipped to high EE standards. This assistance is facilitated not only by the Company's key account managers, but supplemented by engineering and design-build firms that are familiar with both good building design and with our incentive programs.

In the residential programs, a fuel-blind approach to energy use results in significant heating fuel savings in programs focused on new construction and weatherization of existing homes. Just under half of the resulting energy savings comes from a reduction in electricity use from high efficiency HVAC, appliances and lighting.

For the commercial and industrial sector, the majority of savings come from custom projects among manufacturers, retail establishments, municipalities, and schools. While high efficiency lighting and controls continue to be the most important single contributor to overall EE savings, the Company is dedicated to reducing both energy use and demand by incenting high efficiency HVAC measures, motors and drives, appliances, plug loads, and process equipment. Technical assistance, professional referrals and financial assistance help customers to overcome non-cost barriers to the adoption of energy efficient equipment and operations.

5.3.2 MAPPING TO OBJECTIVES

The Company has developed a set of objectives influenced by the United States Department of Energy, Massachusetts Department of Public Utilities and New Hampshire Public Utilities Commission. Examining guidance provided by these agencies reveals an emerging consensus around certain key areas of interest. The benefits and values achieved from the modern grid can result in cost savings for all users. This section identifies how the distributed energy resources vision supports the objectives established by the Company.

Project/Functionality	Existing / Planned	Safety and Reliability	Customer Enablement	Security	Flexibility	Affordability	Demand and Asset Optimization	Technical Innovation	Environmentally Friendly
Generator Interconnections	Existing	X	X		X	X	X	X	X
Utility Scale Solar	Planned	X					X		X
Energy Storage	Planned	X	X		X	X	X	X	X
Smart Inverters	Planned	X	X		X	X	X	X	X

Electric Vehicles	Planned	X	X		X	X	X	X	X
Demand Response Program	Existing	X	X		X	X	X	X	X
Energy Efficiency	Existing	X	X		X	X	X	X	X

Table 5: Distributed Energy Resources Mapping

5.3.2.1 Safety and Reliability

Distributed energy resources is changing the manner in which power is generated and transmitted to the electric system. DERs can be used to pinpoint added capacity to specific locations on the electric system or can be aggregated to supply large amounts of power to the grid.

The growing penetration of variable loads and renewable intermittent distributed energy resources will create a challenge for the electric system. Capacity, reliability and availability are important considerations when evaluating non-wires alternatives to traditional system improvements. The ability to monitor and control a diverse set of distributed assets on the system will be critical to the safety and reliability of the system. Intermittent resources coupled with energy storage can provide a safe and reliable alternative to traditional system improvements.

Advanced monitoring and control provides the system operators the ability to safely and reliably respond to events that could pose a risk to the system or its customers. Advanced monitoring and control enables the managing loads and generation to control or prevent reverse power flow conditions and reduce the opportunity for protection issues related to ground overvoltage conditions.

Smart inverter technology provides added control and protection against overvoltage conditions often experienced with standard inverter technology.

5.3.2.2 Customer Enablement

Distributed energy resources are typically owned by customers and continue to gain popularity. An increasing number of customers desire to take more control of their energy usage. They desire more control over their electricity sources as well as how and when they consume the electricity. As the cost of technology continues to become more cost competitive, electric utilities are developing strategies to enable a seamless interaction with customer who deploy DER technology. The electric system as an enabling platform must be adept at managing the increasing quantity of DERs while also maintaining a reliable and stable network.

As more customers invest in DER, advanced monitoring and control becomes increasingly important for utilities. Enhanced interaction with customers enable the greatest benefit to the customer as well as the distribution system. Customer desire instant access to the most up to date information from their utility just like they are accustomed to having on the cell phones.

5.3.2.3 Flexibility

Designing and managing a flexible electric system is required for supporting the increase in penetration in DERs. The electric system as an enabling platform need to be flexible enough to safely and reliably operate a system with two-way power flows. The penetration of DERs such as distributed generation (i.e. rooftop solar), energy storage, and electric vehicles affect how the system is operated.

Increased DER is a double edged sword that needs to be considered. DERs can have the positive effect of reducing CO2 emissions with sustainable DG, providing capacity and reducing peak loading on electric lines, increasing self-consumption and providing customers with some independence from the electric grid. However, DER can be

problematic for the electric system affecting stability and reliability due to the intermittent and unpredictable nature of DG, voltage fluctuations and two-way power flow.

DERs provide value to electric systems and flexibility. Energy storage systems and demand response supply the system with flexibility to safely and reliably increase the penetration of DER as well as shift the system peak resulting in less capacity and transmission congestion and lower generation requirements. Energy storage might provide the most flexibility because it can be used as a generation or a load source depending on what the electric system needs at the time.

5.3.2.4 Affordability

In the near future, the distribution system will see some major changes in the products and services it provides. Markets and pricing mechanisms will be in place for customers to receive payments or credits for allowing their equipment to participate or be controlled in certain programs.

Distributed energy resources allow customers to take more control of their energy use. It will take a combined effort of the customer and the utility to maximize the benefits to the customer and to the system. DERs can offset power system losses, transmission capacity charges, generation charges, and can defer costly capacity improvements by reducing system peak loads.

Demand response and energy efficiency programs provide an incentive to customers to use electricity more efficiently and to modify their usage patterns in a manner that reduces system loads. The distribution system must be operated in an optimized manner to gain the most value while also making it affordable. Optimization of DERs provides value to the customer, the Company and to the overall system.

5.3.2.5 Demand and Asset Optimization

DER penetration across the electric system continues to increase at an increased pace. DERs are electricity producing resources or controllable loads connected to a distribution system. DERs may include roof top solar, wind, CHP, energy storage, small gas powered backup generators, electric vehicles, and controllable loads. Behind the meter DER such as roof top solar is the largest application of DER technology across the service territory. System reliability and inefficient performance increase the risk profile for these DERs creating the need for optimizations.

An optimized electric system only uses what it needs at any given moment in time. An optimized system will react to changing system generation and load conditions in real-time and control the appropriate resources to ensure the safe and reliable operation of the electric system. DERs can offer great customer choice and also represent an opportunity to optimize overall system investments. Planning for the impact of DERs on the electric system requires visibility into the real-time operation of the DERs.

The DERMS in conjunction with the ADMS are key components to enabling a system that can be optimized for various different conditions such as voltage, load, losses, renewable generation, energy storage, and achieve the goals for energy savings and peak demand reduction. Power system requirements must be met on a continuous basis, but they can be met in an optimized and economic manner. The DERMS is designed to react to localized constraints and knows exactly what steps to take to achieve an optimized state.

5.3.2.6 Technology Innovation

Electric distribution systems are becoming more decentralized with the growth of DER penetration leading the way. Technology innovations in photovoltaics, energy storage, and energy management systems are driving the price point down and customer interest up. As technology continues to improve, the integration of DERs will continue to grow.

Customer expectations are changing where they are expecting their resources to be integrated into the grid to provide the most benefit to the customer and the system.

Utilities are quickly making adjustments to their electric systems to improve its ability to interconnect intermittent resources that are uncontrollable and unpredictable. Technology improvements are required to make the grid more flexible and the integration less complex. The Company is focusing its efforts on improved monitoring and control of the distribution system. This technology will begin to form the basis of distribution markets that allow peer to peer and group transactions, sophisticated pricing and a growth in electric vehicle adoption rates. Technology improves the ability to share information with customers, improve access to markets, enable programs such as demand response and reduce peak demand on the system.

Improvements to technology associated with DERs is endless. The sky is the limit. The Company's goal is to design and build an enabling platform that allows customers to connect with ease, the system to operate in a safe and reliable manner, and benefits are optimized for the customer and the system.

5.3.2.7 Environmentally Friendly

An environmentally friendly grid is one that is optimized for interconnection and use of DERs including renewable generation and controllable loads, while optimizing the system demand at all times of the year. The goal of cleaner and cheaper power has become synonymous with DERs. DERs provide clean energy and the opportunity to reduce CO2 emissions.

Technology improvements in roof top solar continues to drive the price point lower and lower. The costs of other DERs such as energy storage and energy efficiency improvements are also experiencing decreasing pricing and increased sales. Demand response opportunities continue to grow as home assets such as HVAC, water heaters, LED lights, thermostats and even electric vehicles as the ability to control these assets from the internet become more prevalent.

What does all of this mean? The ability to monitor and control DERs individually or in an aggregated manner will lead to more clean energy and demand reduction opportunities to offset centralized fossil fuel based generation and transmission capacity additions.

The electric system as an enabling platform strives to minimize GHG emissions by integrating greater renewable energy DER and empowering customer energy options. Technology advancements in monitoring and control of DERs will allow the interconnection and operation of a larger percentage of renewable energy resources than otherwise could have been supported. Demand reduction programs supported by advanced monitoring and control will lead to the replacement of inefficient end use devices.

5.3.3 SUMMARY

Utilities are experiencing extreme pressure to manage the large quantities of DERs coming onto the system in such a short timeframe. The ever increasing interconnection of intermittent resources resulting in two-way power flow is creating challenges for utilities who still are trying to operate the system manually. The intermittent nature of renewable resources are creating system challenges of voltage fluctuations and back flow. Advanced monitoring and control technologies are required for the safe, reliable and cost effective operation of the electric system. Technology for the utility and for the customer will allow these DERs to support the electric system.

The distribution system as an enabling platform must be operated in a safe and reliable manner, with the flexibility to interconnect large quantity of diverse DERs. Technology advancements in DERs is making the price more competitive and increasing adoption rates. DERs when planned properly will assist utilities in the pursuit of an optimized system;

one that is clean, affordable and enables customer to take an active role in their electricity usage. Reductions in customer usage, peak demand and system losses will result in further savings in generation and transmission costs.

5.4 Advanced System Planning

The growing penetration of variable loads and intermittent renewable resources creates a challenge for the electric system if the grid is not prepared to accept these resources. The Company's vision of the advanced grid is an enabling platform with the ability to interconnect a large quantity of renewable resources and other DERs. Advanced system planning forms the foundation for an enabling platform willing and ready to accept DERs and other electrification technologies.

Advanced system planning begins with an accurate system model. A GIS system that is maintained on a timely basis form the basis for the network model used in Advanced System Planning. A complete and detailed network connectivity models is essential and when used across multiple platforms allows for consistent results for real-time operation of the electric system.

Real-time system planning is foundational to the optimization of the electric system. The modern grid is constantly changing. Intermittent generation resources and added loads from electrification can drastically change operating conditions within moments. Real-time system planning enable grid operators the tools to make the necessary adjustments to optimize the system. Real-time system planning increases the safety, reliability and security of the electric system.

Forecasting is a critical component of advanced system planning. DER interconnections can be a challenge to the electric system if they are not appropriately integrated. DER forecasting enables the electric system to take advantage of DERs for the operation of the system. DER forecasting can identify the real cost of DERs in comparison to traditional alternatives and drive a lower cost and improved affordability across the system.

Electrification has the potential to double the electric loads on the electric system. Increased adoption rates of electric vehicles and heat pumps may have a negative effect on the electric system if the loads are not accurately forecast and included in system design and operation considerations.

DERs can provide can be a challenge and a benefit to the electric system. Advanced system planning reduces the risk associated with DER interconnections and enables the benefits to be realized by the system and customers. Hosting capacity and locational value analysis are tools that can be used to identify the optimal locations for DER interconnections maximizing the benefits to the customers and the system. Understanding the value and benefits of DERs will allow utilities to plan for and rely-on cost effective DER solutions to defer distribution system upgrades.

5.4.1 DESCRIPTION

Advanced system planning forms the foundation for an optimized distribution system that is safe, reliable, secure and affordable. Accurate system models that are accurate and up to date support consistent decision making. Real-time planning allows system operators to operate an optimized system, taking into account a diverse set of intermittent generation and controllable load resources. Forecasting of DERs and electrification technologies is critical to enable the increased adoption of these resources. Hosting capacity and locational value analysis provide the tools necessary to optimize the location of these resources.

5.4.1.1 Geographic Information System

A Geographic Information System (GIS) is no longer the simple mapping of utility assets. GIS is an enterprise relational database which provides an accurate representation of the electric network and is the foundation for all system planning and forecasting. GIS is designed to provide a spatial representation of the distribution system and the equipment connected to it.

The Company has been using various versions of GIS technology for over two decades. The electric system is a complex network of assets each with its own characteristics and settings. Electric systems are spread over hundreds of square miles and managing all of the data is complex. GIS is an effective tool used to simplify the management of these assets. GIS has revolutionized the manner in which the Company operates. GIS is used to collect, display, analyze and manage data. The spatial nature of the database allows the data to be shared or referenced in a visual representation encouraging creative solutions to otherwise complex maintenance or upgrade challenges.

The Company's GIS is an enterprise system and is integrated with many of the Company's other systems such as AMI, ADMS, OMS, CIS, mobile damage assessment and engineering circuit analysis software. The GIS system is also used on the natural gas side of the business and provides the basis for DIMP, TIMP, gas leak survey, and CMS.

GIS provides the basis for system planning activities for the Company. A complete and detailed network connectivity model is essential for planning the system. The GIS provides the detailed model of the electric system from the interconnection with the transmission system to the service transformers. Customers are mapped directly to the service transformer they are connected to. The GIS system also provides important engineering related information on specific equipment and construction types.

GIS provides the single network model to be used within the ADMS, DERMS, OMS and VVO systems. An accurate and consistent model used across all of these system will ensure consistent results for the real-time operation of the electric system. GIS provides the network model required for accurate real-time system planning.

5.4.1.2 Real-Time System Planning

Utilities have historically completed distribution level planning on an annual basis, primarily focused around the peak load hour in the summer and winter periods. This analysis is generally focused on one-way power flow in comparison to the limiting elements of a circuit. The static nature of this approach has supported the utilities for many decades. The legacy approach to system planning is quickly becoming inaccurate because the uses of the system are changing so rapidly.

The modern grid is changing at an accelerated pace. System planning must change as well. The modern grid must be designed and planned for two-way power flow, and increase in intermittent distributed energy resources and increasing loads connected to the system due to electrification. Utilities can no longer plan for the one-hour of the year. Real-time system planning is required to evaluate and optimize the electric system at all hours of the day.

The basis for real-time planning is an up to date and accurate system model. Advanced monitoring and control through the ADMS, DERMS, SCADA and VVO systems will provide the information required to plan and optimize the system in real-time. Real-time system planning will enable grid planners and operators to plan for and react to local disturbances before they cascade into larger problems.

Real-time system planning will allow operators the advanced monitoring tools to operate the grid in real-time, make the necessary adjustments to optimize the system and allows market based mechanisms that promote energy efficiency and reliability. Real-time system planning will increase the safety, reliability and security of the electric system.

5.4.1.3 DER Forecasting

DER can be one of the largest challenges to the electric system. Properly planning for DER interconnections can turn DERs into one of the largest benefits to the system. DERs are changing the make-up of the electric system at an alarming pace, allowing customers to take greater control of their electricity usage. DERs, when planned and forecasted accordingly, will potentially replace traditional grid improvements in infrastructure. If customer adoption of DERs outpace the utility's preparation and planning, new operational issues on the distribution system could result in costly upgrades.

The Company has already experienced a high adoption rate of rooftop solar installations in its Massachusetts service territory. The adoption rate will continue to grow into New Hampshire with improvements in technology that lead to a reduction in costs. Behind the meter energy storage has seen little activity in the Company's service territory to date, but become an important resource for the reliable interconnection and operation of intermittent resources. The drive for electrification will bring and increase adoption of electric vehicles and heat pumps.

DER forecasting is one tool that the Company will use to ensure the system is ready to interconnect DERs. In addition, day to day forecasting of DERs is important especially as the quantity and capacity of DERs are interconnected. More accurate inclusion of DERs into the Company's load forecast will provide a better understanding of the costs and benefits of the DERs. This will lead to more optimal investments such as non-wires alternative project to replace or augment the traditional distribution infrastructure.

Forecasting DERs is one of the first steps to advanced system planning. System planners and operators need to understand the amount, location and timing of DERs over an extended planning period. This is a difficult task which requires assumptions. Geospatial analysis supported by GIS is a critical component to the forecast. The old adage that all forecasts are wrong is true, but forecasts can be used in conjunction with sensitivity analysis to provide valuable information.

5.4.1.4 Electrification Forecasting

The goal of reducing emissions has become synonymous with electrification. Two of the largest opportunities for electrification receiving the most attention right now are transportation and building and industrial sectors.

Electrification of the transportation sector can include light-duty cars and trucks, medium-duty battery electric trucks, heavy-duty battery electric trucks, and battery electric busses. EV penetration is expected to have an impact on the Company's total system load forecasts however it is not anticipated that the Company's system design forecasts will increase by the amount of forecasted EV load in this document. Impact of EV load on the Company's system design forecasts will be incorporated into the electric system load forecasting process in the future.

The Edison Electric Institute's (EEI) national forecast for the number of EVs on the road is the basis for the Company's EV load projections. The EEI forecast along with New Hampshire Department of Motor Vehicle (NHDMV) and census data was used to project the number of EVs on the road and ultimately the number of EV chargers within the Company's service territories.

Department of Motor Vehicles (DMV) information on the number of EVs registered per New Hampshire County was used to estimate the current number of EVs in each of the Company's service territories. The estimated number of EVs in each of the Company's service territories was determined by calculating the number of EVs registered per adult and estimating the number of adults residing in each of the Company's service territories.

Once the estimated number of EVs in each of the Company's service territories was determined, the EEI national EV forecast was used to project the number of EVs in each of the Company's service territories for each year from 2020 through 2030. Three forecasts for each territory were created:

- High Rate – utilizes 100% of the EEI projection
- Moderate Rate – utilizes 75% of the EEI projection
- Low Rate – utilizes 50% of the EEI projection.

Utilizing the assumptions in the section below the estimated number of home level 1 and level 2 chargers in each service territory was calculated. EEI projections for the percentages of the total number of each type of level 2 charger allowed for the calculation of the estimated number of level 2 public and work place chargers.

Utilization percentages (percentage of total of each type of units charging) for each hour of the day for home, public (including DC fast chargers) and workplace chargers and the assumed demand for each type of charger was then used to calculate the forecasted load due to EV charging for each hour of the day. This methodology was repeated for each forecast type and each of the Company's service territories.

Electrification of the building and industrial sectors include air-source heat pumps, heat pump water heaters, electric machine drives, industrial heat pumps, electric boilers and electric process heating. This portion of the Company's electrification forecast is still being developed.

5.4.1.5 Hosting Capacity Analysis

Under the present tariff model, those wishing to interconnect onto electric distribution system submit an application with the applicable information and the location of the interconnection. The Company then evaluates each application to determine if any system improvements are required. This process works well, but without knowledge of the general capacity and limitations of specific areas, some applications are likely to be determined to be economically impractical. If these developers or DER owners had a greater visibility into the ability for the grid to accept DER, this should reduce some of the iterative analysis by the utility and developer trying to identify a good location. The overall goal is to improve the quality and practicality of the applications submitted for review.

Circuit capacity, sometimes referred to as "integrated capacity" or "DER hosting capacity," is challenging to define, because each circuit has its own characteristics and these characteristics change over time. The "hosting capacity" of a feeder is the amount of DER a feeder can support under its existing topology, configuration, and physical response characteristics without affecting power quality or reliability. Many considerations need to be evaluated depending on where the DER is located. The utility needs not only to look at the grid in the area of the interconnection (i.e. transformer and wire capacity, voltage control, etc.) but they also need to determine if this installation will have any effect on the overall loading on the circuit, substation or even back flow of power onto the subtransmission or transmission systems. This is a highly variable calculation depending on the situation on each individual circuit. There are many additional concerns that require analysis on a case-by-case basis for specific applications, but general loading information can be supplied at a substation or circuit level prior to receiving specific applications.

UES has been analyzing the ability and process of developing a DER Hosting Capacity for each circuit or substation. The analysis will quantify the capability of the system to integrate DER with the existing thermal ratings, protection and control system limits, and safety standards of the existing equipment.

UES has implemented an approach to evaluate the hosting capacity of each substation and circuit to determine how much DG could be added without the need for distribution system upgrades. This information is presented to the public

as an interactive map allowing the ability to zoom to certain areas of the system to see if it would be a good location to site a DG or if the location may require some system improvements to support the interconnection of DG. This is a tool that the Company hopes the public will find useful.

5.4.1.6 Locational Value Analysis

Locational value analysis is used to determine the value a DER has to the distribution system and will service to improve the overall customer value proposition. Locational value analysis is a relatively new concept to DER interconnections but is an important consideration when trying to maximize the benefits of the DER to the system and its customers. The precise way to calculate locational value has not been developed yet, but the models continue to get more accurate over time.

Locational value analysis is difficult to calculate with a high degree of accuracy because conditions on the distribution system change very quickly based upon changes in load and other distributed resources. These changes can have a large impact on the value of a DER in a given location. Locational value analysis is still in its infancy. Locational value analysis is evolving as utilities understand more about the capacity, reliability, availability and life span of DER assets.

Developing the benefits for integrating DERs into the grid is a more complicated calculation than identifying the circuit capacity. The benefits include but might not be limited to the generation energy, generation capacity (distribution and transmission level capacity), reduction in losses, environmental, and other benefits. The circuit capacity study will help the Company and DG developers to better plan for DG growth. The benefits of DER Enablement ultimately depend on how much DER is installed.

Understanding locational value is essential for utilities to plan for and rely on cost-effective DER to defer distribution system upgrades. The hypothesis is that as the value of DER can be accurately calculated it will lead to more distribution system investment deferrals.

5.4.2 MAPPING TO OBJECTIVES

The Company has developed a set of objectives influenced by the United States Department of Energy, Massachusetts Department of Public Utilities and New Hampshire Public Utilities Commission. Examining guidance provided by these agencies reveals an emerging consensus around certain key areas of interest. The benefits and values achieved from the modern grid can result in cost savings for all users. This section identifies how advanced system planning and forecasting supports the objectives established by the Company.

Project/Functionality	Existing / Planned	Safety and Reliability	Customer Enablement	Security	Flexibility	Affordability	Demand and Asset Optimization	Technical Innovation	Environmentally Friendly
Geospatial Information System	Existing	X			X			X	
Real -Time System Planning	Planned	X	X	X	X	X	X	X	X
DER Forecasting	Existing	X	X		X	X	X	X	X
Electrification Forecasting (EV and Heat Pumps)	Existing	X	X		X	X	X	X	X

Hosting Capacity Analysis	Planned	X	X		X	X	X	X	X
Locational Value Analysis	Planned	X	X		X	X	X	X	X

Table 6: Advanced System Planning Mapping

5.4.2.1 Safety and Reliability

The safety and reliability of the electric system begins with accurate and detailed system planning. Accurate GIS modeling of the system provides the foundation for system planning. These models need to be accurate and timely in order to accurately depict existing field conditions. Inaccurate base models result in uninformed actions which could cause unintended consequences.

The increasing penetration of DERs causes significant changes on the distribution system on a minute by minute basis. Real-time system planning will be required to ensure the safe and reliable operation of the electric system. Increasing DER penetration and increasing loads from electrification activities place a higher importance on forecasting. Accurate forecasts are required to ensure the safe and reliable operation of the electric system.

Integration of DERs can impact the safety and reliability of the electric system if not interconnected in a planned and coordinated manner. Hosting capacity and locational value analysis when shared publicly can guide the installations of DERs to the locations on the system which provide the largest benefits. Cooperation between the utilities and the DER owners will ensure DERs are interconnected in a safe and reliable manner.

5.4.2.2 Customer Enablement

Advanced system planning forms the basis for customer enablement. Electric systems are dynamic with constantly changing loads and sources of generation. As more customers invest in DER, advanced system planning becomes increasingly important for utilities. Advanced system planning provides the insight into real-time system conditions and is enabling customers to use their resources in a manner to benefit the customer as well as the system. DER forecasting improves the Company's ability to prepare the system to interconnect more DERs than would otherwise be allowed. Electric vehicle and heat pump adoption rates continue to increase. The potential increase in load on the electric system is significant and if not planned appropriately will create problems for the electric system. Advanced system planning will ensure the system is designed to accept the additional load. Hosting capacity analysis will provide customers and developer to have information and data in advance of proposing a DER interconnection. Hosting capacity when coupled with locational value analysis will provide customers and developers to identify and calculate the benefit of interconnecting a DER in a certain location on the network. Advanced system planning provides the Company and its customers with the information required to enable customers to take control of their own implementation of technology.

5.4.2.3 Flexibility

Designing and managing a flexible electric system begins with advanced system planning. The electric system as an enabling platform needs to be flexible enough to safely and reliably operate a system with two-way power flows. The penetration of DERs such as distributed generation (i.e. rooftop solar), energy storage, heat pumps and electric vehicles affect how the system is operated. Advanced system planning allows electric system to be designed to balance supply and demand at all times. Advanced system planning provides the information necessary to address the variability and uncertainty of the diverse set of resources connected to the electric system. Advanced system planning provides the building blocks to ensure the future system possesses sufficient flexibility to accommodate the growth of DERs. Advanced system planning is required to ensure flexible generation, transmission, demand-side resources and system

operations for a safe and reliable system. Flexibility comes with a cost, therefore advanced system planning is required to determine the amount and type of flexibility and the associated costs.

5.4.2.4 Affordability

Advanced system planning is required to assess the physical and operational needs of the system to enable safe, reliable and affordable service to customers. Changing customer expectations and integration of DERs must be planned in an integrated manner, involving stakeholder involvement and reviewing non-wire alternatives in addition to traditional investments. Forecasting of electrification and DER technologies allows the system to be designed to safely and reliably serve these customers. Hosting capacity and locational value analysis ensures that DER interconnections are providing the largest benefits to the customer as well as the system.

5.4.2.5 Security

The electric system will soon be influenced by market activities. Real-time system planning will ensure the system is designed with adequate resources to withstand sudden disturbances. The system is designed to remain intact even after outages and equipment failures. Real-time system planning can identify rapidly evolving threats and vulnerabilities with mitigation implemented in a timely fashion.

5.4.2.6 Demand and Asset Optimization

An optimized electric system only uses what it needs at any given moment in time. An optimized system will react to changing system generation and load conditions in real-time and control the appropriate resources to ensure the safe and reliable operation of the electric system. Accurate system models and advance system planning form the basis for optimizing the electric system.

DER penetration across the electric system continues to increase at an increased pace. DERs are electricity producing resources or controllable loads connected to a distribution system. DERs include roof top solar, wind, CHP, energy storage, small gas powered backup generators, electric vehicles, heat pumps and controllable loads. Behind the meter DER such as roof top solar is the largest application of DER technology across the service territory. System reliability and inefficient performance increase the risk profile for these DERs creating the need to optimizations. Hosting capacity and locational value analysis support the interconnection of DERs which provide an additional means of support for an optimized system.

5.4.2.7 Technology Innovation

Implementing innovative technology solutions require and an electric system that enables and encourages those technologies. As the industry transitions to the modern grid, advanced planning tools will be crucial to informing decisions regarding infrastructure and system changes. Fundamental changes to the electric system are required to integrate the new technologies in greater quantities. Advanced system planning allows utilities to make timely adjustments to their electric systems to improve its ability to interconnect intermittent resources that are uncontrollable and unpredictable. Technology improvements are required to make the grid more flexible and the integration less complex. The Company is focusing its efforts on advanced planning of the distribution system. Technology improves the ability to share information with customers, improve access to markets, enable programs such as demand response and reduce peak demand on the system.

5.4.2.8 Environmentally Friendly

An environmentally friendly grid is one that is optimized for interconnection and use of DERs including renewable generation and controllable loads, while optimizing the system demand at all times of the year. Advanced system planning forms the basis for optimization of the system. Advanced system planning models allow the operator to run scenarios at varying load and generation levels to find the optimal settings.

The goal of cleaner and cheaper power has become synonymous with DERs. DERs provide clean energy and the opportunity to reduce CO2 emissions. Hosting capacity and locational value analysis provides valuable information most beneficial locations for interconnecting DERs. Electrification activities such as greater adoption of electric vehicles and heat pumps will continue to reduce emissions.

5.4.3 SUMMARY

Advanced system planning provides a strong foundation for the evolving electric system. Accurate system models that can be used in real-time are a requirement for complete optimization of the system. The distribution system as an enabling platform must be operated in a safe and reliable manner, with the flexibility to interconnect large quantity of diverse DERs. Advanced system planning will support the further integration of DERs as well as electrification technologies such as electric vehicles and heat pumps. DERs when planned properly will assist utilities in the pursuit of an optimized system; one that is clean, affordable and enables customer to take an active role in their electricity usage. Reductions in customer usage, peak demand and system losses will result in further savings in generation and transmission costs.

5.5 Enhanced Customer Services

Customers of the modern grid have begun the transition from passive recipients to active participants in the energy markets. They will take an active role in technology deployment and control over their energy usage. Superior customer service is fundamental to the Company's Vision, Mission and Values. The Company's customer service offerings will continue to evolve with the needs of our customers. The transition from traditional customer service offerings to more personalized options is one of the important steps to fulfilling the utility customer of the future evolving expectations.

Enhanced customer services provide customers with a suite of tools and services to take control of their own electricity usage. The vision begins with providing digital options for common and existing services followed by enhancing and optimizing the communication channels between the Company and its customers. The vision continues with extending additional value to our customers with personalized products and services depending on the individual customer's desires. The overall vision is to provide a total energy solution that provides pricing and services personalized to allow customers to achieve the greatest benefits based upon the technology deployed by customers.

Customers desire the ability to take control of their own electricity usage and a comprehensive education and outreach plan provides an important foundation for our customers to not only understand these enhanced customer services but to also understand how they may benefit their energy lives. Education helps customers to understand the options available tailored to their individual usage patterns or technology deployment. A strong customer communication, education and outreach plan assists customers to understand the services available and which services provide the most benefits. Self-service, web based tools that are easy to understand and operate improves the overall customer experience.

Looking forward, we will continue to invest in technologies designed to support our commitment to strong customer experience. We recognize that the complete utility customer experience involves a comprehensive customer engagement strategy that includes system and technological opportunities, personalized assistance from customer engagement representatives, web and electronic communications, and personalized self-service options. We will

continue to enhance our customer web portal, adding self-service options that enable customers to better manage their energy usage and accounts. Planned enhancements include a mobile app, artificial intelligence and chat features, together with a robust notification engine to proactively alert customers regarding payment activity, increases in usage, outage notifications, and the status of scheduled appointments.

Data sharing between the utility, customers and third parties may also be a solution to overcoming barriers that may exist for customer adoption. The Company continues to work with stakeholders on data sharing tools and standards (i.e. Green Button). Home energy management systems have become widely available, with lower costs over time. Data sharing standards and platforms should be considered that benefit the customer, the utility, society at large, and third party vendors. Partnerships with global vendors such as Amazon and Google may provide behind-the-meter services as a means to share data and enable customers to better understand and control their energy usage.

5.5.1 DESCRIPTION

UES's vision for enhanced customer services is segmented into four parts: Digitizing Core Services, Optimizing the Customer Lifecycle, Extending the Value-Add and Providing the Total Energy Solution. The vision includes a strong foundation of easy to use tools presented in a web-based platform that provides customers with access to digitized core services. Communication with the customer that engages the customer using the media channel they most desire is an important aspect to optimize the customer lifecycle. As our customer engagement continues to grow, the platform will extend added value to customers by providing more personalized options. The ultimate vision is to provide a total energy solution that meets the unique needs of all of our customers.

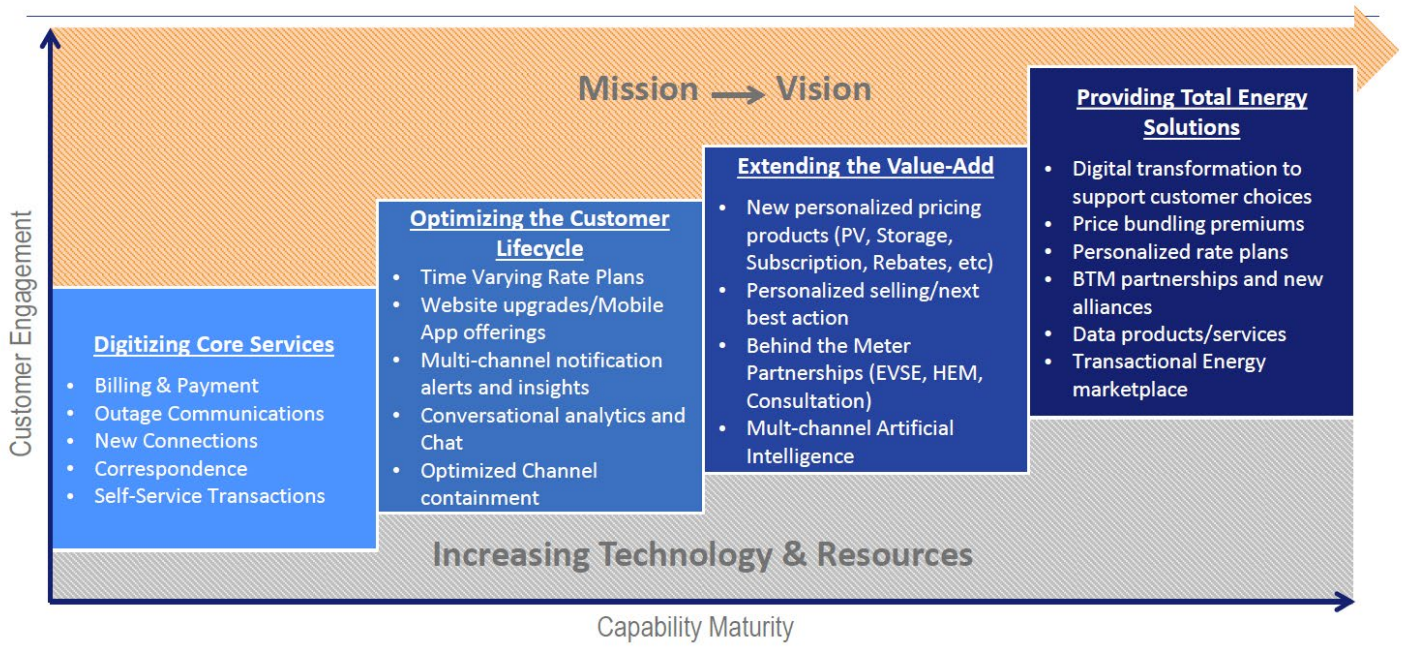

Figure 4: Enhanced Customer Services Roadmap

5.5.1.1 Digitizing Core Services

Enhanced customer services begins with improvements to the existing services provided to customers. Improved online options for billing and payments, outage communications, new connections, self-service transactions and general

correspondence options. A web based platform is central to the Company's goal to assist with normal and emergency customer needs.

5.5.1.2 Optimizing the Customer Lifecycle

Communication with the customer is key to a strong customer experience. Every customer has a preferred method of receiving communication. Customer communications preference for outbound notifications ensures the customer receives information, alerts and insights from the Company using their media of choice. Optimized channel containment will keep customers engaged and provide customers the means to accomplish their task without the need of seeking the assistance of a customer service representative.

5.5.1.3 Extending the Value Add

Customers desire services that meet their individual needs. Extending the value-add provides the customer with personalized products and pricing that are not currently available. New pricing products provide the customers with the ability to maximize the benefit of their technology deployment. Partnerships with Behind the Meter vendors or energy related advice and consulting services provides the customer with recommendations on products and services that can empower them to take control over their energy usage. Energy contract management provides customers with a greater understanding of the contract details and how to best manage those contracts.

5.5.1.4 Total Energy Solution

Customers of the modern grid desire a one stop shop for all of their energy needs. Enhanced customer services provides the customer with a total energy solution. The platform will provide access to the transactional energy marketplace. Customers can obtain personalized rate plans, data products and services that meet their unique needs. Home energy management systems are available through partnerships between the Company and known vendor alliances. The total energy solution will be designed with the flexibility to meet changing customer needs into the future.

5.5.2 MAPPING TO OBJECTIVES

The Company has developed a set of objectives influenced by the United States Department of Energy, Massachusetts Department of Public Utilities and New Hampshire Public Utilities Commission. Examining guidance provided by these agencies reveals an emerging consensus around certain key areas of interest. The benefits and values achieved from the modern grid can result in cost savings for all users. This section identifies how the enhanced customer services vision supports the objectives established by the Company.

Project/Functionality	Existing / Planned	Safety and Reliability	Customer Enablement	Security	Flexibility	Affordability	Demand and Asset Optimization	Technical Innovation	Environmentally Friendly
Digitizing Core Services	Planned		X		X	X		X	
Optimizing the Customer Life Cycle	Planned		X		X	X		X	
Extending the Value-Add	Planned		X		X	X	X	X	X
Providing Total Energy Solution	Planned		X		X	X	X	X	X

Table 7: Enhanced Customer Services Mapping

5.5.2.1 Customer Enablement

Enhanced customer services requires a strong customer communication, education and outreach plan. Customer education is a critical aspect of increasing awareness and encourage adoption of new products and services. Easy to understand web-based tools provide customers with the opportunity to control their energy usage. Proactive alerts and preference-driven notifications provide customers with advance notification of changing circumstances.

5.5.2.2 Flexibility

Not all customers are equal. Each has its own individual value proposition when it comes to their electric usage. Some customers still prefer a passive approach as a load user while others have the means and desire to implement technology to become prosumers. Enhanced customer services provides the flexibility through personalized products and service offerings, individualized customer communications, customized energy related advice, and personalized billing and payment options that cover the wide range of users.

5.5.2.3 Affordability

The way customers use the distribution system is changing. Enhanced customer services will provide customers with personalized education and tools to enable customers to take control of their own energy usage. Personalized products and services designed to allow customers to maximize value and minimize cost helps to support a sustainable and affordable electric system. Enhanced customer communications, alerts and consulting advice educates the customer to make decisions that can reduce cost and increase the overall affordability of their service. Personalized rate plans and access to a transactional energy marketplace provide options to the customer to improve their overall value proposition.

5.5.2.4 Demand and Asset Optimization

Optimization of the electric system requires a combined effort of the Company and its customers. Personalized education, technology, products and services provide customers with the motivation to adjust their usage patterns to maximize the benefit to the system as well as reduce their costs. Active management of peak demand usage reduces transmission and generation costs, defers costly system improvements and allows the system to operate in a more efficient manner. Lower capital expenditures resulting from reduced peak demand improves asset utilization and results in customer bill savings.

5.5.2.5 Technology Innovation

Technology is moving at an alarming pace and is changing the operation of the distribution system. Customers have options that they never had before. The present challenge is that customers do not understand the opportunities available and how those opportunities can influence their individual situation. Enhanced customer services provides customers with the education to better understand the options. Online personalized customer communications and tools are provided to engage the customer in their electricity use and educate them on different options and plans that may better suit their desires. Data sharing products and services integrated with home energy management systems provide customers with the technology required to actively take control of their situation.

5.5.2.6 Environmentally Friendly

A sustainable and environmentally friendly electric distribution system requires effective and efficient use of electricity. Customers who have knowledge, tools and technology can support the overall goals of energy conservation during peak load hours leading to reduced emissions. Customers who are engaged and have a clear understanding of their individual situations have a greater tendency to make beneficial changes. The customer engagement platform will be a forward looking “one-stop-shop” for everything customers related to the products, services and rate offerings available to them.

5.5.3 SUMMARY

UES is a preferred energy partner with a portfolio of services which address the varying needs of customers where the Company competes for the customer relationship. Improving the awareness and visibility of these options supports the goal of delivering the right experience, products and services for each customer. Customers are no longer content as passive consumers. Advancements in technology, concerns over climate change and the desire to control costs while increasing functionality are motivating customers to increase their understanding of the options available. Enhanced customer services is designed to provide customers with the education, products, services and rate offerings available to maximize their individual value proposition.

5.6 Innovative Rate Design

Customers desire the ability to take control of their own electricity use. Customer have the ability to invest in technology to support their individual use cases. Customers desire a means to achieve a benefit from their investments that not only support their individual goals but also provide benefit to the electric system and other customers.

Historically, rate design has been a “one size fits most” approach. Demand based rates for large customers and volumetric rates for smaller customers. These rate designs have been in place for decades. Innovative rate design continues to review and evolve existing rate designs to enable customers to more efficiently manage their energy needs.

Given the various desires of our customers, needs of the electric system and dynamic nature of the markets, no single rate option will be suitable to serve the needs of all customers. Innovative rate design is a suite of rates tailored to different customer types and use cases. Innovative rate design affords customers the opportunity to adopt new technologies, manage energy consumption and actively participate in energy markets to enhance efficient utilization and consumption of electricity to save money.

The overarching objective of rate redesign is the development of pricing for grid services that adhere to the principles of fairness, transparency and economic efficiency. Transparent and economically efficient pricing structures will ensure a viable and sustainable long term model that provides sufficient revenue to support the modernization of the electric system. Innovative rate design encourages appropriate behaviors and assures fairness and equity among customers

The Company recognizes the evolving needs of the public that have occurred over the last several years and that are expected to continue in the future as customers transition from passive recipients to active participants in the energy market. The transition from offering traditional rate designs to tailored and more personalized options, especially for EV owners, is an important step to fulfill customers’ evolving requirements from their utility.

Customer education is an important aspect to innovative rate design. A strong customer communication, education and outreach plan is required to support new rate offerings. Customers will be more likely to adopt new rate structures if they are aware of and understand the new rates. An easy to understand rate comparison self-service tool (e.g. shadow billing) is a critical web based tool customers can use to compare different rate structures to their individual usage patterns.

5.6.1 DESCRIPTION

Innovative rate design is driven by timely and accurate data. the Company’s Advanced Metering Infrastructure, Meter Data Management system and Customer Information System provide the tools required to provide timely and accurate

metering data for many different types of innovative rate designs and coupled with data sharing platforms, allow customers to make informed energy choices.

Innovative rates should be based on cost of service rate design principles to ensure economic efficiency and limit cost shifting. Critical peak pricing (CPP) and demand reduction approaches are also worthy of consideration in addition to tariff-based TOU rates.

Marginal energy costs are typically driven by wholesale electric market (ISO-NE in this case) factors and may not fluctuate for different customer segments. A utility's distribution-related costs are fixed in nature and are incurred to meet customers' non-coincident peak demands and do not necessarily exhibit time-varying cost characteristics. In most cases, demand charges for C&I customers better reflect the manner in which a utility's costs are incurred to serve such larger customers. Incremental loads may require new transformers, service lines and meter upgrades. Instances may also exist where the addition of loads would require an upstream feeder and/or substation upgrade.

UES believes that the rate design options for any type of electric load should be designed to promote the efficient use of the utility's electric system resources and reduce costs for all utility customers. Rate options must provide proper price signals and influence customer behavior in a manner that creates beneficial outcomes for the customer (through lower rates and electric bills) and for the utility (through a reduction in system costs over time). To achieve these objectives, the design of the rate options should only reflect system costs that are time-varying in nature, and provide customers a cost-based price signal through the rate design. The time-varying costs should drive the desired shape of the utility's system load curve and not simply represent a preconceived outcome based on non-cost or qualitative presumptions.

At the same time, it is also necessary to understand and evaluate how customers are responding to the utility's TOU rate options in order to make periodic refinements to the TOU rate design and identify how the utility's load shape and resulting costs will likely change over time. For example, some customers may find certain TOU rate design options to possess overly long peak time periods, precluding those customers from responding to the TOU rate in a meaningful way. In addition, some jurisdictions have designed TOU rates to create a significant peak to off-peak rate differential to increase the likelihood of a positive customer response without recognizing that the underlying costs of the utility are not accurately reflected by the rate design. In that case, a rate benefit is afforded to customers who can change their electric usage patterns even though the utility does not experience a corresponding reduction in cost. This may be deemed desirable for non-cost causative objectives, such as supporting technology adoption, gaining an understanding of consumer behavior, and insights into grid operations and future investment requirements by the utility. Notwithstanding the Company's earlier comments with regard to the non-time-varying cost characteristics of its distribution system today, incorporating considerations into the design of EV TOU rates that may be non-cost causative in the near term may provide an opportunity to gauge the resulting longer-term impact of EV adoption on the electric distribution system, as further discussed herein.

Innovative rate design considers the effect that technology adoption will have on the electric distribution system and subsequent system planning and investment. Technology adoption rates should be forecast over the coming years and integrate these loads into planning studies and load forecasts. Possible changes to engineering and construction standards may be warranted to ensure reliability, safety, and appropriate equipment sizing.

The design of electric services may need to change as well, such as shorter distances and increased conductor size to address voltage drop concerns. Ongoing capital budgeting may need to accommodate early replacement of current infrastructure that is undersized and unable to accommodate new customer loads. Additionally, the installation of interval metering should be considered for increasingly dynamic loads and generation that have the potential to export energy onto the distribution system and necessitate more granular planning analyses.

Innovative rate design may also include make-ready programs, charging incentives, and behind the meter partnerships with third parties. Data sharing between the utility, customers and third parties may also be a solution to overcoming barriers that may exist for customer adoption. The Company continues to work with stakeholders on data sharing tools and standards (i.e. Green Button). Home energy management systems have become widely available, with lower costs over time. Data sharing standards and platforms should be considered that benefit the customer, the utility, society at large, and third party vendors. Partnerships with global vendors such as Amazon and Google may provide behind-the-meter services as a means to share data and enable customers to better understand and control their energy usage.

5.6.2 MAPPING TO OBJECTIVES

The Company has developed a set of objectives influenced by the United States Department of Energy, Massachusetts Department of Public Utilities and New Hampshire Public Utilities Commission. Examining guidance provided by these agencies reveals an emerging consensus around certain key areas of interest. The benefits and values achieved from the modern grid can result in cost savings for all users. This section identifies how the innovative rate design vision supports the objectives established by the Company.

Project/Functionality	Existing / Planned	Safety and Reliability	Customer Enablement	Security	Flexibility	Affordability	Demand and Asset Optimization	Technical Innovation	Environmentally Friendly
Residential/Business TOU	Planned	X	X			X	X	X	X
EV TOU	Planned	X	X			X	X	X	X
Distributed Energy Resources	Planned	X	X			X	X	X	X
Behind the Meter Partnerships	Planned	X	X			X	X	X	X
Make Ready Programs	Planned	X	X			X	X	X	X

Table 8: Innovative Rate Design Mapping

5.6.2.1 Safety and Reliability

Rate design and technology innovations must go hand in hand. Improper rate design can create unintended consequences. Safety and reliability of the electric system must have a high priority in rate design in order to design a rate mechanism that is sustainable and supportive of the needs of the electric system. Rate design should encourage and incentivize customers to shift their usage away from the peak periods and shift generation away from light load periods. Reducing loads at peak and reducing generation at light load times will reduce costs and improve the reliability of the electric system.

5.6.2.2 Customer Enablement

A successful implementation of innovative rate designs requires a strong customer communication, education and outreach plan. Customer education is a critical aspect of increasing awareness and encourage adoption of innovative rate designs. An easy to understand rate comparison tool (i.e. shadow billing) is a tool customers can use to compare their historical usages against different rate designs. This tool allows customers to understand how they can change their usage behaviors to maximize their benefit. Customers who feel empowered are more likely to participate in different rate design opportunities.

5.6.2.3 Affordability

In the near future, the distribution system will see some major changes in the products and services it provides. Markets and pricing mechanisms will be in place for customers to receive payments or credits for allowing their equipment to participate or be controlled in certain programs aimed at optimizing the system. Innovative rate design provides the means for customers to receive benefits for taking control of their usage. Customers will have the ability to choose the rate designs that produce the most value for their situation. Innovative rates are designed to reduce the overall cost of the electric system and promote usage during off peak timeframes.

5.6.2.4 Demand and Asset Optimization

A primary goal of innovative rate design is to encourage customers to shift load away from peak load times and to shift generation away from light load periods. Capacity constraints on the distribution and transmission systems drive system improvement projects. Innovative rate design can encourage and incentivize customers to manage their usage and peak demand. Active management of peak demand usage reduces transmission and generation costs, defers costly system improvements and allows the system to operate in a more efficient manner. Lower capital expenditures resulting from reduced peak demand improves asset utilization and results in customer bill savings.

5.6.2.5 Technology Innovation

In the advanced grid, Customers benefit from their investments in technology. Customers will have tools in place to evaluate their investments prior to making them. Innovative rate design enables customers to take control of their electric consumption and when it occurs. Customers should have a mechanism in place to receive value from benefits that can be monetized. Current pricing models support and inefficient use of the electric system. Rates are developed to recover the investment over all hours of the year even though all hours of the year are not identical. Using pricing structures that reflect the actual costs will drive more efficient use by customers.

5.6.2.6 Environmentally Friendly

The primary environmental benefits associated with innovative rate design relate to the reduction of electricity usage and peak load reduction. Innovative rate design provides customers the opportunity to take more control over their energy usage leading to reduced emissions. Energy efficiency activities are effective at reducing electricity consumption, but that only goes so far. Effective rate designs supporting dynamic pricing (such as TOU or TVR), energy management and smart appliances can have an even greater impact at reducing system peak demand.

Innovative rate designs that further integrate DERs and other renewable resources into the distribution system is key to an environmentally friendly distribution system. Well-designed rate programs which reduce distribution and transmission peaks resulting in lower peak loads, reduces emissions and reduces the need for non-environmentally friendly generation resources.

5.6.3 SUMMARY

The electric system is changing and customers desire to use the system in different ways. Technology innovations are providing customers with cost effective means to take control of their electricity usage. A suite of innovative rates tailored to different customer types and use cases provide benefits to customers as well as the distribution system. The transition from traditional rate offerings to more personalized options is an important step towards meeting customer desires as they transition from passive recipients to active participants in the energy market.

Innovative rates are designed to be fair, transparent and economic. Unintended consequences affecting the safety and reliability of the electric system can be avoided while encouraging appropriate behaviors and assuring fairness and equity among customers. Data sharing can provide customers with the information they need to make decisions regarding their energy consumption. Customer outreach and education improves the overall understanding and

encourage adoption of new rates. Innovative rates will evolve with customers' needs, expectation and use. Innovative rate design is a required component to develop the modern grid as an enabling platform.

6 PROJECT PLAN

This section of the report details the project plan that consists of foundational elements to the Company's Advancing the Grid vision. The projects presented here are required to facilitate the distribution system as an enabling platform. This plan is designed to be flexible to changes in technology, system needs and customer desires. These projects will provide the foundation to enable future investments.

6.1 Grid Intelligence

Grid Intelligence technologies rely upon a safe and reliable advanced communications system to provide communications for the monitoring and control of field devices. The Company's Grid Intelligence vision consists of centralized software systems and the installation of field devices and a field area network for ADMS, DERMS, VVO, SCADA, mobile damage assessment, further integration of AMI and OMS systems and distribution automation.

6.1.1 Field Area Network

The Company currently uses a powerline carrier AMI system, and a combination of wireless (cellular) and land-line telecommunications services for the existing SCADA communications. The Company does not have a FAN installed in New Hampshire that is capable of supporting the capability and functionality required to support the functionalities identified as part of the plan.

This project consists of installing a FAN including communications between collectors and endpoint devices (meters and distribution devices) and backhaul communications from collectors at each substation to the central office. The Company expects that the deployment of a FAN will follow the same prioritization plan for substation and circuit deployment.

6.1.1.1 Description

This project consists of installing a FAN, including communications for field based endpoint devices and adequate backhaul communications. In the context of the modern grid, communications is the enabling system that makes it possible for all parties to interact and share information. The FAN will handle data traffic between distribution and grid edge devices and centralized information and operational systems. The FAN can be used by most of the modern grid systems that the Company implements. These may include SCADA controlled devices, Volt/VAr Optimization devices, advanced metering, distribution automation and DER management.

As part of its grid modernization plan in Massachusetts, a specification was developed and completed to request proposals (RFP) from vendors for field area network consulting services. The vendor was selected for the consulting services to assist in the specification and evaluation of proposals for a FAN throughout its electric service franchise area in Massachusetts. The following tasks were completed through the assistance of this consultant: identified the needs and requirements of the FAN, developed a specification for the network, created a list of appropriate bidders, issued an RFP to the list of bidders and completed a review and evaluation of different approaches to implementing a FAN.

The Company evaluated several options of building a radio frequency (RF) communications network in addition to partnering with an existing carrier s. Based upon the bidding evaluation, the Company decided on the carrier solution for our field communications.

Unitil Corporation will utilize the AT&T FirstNet network in New Hampshire and Massachusetts. AT&T FirstNet is a nationwide high-speed wireless network reserved for use by public safety and emergency first responders. It is designed to allow essential workers and emergency first responders the ability to communicate across a network that is separate from the communication paths used by the general public. This network also comes with a higher service level agreement that gives it priority if repairs are required. For applications where reliability and redundancy is critical, the Company has an existing contract with another carrier vendor for private area network services and would install redundant communications at these locations.

6.1.1.2 Benefits:

A FAN is an enabling technology that would provide the Company with the communications backbone to install many of the grid modernization initiatives being considered. The installation of a FAN without any of the other programs does not result in any monetizable benefits. However, the VVO system cannot provide the benefits identified without a FAN.

6.1.1.3 Project Timeline and Cost Estimate:

The FAN project is closely aligned with the ADMS, SCADA and VVO projects. The schedule for the FAN is based upon the prioritized listing of circuits and substation from the VVO project.

Year	1	2	3	4	5	6	7	8	9	10	Totals
Benefits (000s)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
Capital Costs (000s)	$90	$56	$127	$626	$325	$463	$780	$811	$640	$704	**$4,622**
O&M Costs	$0	$0	$4	$23	$32	$47	$71	$94	$106	$124	**$500**

(000s)											
Total Costs (000s)	**$90**	**$56**	**$131**	**$649**	**$357**	**$510**	**$850**	**$906**	**$746**	**$828**	**$5,122**

Table 9: FAN Benefits and Costs

FANs have gained a considerable amount of interest from utilities and regulators who are interested in modernizing their electric systems. A FAN is the communications network between the field end devices such as meters, reclosers, regulators, fault sensors, and any other intelligent end devices capable of gathering and recording information. The FAN takes that information and transmits the data back to the head end system such as and ADMS, OMS, Meter Data Management (MDM) or other database. These head end systems use real-time data to make application decisions, for optimization of voltage for example, and send the appropriate control signals back to specific devises on the distribution grid to achieve that optimization.

In the context of the modern grid, communications is a foundational technology that makes it possible for systems, operators and stakeholders to interact and share information. The FAN will handle data traffic between distribution, grid edge devices, centralized information and operational systems. The FAN will be used by most of the modern grid systems to be implemented.

There are many different technology options for a FAN such as wireless mesh, point-to-point fiber, point-to-point POTS line, radio, and microwave, just to name a few.

The Company has determined through a competitive bidding process conducted by FG&E that a carrier based wireless network makes the most sense for the applications being considered. The Company also has the option of installing redundant, multivendor, wireless communications at critical sites to provide redundancy and reliability. This carrier-based network approach should provide a cost effective, scalable and flexible communications system capable of transferring the amount of data for all of the programs that the Company is considering in its grid modernization plan such as AMF, expanded SCADA, VVO, and the communications needed to operate an ADMS.

The implementation of a FAN is an enabling technology that would provide the Company with the communications backbone to install many of the grid modernization initiatives being considered. The installation of a FAN without any of the other programs does not result in any monetizable benefits.

6.1.2 Advanced Distribution Management System (and DERMS)

UES manages its distribution system without much control or visibility past the distribution substations and does not have real-time visibility into the vast majority of the distribution resources connected to the network. Limited tools are available to monitor and control the influx of intermittent renewable resources which can cause two-way power flow concerns. These resources have a substantial impact on reliable operation of the system. This mode of operation is not sustainable in the future.

An ADMS system can provide many different functions such as (but not limited to) self-healing automation, control for distributed energy resources, additional SCADA functions across the distribution system, real-time load flow and circuit analysis, demand response, outage restoration, direct load control, network configuration, and integration of outside data sources such as real-time weather and VVO. The ADMS will provide the visibility and control required to operate

the advanced grid in a safe and reliable manner. The ADMS will also provide valuable information during outage events and enhance situational awareness resulting in shorter outage durations.

The Company ADMS system will be implemented with the following functionalities:

- GIS editor to transfer the network model from the GIS to the ADMS on a routine basis as changes to the network topology are made in GIS
- Verification of network connectivity
- Enhancements of existing OMS and SCADA systems
- Switching manager and simulation module
- Volt/VAr Optimization
- Crew assignments
- Engineering based load flow and circuit analysis tools
- Hardware, software, and training

An ADMS system will need to closely integrate with other enterprise systems to realize its full potential such as the FAN to provide communication to field devices, the installation of field devices that have the ability to be controlled and a DERMS which provides the monitoring and control of DERs connected to the system.

This complex project will take several years to implement, but it will serve as one of the foundational pieces to achieving the objectives described below.

6.1.2.1 Description

The Company's Massachusetts affiliate is in the process of implementing an Advanced Distribution Management System (ADMS) throughout its electric service territory in Massachusetts. Given the nature of the systems and its integration with other systems, UES will implement ADMS for its New Hampshire service territories as well.

An ADMS is the next step in the evolution of distribution management systems. An ADMS integrates a comprehensive set of monitoring, analysis, control, planning, and informational tools that work together with one common network model. An ADMS merges existing OMS, ADMS, unbalanced loadflow, short circuit analysis and SCADA systems together to provide a real-time view of the distribution system.

An ADMS system can provide many different functions such as (but not limited to) self-healing automation, control for distributed energy resources, additional SCADA functions across the distribution system, real-time load flow and circuit analysis, demand response, outage restoration, direct load control and network configuration. Additionally the Company's ADMS will utilize "real-time" unbalanced load flow calculation results to automatically control distribution equipment for VVO.

The plan for ADMS includes the implementation of a DERMS in the future. This is an add-on to the ADMS which provides the ability to manage and control multiple DER facilities and other infrastructure (electric vehicle charging stations, demand response, etc.) including both company owned and customer owned facilities. DERMS will provide the information and control necessary to effectively manage the technical challenges posed by a more complex grid. The DERMS system provides the utility the ability manage the impact of DER and operate the system more efficiently. Appendix B, which is the ADMS Project Description submitted in connection with the FG&E Grid Modernization Plan, describes the functionality in more detail.

6.1.2.2 Benefits:

ADMS is an enabling technology. The ADMS will enable effective VVO, reducing customer energy consumption by 2-4% and commensurate peak demand reductions. The benefits will accrue directly to consumers as reductions in electricity bills, and through utilities as reductions in demand charges. The ADMS will also enable better voltage control for integration of DER and improved reliability through FLISR. The ADMS will serve as a platform for more advanced modules such as a DERMS. DERMS will provide the visibility and control to enable an increased quantity of distributed resources. Quantifiable benefits are shown under the other projects.

6.1.2.3 Project Timeline and Cost Estimate:

Implementation has begun. The base software and network environment is in production. Project costs demonstrated here include GIS data model improvements to include the necessary data required for ADMS, DERMS module purchase and integration, model build within ADMS and mapping development for loading analysis, reliability analysis, hosting capacity, and heat map.

Year	1	2	3	4	5	6	7	8	9	10	Totals
Benefits (000s)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
Capital Costs (000s)	$350	$668	$468	$378	$298	$170	$0	$0	$0	$0	**$2,331**
O&M Costs (000s)	$44	$46	$47	$48	$50	$51	$53	$55	$56	$58	**$508**
Total Costs (000s)	**$394**	**$714**	**$515**	**$426**	**$347**	**$221**	**$53**	**$55**	**$56**	**$58**	**$2,839**

Table 10: ADMS Benefits and Costs

A modern distribution system is evolving at a rapid pace. The ever increasing interconnection of intermittent resources resulting in two-way power flow is creating challenges for utilities who still are trying to operate the system manually. The ADMS will allow the electric system to increase renewable integration and enable more customer energy options at the same time providing safe and reliable service at a reasonable cost. The benefits of the ADMS and DERMS are to provide greater monitoring, control and optimization of the distribution system and allow for an increased penetration of variable resources. The ADMS will quickly adapt to changing system conditions and rapidly recover from outages through an enhanced situational awareness. The ADMS meet all of the objectives for a modern electric system and the Company is in a position to maximize previous investments to improve the overall functionality of the system.

6.1.3 Volt/Var Optimization

VVO is a proven technology for utilities to save energy for customers and reduce system demand all while ensuring reliable service. VVO provides benefits to customers without customer investment in technology or management of their loads. VVO also helps to integrate DERs, by controlling the voltage variations caused by DERs. The VVO project will deliver significant and measurable benefits for the Company and its customers, while creating platform capability to be leveraged in the future.

6.1.3.1 Description

The scope of the project includes installing automated controls on all voltage and reactive power equipment on select distribution circuits. This includes controls of all capacitor banks, voltage regulators and transformer load tap changers (LTCs). In some cases the equipment in the field is of the age that a simple addition of a control is not feasible and the entire voltage regulator or capacitor bank requires replacement. In addition, line sensors to measure voltage and energy will be installed at strategic locations on the circuits. The operation of these control devices will be coordinated and optimized by the ADMS. The communication between the ADMS and the VVO controls will be designed and installed as part of the FAN project. The design requirements of the VVO system will be coordinated with the plans of the ADMS, SCADA and FAN projects.

There are three primary aspects to implementing a VVO program: communications, software intelligence, and field equipment. A robust communications network is the foundation for a successful VVO program. The communications network described earlier in this report will be designed to support the VVO program. The software intelligence will be discussed as part of the ADMS project.

Voltage regulation refers to the management of circuit level voltage in response to the varying load conditions. There are two primary devices required to control the voltage on a distribution circuit: transformer LTCs and voltage regulators. The distribution management system uses input from voltage sensors across the system to adjust the voltage regulators and LTCs to provide power within an appropriate voltage limit. Capacitors are used for reactive power (VAr) regulation.

Although the project does not presently include plans to control customer owned inverters, the Company plans to implement a system with the possibility of controlling inverters along with capacitors, to provide reactive power to the distribution system.

UES has hosted many working meetings and demonstrations with various vendors to understand the different ways to implement a VVO system. The Company has evaluated two basic approaches to implementing a VVO system: model based and measurement based) and decided that a model based system would be implemented through integration with ADMS.

In a model based system, the system utilizes a dynamic operating model of the system in conjunction with real-time information from the field and runs this information through a complex optimization algorithm, within an ADMS, to optimize the performance of the distribution system. The system model and algorithm combined with remote field measurements and control enable the circuit to be optimized based upon minimizing power loss or demand while maintaining a tighter acceptable voltage profiles on each distribution circuit. The benefit to this approach is that fewer field devices are required since the algorithm relies heavily on the model.

6.1.3.2 Benefits:

The VVO system operates by constantly optimizing voltage regulation (voltage regulators, LTCs) and reactive compensation (through switched capacitor banks). The VVO project is expected to reduce customer energy consumption by 2% and is expected to reduce system and circuit peak demand by a similar amount. This will directly benefit customers by reducing their electricity consumption and thereby reducing their bills.

6.1.3.3 Project Timeline and Cost Estimate:

UES has learned that the implementation of the VVO, FAN, SCADA and ADMS projects are closely tied together. The Company's plan is to implement these projects on a substation by substation basis. For instance, the FAN, VVO, SCADA and ADMS projects would be implemented at the same time or in close time frame to each other. In order to facilitate this effort, the Company developed a ranking system to prioritize which substations provide the largest benefits to customers and should be completed first.

UES developed a prioritization model comparing the cost of implementation versus the number of customers affected and well as the cost versus the peak demand (kVA). Each measurement was weighted 50% and the resulting combinations were ranked to provide the largest benefit/cost ratio. Other aspects (such as planned circuit ties, and coordination of other work planned at the substation) were then analyzed to create the schedule of implementation.

The Company's prioritized ranking system weighs the ability to reduce peak demand evenly with the opportunity to save the largest number of customers on cost of energy consumption. Secondly, engineering judgement was used to group the circuits that are planned to tie with each to provide back-up restoration. In this manner, VVO could be implemented even when the system is not in its normal configuration, but in a planned restoration configuration.

In the ranking procedure, each location was ranked by $/kVA and separately ranked by $/customer. The ranks were then summed together to establish the overall ranking. The rank with a lowest number provides the largest benefit/ cost. The substation transformer or circuit with this lowest score becomes the highest priority for implementing the projects. After all locations were ranked and charted, a cut-off point was determined where there was a noticeable gap of cost and benefit. Therefore it was decided not to implement VVO in locations that did not provide adequate benefit compared to the cost of implementation.

The table below provides the results of the calculations. The substations have been ordered from highest to lowest priority.

Substation Transformer / Circuit	Number of Customers	Cost/Customer ($)	Peak Demand (kVA)	Cost/kVA ($)	Calculated Rank	Adjusted Rank
Capital - Gulf Street - 4.16 kV	769	127.13	1,695	57.68	1	1
Capital - Gulf Street - 13.8 kV	1,049	508.91	6,073	87.90	9	2
Seacoast - Winnacunnet Road Tap	874	154.90	1,698	79.73	3	3
Seacoast - Gilman Lane	4,246	257.93	18,942	57.82	2	4
Seacoast - Portsmouth Ave	1,710	614.44	9,992	105.15	19	5
Seacoast - Willow Road Tap	1,834	593.28	6,280	173.26	27	6
Capital - Bow Junction - 13.8 kV	2,092	313.49	8,622	76.06	4	7
Seacoast - Hampton Beach	3,258	237.75	8,067	96.02	5	8
Seacoast - High Street	2,659	448.88	6,380	187.08	21	9
Capital - Penacook - 13.8 kV	3,741	192.34	5,872	122.54	8	10
Capital - Penacook - 34.5 kV	1,955	408.40	6,220	128.36	13	11
Capital - West Portsmouth - 13.8 kV	1,299	268.56	3,531	98.80	7	12
Capital - West Portsmouth - 4.16 kV	16	2459.51	509	77.31	18	13
Capital - Iron Works Road	2,160	431.22	8,572	108.66	10	14
Seacoast - Guinea Road Tap	1,651	299.14	5,000	98.78	6	15
Seacoast - Winnicutt Road Tap	1,952	610.78	5,159	231.10	31	16
Capital - 37X1 - 37X1	183	303.22	374	148.36	14	17
Seacoast - Westville Tap 58X1	2,260	506.87	10,636	107.70	11	18
Seacoast - Cemetery Lane	997	615.38	7,741	79.26	12	19
Seacoast - Seabrook - 34.5 kV	1,812	658.68	4,165	286.56	32	20
Seacoast - Guinea Switching - Distribution Circuits	1,821	585.39	7,257	146.89	22	21
Seacoast - Hampton - 34.5 kV	3,437	633.68	13,963	155.98	30	22
Seacoast - Stard Road Tap	1,044	764.02	6,614	120.60	24	23
Seacoast - Mill Lane Tap	959	1024.59	3,184	308.60	33	24
Capital - Bow Bog	841	430.99	2,417	149.96	16	25
Capital - Terrill Park - 16X4	574	572.71	2,801	117.36	17	26
Capital - Pleasant Street	1,115	766.87	10,005	85.46	20	27
Seacoast - Timberlane - 13.8 kV	2,747	535.65	7,636	192.70	23	28
Capital - Hollis - 8T1	912	515.67	2,246	209.39	25	29
Capital - Hollis - 34.5 kV	3,735	707.33	21,435	123.25	26	30
Capital - Boscawen - 13X4	1	119697.06	2,917	41.85	15	31
Capital - Boscawen - 13.8kV	3,109	584.78	8,727	208.33	28	32
Seacoast - Exeter	904	568.91	2,382	215.91	29	33

Table 11: Prioritization Model Scores

The following table provides the benefits and costs associated with the VVO project.

Year	1	2	3	4	5	6	7	8	9	10	Totals
Benefits (000s)	$0	$186	$875	$1,320	$1,795	$2,207	$2,584	$3,051	$3,501	$4,243	**$19,763**
Capital Costs (000s)	$383	$2,000	$2,929	$2,731	$2,862	$2,880	$3,416	$3,488	$4,292	$2,783	**$27,764**
O&M Costs (000s)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
Total Costs (000s)	**$383**	**$2,000**	**$2,929**	**$2,731**	**$2,862**	**$2,880**	**$3,416**	**$3,488**	**$4,292**	**$2,783**	**$27,764**

Table 12: VVO Benefits and Costs

Traditionally, utilities including the Company have used local control to operate their voltage regulators, LTCs, and distribution capacitor banks. These devices incorporate inputs from locally available measurements such as voltage or current and are set to accommodate a wide range of operating conditions from peak load conditions to light load conditions. These devices act independently of other devices on a given circuit or feeder, which may result in suboptimal affects across the circuit.

The technology has improved to the point where implementing VVO equipment and software can reduce line losses by optimizing the distribution system. Circuit optimization is affected by many different factors across the circuit such as substation bus voltage, end of line voltage, types and sizes of loads, length of feeder and type of conductors, as well as the size, quantity and type of DER located on the circuit. The ever-changing load and DER conditions make optimizing a circuit very challenging.

VVO utilizes dynamic operating model of the system in conjunction with real-time information from the field and runs this information through a complex optimization algorithm to optimize the performance of the distribution system. The system model and algorithm combined with remote field measurements and control enable the circuit to be optimized based upon minimizing power loss or demand while maintaining acceptable voltage profiles on each distribution circuit. VVO operates by trying to optimize voltage regulation (voltage regulators, LTCs and reactive compensation (switched capacitor banks). Effective VVO programs have been proven to typically reduce demand by 2-4%.

6.1.4 Supervisory Control and Data Acquisition

Presently, SCADA is implemented to some extent at most of the Company's substations (but not all) and only minimally for devices on distribution circuits beyond the substations. Additionally, some existing SCADA implementations use out-of-date equipment that cannot be integrated with modern SCADA functions or the new ADMS. Furthermore, at many

locations that presently have some level of existing SCADA capability, it is incomplete to the extent required by the modern grid. Therefore, this project will upgrade or replace SCADA equipment that cannot be integrated with the new ADMS, and add or expand SCADA functionality at locations and equipment involved in VVO or other modernization projects. Included with this work is the replacement of older control devices or primary equipment that cannot be easily integrated with modern SCADA functions, and the addition of ancillary components (e.g. instrument transformers, auxiliary switches, etc.) to provide other necessary measurements or indications.

6.1.4.1 Description

The objective of this project is to implement key SCADA functionality at all locations needed to support the ADMS/OMS/VVO applications and other modernization projects. SCADA provides for the remote monitoring of conditions on the electric system and the remote control of equipment and functions by operating personnel or automation systems. The SCADA project is an enabling technology for other projects in the GMP including the ADMS/OMS/VVO applications. In conjunction with other components of the Plan, it will support the GMP objectives of reducing the effects of outages and optimizing demand.

The implementation of SCADA at substations typically involves the installation of a remote terminal unit (RTU) at the site, the interconnection of the RTU with local devices and sensors, the establishment of communications between the RTU and the remotely-located SCADA Master system, and the associated programming to implement the desired SCADA functions. The implementation of SCADA at standalone devices on distribution circuits (e.g. reclosers, capacitor banks, voltage regulators, etc.) does not necessarily require an RTU, and can often be achieved with the installation of communications directly to modern device controllers.

Finally, some of the existing power system equipment that will be necessary to provide the needed measurements or that will otherwise be put under SCADA control are either absent or not suitable for this purpose (e.g. hydraulic reclosers, obsolete controls, etc.). Therefore, this SCADA project will also drive the replacement of that type of equipment and the installation of additional ancillary devices to better facilitate SCADA deployment.

6.1.4.2 Benefits

In addition to facilitating the ADMS/OMS/VVO and other modernization projects, SCADA monitoring and control at the distribution level is foundational to reducing outage response and restoration times through improved outage awareness, fault location, isolation and system reconfiguration capabilities, both manually or through automation. After implementation, it is estimated that outages originating at SCADA-controlled devices may be reduced by 5 minutes of response time at the front-end and 5 minutes of re-energization time at the back-end of an outage for a total savings of 10 minutes. For the UES system, an estimated reduction of 10 minutes off of each circuit-level outage results in just shy of 800,000 customer-minutes of savings for the year 2020. These benefits will be assumed to start at 10% of the total (approximately 80,000 customer-minutes) and increase by 10% each year over the duration of the 10 year plan.

The following functionality is intended for the devices where these SCADA additions or modifications are planned:

- Real-time telemetry and historical interval data collection for each included power transformer and circuit position, including the following measurements:
    - Voltage
    - Current
    - Active and Reactive Power
    - Active and Reactive Energy (where required)

- Remote monitoring of live/dead states of included buses, lines and circuits
- Remote monitoring and control of included breakers, reclosers, switches, etc.
- Remote monitoring and control of included transformer LTCs and voltage regulating transformers
- Remote monitoring and control of included capacitor banks
- Integration with the ADMS, and the ability to participate in automation schemes suitable to their functions

6.1.4.3 Project Timeline and Cost Estimate

The implementation of the ADMS, VVO, FAN and SCADA projects are closely tied together. The following timeline and cost estimates reflect emphasis on the necessary additions and modifications to integrate existing SCADA sites into the new ADMS in the first few years, followed by the extension and expansion of SCADA functionality in subsequent years to coincide with the VVO deployment plan. Year 1 of the project plan is expected to be 2022.

Year	1	2	3	4	5	6	7	8	9	10	Totals
Benefits (000s)	$ 182	$ 359	$ 536	$ 713	$ 890	$1,067	$1,244	$ 1,421	$1,598	$ 1,775	**$ 9,786**
Capital Costs (000s)	$1,530	$1,740	$ 760	$ 790	$ 250	$ 340	$ 420	$ 550	$ 760	$ 470	**$ 7,610**
O&M Costs (000s)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	**$ -**
Total Costs (000s)	**$1,530**	**$1,740**	**$ 760**	**$ 790**	**$ 250**	**$ 340**	**$ 420**	**$ 550**	**$ 760**	**$ 470**	**$ 7,610**

Table 13: SCADA Benefits and Costs

SCADA deployed in distribution substations and on distribution circuits allows grid operators to monitor and control distribution equipment remotely from the dispatch center. This capability will manage the reliability and operational efficiency of an increasingly complex distribution system. Historically, emphasis was made on implementing SCADA for monitoring and control of transmission systems. Installing SCADA on the distribution system was considered secondary and not as important as having control of the transmission system. Grid modernization will require as much control and information on the distribution system as possible.

6.1.5 Mobile Damage Assessment Platform

This project is to implement a Mobile Damage Assessment Platform to enable quicker, better-informed decisions to ensure operational efficiency and maintain strong restoration performance by significantly reducing the amount of time for field information to be relayed. This would allow for faster and more accurate situational awareness during large scale weather events.

6.1.5.1 Description

UES has researched and evaluated various applications that will expedite damage data acquisition, develop fasters ETR's, enhance overall situational awareness and produce more efficient work packages that will, in turn, expedite the overall restoration. The project team developed an RFP and evaluated proposals from 13 different vendors.

The mobile platform damage assessment system will be an application based system that will replace existing paper based damage assessment and inspections presently used by the Company. This system will allow damage to be collected on the mobile application including the location, the type of damage and pictures. This data will automatically be transferred back to the back end system portal in the office where ETRs and work packages can be developed, issued for repair, tracked until completion.

The following capabilities are technical requirements for the mobile platform damage assessment application.

1. Data collected by the platform must be fully accessible via a documented application programming interface (API).
2. The platform must be capable of rendering output in a device agnostic, fully responsive manner, compatible with all major mobile, laptop and desktop devices
3. The platform must be capable of high availability, redundancy, high-capacity storage and industry standard security and compliance
4. The platform must have the ability to consume data from legacy applications
5. The platform must have documented APIs allowing the Company to build its own connectors
6. The platform must support direct integration with GIS
7. The platform must support the ability to capture, store and display rich media content such as photos, video and audio files.
8. The platform must support the ability to work offline / without real-time connectivity to the internet
9. The platform must support offline mapping
10. The platform must support integration with Active Directory for Single Sign On
11. The platform must include the ability to capture GPS coordinates and geo tag records and collected assets with this data
12. The platform should have no cap on the number of applications or the number of records that can be collected by a given application
13. The platform must support, at a minimum, two discreet environments for testing and production
14. The platform must support electronic signature capture
15. The platform must include audit logging capabilities to capture transactional history
16. All Systems that Handle Confidential Information must encrypt the data that include Confidential Information in transit using algorithms and key lengths consistent with the most recent NIST guidelines.
17. The initial application built on this platform will be for the Company's Damage Assessment system. However, there are a number of additional areas wherein real-time information exchange would result in more effective work flows. Future applications may include (but are not limited to): Asset inspections, Mobile Workforce Management, Mobile Work Order Management and Outage Management

The project team is comprised of various company employees who have responsibilities either during routine or emergency times for processes and activities related to damage assessment and inspection. The evaluation team

includes key members from the Electric Operations, Engineering, and IT departments as well as other employees who have emergency assignments related to Damage Assessment.

After the initial review and evaluation, several vendors were invited into the Company to provide a presentation on their proposal so that the project team could a clearer understanding of their proposal and have questions answered. Following the vendor presentations, the evaluation matrix was updated.

After several meetings and weeks of deliberation by the project team, it was ultimately decided that the best solution was the Mobile Information Management System (MIMS) powered by Lifecycle proposed by SSP Innovations. The MIMS solution will be synchronized with the Company's GIS systems and is designed to perform electronic field inspections of assets and vegetation while also providing the ability to create workflows, assign and track work assignments, and estimate cost, labor and equipment associated with work orders.

Throughout this project, the Company has learned that mobile damage assessment is just one of the functionalities that this software platforms can provide. Other functionality includes asset management, inspections, or other workforce management tools with several proposals including many of these features included within their products. The Company is interested in additional functionality in the future and has included the additional functionality available from the vendor offerings during their evaluation.

6.1.5.2 Benefits:

The application will have several benefits related to operations and planning including the ability to confirm, validate and document predicted devices leading to a greater accuracy of affected customer counts, outage causes and times of restoration. Field damage assessment information will also allow work orders to be tied to actual damage or repair work geographical areas and will also provide the Company with faster field information to better estimate and identify the types and amounts of specific resources needed and better identify when resources will no longer be needed. The Plan estimated that this is expected to save on average 15 minutes per outage during a major event.

6.1.5.3 Project Timeline and Cost Estimate:

The project has been initiated and is scheduled to be completed prior in early Q3 2021 ahead of the busy hurricane season.

Year	1	2	3	4	5	6	7	8	9	10	Totals
Benefits (000s)	$946	$946	$946	$946	$946	$946	$946	$946	$946	$946	**$9,460**
Capital Costs (000s)	$449	$-	$-	$-	$-	$-	$-	$-	$-	$-	**$449**
O&M Costs (000s)	$-	$35	$35	$35	$35	$35	$35	$35	$35	$35	**$311**
Total Costs (000s)	**$449**	**$35**	**$35**	**$35**	**$35**	**$35**	**$35**	**$35**	**$35**	**$35**	**$759**

Table 14: Mobile Damage Assessment Benefits and Costs

6.1.6 AMI/OMS Integration

This is a software project to enhance the current AMI to OMS interface. The Company has already implemented an AMI system across its service territories. This enhanced integration will provide improved ability for all AMI meters to communicate with the OMS system in a more reliable manner resulting in greater confidence in the data presented. This enhanced data will be used in the OMS outage engine to help improve outage predictions, including which device has isolated the fault and what customers have been restored.

6.1.6.1 Description

UES's AMI system provides information on outages for every meter on the system. This project is designed to improve the integration of outage information from meters into the OMS outage prediction engine, thereby improving the outage prediction process, reducing false positives and improving the ability to identify the location of nested outages.

UES's OMS system relies on customer outage calls processed by the IVR system, web outage form entries, and manual entries of customer and municipal calls to determine the location and extent of outages. Most outages are reported by only a small percentage of customers contributing to the outage information (typically, only 1-2% of the customers notify the Company when they are out of power). This small percentage of customer notifications may lead to an erroneous outage location and extent, or delay the field trouble shooting process.

UES's AMI system is currently integrated with OMS as a "view only" overlay. The AMI system communicates with all meters through a parallel channel power line carrier (PLC) system. Essentially, the system continuously communicates with all the meters on the system while data collectors in the substations transmit meter status to the head end software system called the Command Center. Changes in meter status are shared through live integration with the OMS where they can be represented visually. Because communication with meters could be lost for reasons other than an outage (e.g., noise on power line, loss of AMI network communications), the Company does not use this information in the algorithm for modeling outages in OMS. Instead, the visual AMI information is presented in OMS to help determine the extent of the outage (i.e. all outage meters go "lost" or red when they lose power) and the extent of restoration (i.e. all restored meters restored become "found" or green).

The figure below shows a partial restoration of an outage. The red icons indicate customers still out, the green are customers that have been restored.

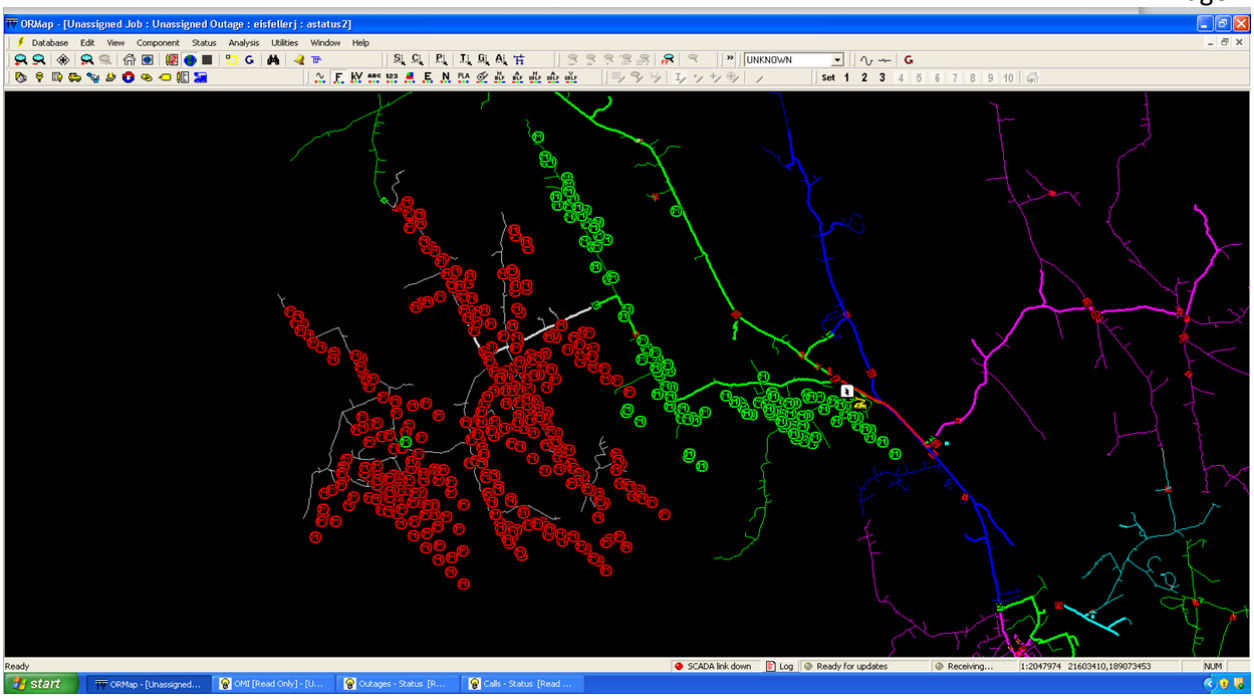

Figure 5: the Company's AMI Meters in OMS

UES is developing a piece of configurable "middleware" (i.e. software) to analyze AMI status changes along with additional relevant data points, and computing an "AMI Confidence Score" for AMI based customer outage reporting. Based on the configuration of the middleware, suspected outages above the allowed "confidence score threshold" will be treated as "real outages" and reported to OMS as such. Those that fall below the threshold will be logged and sent to OMS for view only. This threshold is adjustable by the dispatcher to allow some level of active customization.

The system will leverage a set of correlating data inputs such as historical outages, low level signal data, modem communications status and weather data along with machine learning models to assist in computing outage confidence.

UES has worked closely with our AMI vendor (Landis & Gyr) to identify a combination of data points available on the meter and the AMI collectors along with various correlating data points (environmental and coincident) to build a model that can accurately confirm suspected outages and electronically qualify them.

The project has been broken down into two phases (both are included in the project):

Phase 1 – AMI Confidence Engine & Filter

Although our Landis and Gyr AMI system has functionality to detect and report on meter/ endpoint level outages, the results we see are unreliable to the point that the Company has chosen not to directly integrate the AMI data for outage model calculations. A meter black list construct was implemented where known bad reporting endpoints could be grouped and ignored by any auto outage detection. However, there is no easy way for the Company to dynamically move meters on and off this "outage reporting black list", which makes it a largely static list. If, for example, we make improvements to a network segment of previous blacklisted meters; even though these meters could likely better participate in the AMI auto detection after the upgrade is completed, they will not be able to, because they are part of this hardcoded black list.

The Company is making use of this automatic detection process and accompanying data in an effort to improve our ability to detect and respond to customer outages. The Company also believes that it can augment the existing

Landis & Gyr detection algorithm with an additional algorithm leveraging readily available data to correlate and further qualify (by way of a "Confidence Score") suspected outages.

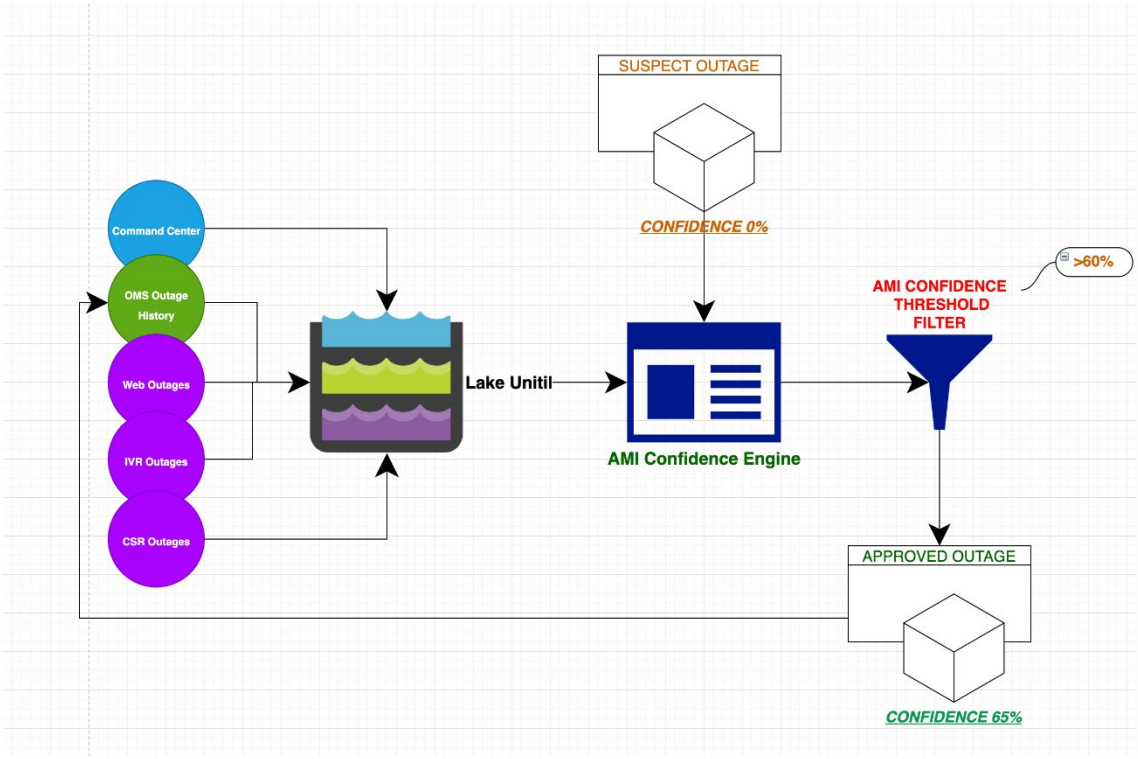

Figure 6: AMI/OMS Phase 1 Diagram

ACE Filter - The ACE Filter is a software service that is responsible for evaluating the confidence score attached to an outage and determining if the score meets or exceeds the configurable confidence threshold (dispatchers would be able to dynamically adjust this threshold up or down). Any outage that meets or exceeds the threshold is allowed through the Filter. Any outage failing to meet the criteria is rejected, logged and a notification is sent. No changes would be required to the core OMS functionality as the filter would handle pre- screening outages before sending them along to OMS.

Lake Unitil - Our data warehousing "lake", will contain data from our Command Center, OMS and enQuesta systems to start. The application development team will build out data load scripts to populate and maintain this Data Lake. It is helpful to think of a data lake as a large data warehouse in the cloud that contains data in a variety of different formats (*XML, flat unstructured data files, CSV and traditional relational data). The ACE will use the data contained in this lake to make its confidence scoring decisions. In later phases, additional data points such as vegetation, social media, behind the meter status and weather could be added to the data lake and augment the algorithm.

Phase 2 – Additional Data Sources

In this phase of the development the Company will include additional data sources into the confidence interval. Specifically, this plan includes the collection and combination of data sources for weather as well as signal to noise ratio (directly from AMI Collectors) into the confidence engine. Quality control, testing and deployment, as well as ongoing support of the system are included.

Project Summary

This project will combine AMI status information, modem status information, and current outage input data (IVR, Web, and manual entries), and process this information through a series of software filters and logic to allow AMI information to be used in the outage algorithm. The goal will be to develop this filter to the point at which there is high confidence in the result (i.e., the AMI status change is a result of an actual outage). If a high confidence is achieved, the AMI data will allow the Company to determine the probable location and extent of an outage in a shorter timeframe, resulting in improvements in outage response time estimates and related customer communications.

The Company continues to research machine learning tools, data science techniques, and cloud technologies to determine the best approach for building applications that will help to determine and calculate the confidence score.

The proposed upgrade will allow AMI outage information to be used directly in the AMI outage prediction engine for outage reporting if the AMI status change has an associated high confidence factor. This AMI information should improve timeliness of outage detection, dispatch, extent and restoration.

6.1.6.2 Benefits:

By proactively detecting, and confirming with a high degree of confidence, valid outages, we expect to save time and money by reducing potentially unnecessary truck rolls and expedite crew deployment. This data may also provide additional near term related benefits such as reduction in SAIDI times as well as long term applicability towards building more proactive and predictive outage intelligence and analytics. The theory is that the outage information from the AMI system will allow the Company to know about the outage without having to rely on a customer phone call through the IVR system. It is estimated that the AMI system on average will be five (5) minutes faster than customer calls for at least 10% of the outages. This system will also give near real-time restoration feedback and provide insight into any "nested" outages that may require follow up by crews.

6.1.6.3 Project Timeline and Cost Estimate:

This project is an internal software development project. An off-the-shelf solution does not exist for this application. The phased approach to the project enables internal software developers the ability to design and implement the project in a staged manner. Testing and verification of the system will occur in conjunction with the Company's dispatchers.

Year	1	2	3	4	5	6	7	8	9	10	Totals
Benefits (000s)	$0	$163	$163	$163	$163	$163	$163	$163	$163	$163	**$1,463**
Capital Costs (000s)	$$155	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$155**
O&M Costs	$0	$11	$11	$11	$11	$11	$11	$11	$11	$11	**$99**

(000s)											
Total Costs (000s)	**$155**	**$11**	**$11**	**$11**	**$11**	**$11**	**$11**	**$11**	**$11**	**$11**	**$254**

Table 15: AMI/OMS Integration Benefits and Costs

6.1.7 Distribution Automation

A reliable distribution system is important to the Company and its customers. Distribution automation provides the Company with the ability to automatically change the configuration of the system based upon changing load or generation characteristics. Distribution automation can also detect outages and automatically restore portions of the system within minutes thus reducing the overall size of the outage.

UES implements targeted distribution automation where projects make sense. Projects generally consist of installation of recloser, sensors and communication equipment to allow the devices to communicate with each other. Distribution automation projects target portions of the system that have been identified as candidates to benefit from the installation of distribution automation. These areas have the ability to automatically shift load from one circuit or substation to an adjacent circuit or substation to isolate the faulted section and restore customers. The table below identifies the benefits and costs associated with distribution automation. The primary benefit of this project is the ability to restore customers within minutes of the initial outage reducing the number of impacted customers as well as the customer minutes of savings.

Distribution automation is not a new concept to the utility industry. Technology advancements in communication speeds, fault sensing, and switching capabilities has made distribution automation more cost effective. Distribution automation has the capability to achieve substantial reliability savings. Improved fault location, isolation and service restoration result in fewer and shorter duration outages, reduced equipment failure, lower outage costs for the customers and the utility and less inconvenience for customers. Overall system resilience to extreme weather events improves with the ability for automatic switching reducing the overall impact of outages and provides the operator with greater information to identify and repair equipment. Distribution automation can reduce the number of truck rolls and reduce the amount of time required for service restoration. Integration of DERs can also be improved with distribution automation schemes.

UES is not proposing any specific distribution automation projects at this time. As part of annual reliability analysis, specific projects may be proposed at a later date. The implementation of a field area network and SCADA will support a wider scale deployment of distribution automation.

6.2 Advanced Metering Functionality

The modern electric system is driven by data and information. Customers need data to inform their usage decisions. Customers desire flexible pricing options that allow them to take advantage of their investments. Customers need to know how much electricity they are using and when that electricity is being used. Customers are willing to reduce their

peak hour usage as long as they have the knowledge and tools to achieve the benefits. Timely and user-friendly data starts with a metering system that can accurately and automatically gather granular usage data, store the data in a meter data management system where it can be pushed to customers in a timely manner.

The Company implemented an automated metering infrastructure system that uses powerline carrier based technology. Powerline carrier uses the electric system primary conductors to communicate commands to the meters and transmits data from the meters back to the head-end system. This two-way communications technology is highly reliable and highly secure.

The Company's original AMI installation was state of the art when it was installed but has been outpaced by new technology that can provide more information in a more timely fashion. The Company recently completed an upgrade of the substation collectors that will allow interval meter readings to be transmitted once an interval meter has been installed. This will support the Company's plan for implementing time-of-use rates for various use cases.

Meter replacements will be tied directly to the TOU enhance rate offerings being proposed as well as the Customer Experience Management System. In order to obtain the full benefits from these offerings, the existing TS2 meter must be replaced with a PLX meter that enables interval metering. At the present time, the Company is not proposing a particular project for replacement of the endpoints and meters outside of meters that will be replaced to enable TOU rate offerings. However, as meters are replaced for maintenance or testing, they will be replace with PLX technology that enables interval metering.

6.3 Distributed Energy Resources, Energy Storage and Controllable Loads

The growing proliferation of distribution-connected DER and increasing interest in energy storage systems and controllable loads creates new opportunities and challenges for the electric system. The Company's vision of the advanced grid is an enabling platform with the ability to interconnect a large quantity of renewable resources and other DERs.

6.3.1 DER Reverse Power Flow and Sustained Energization Mitigations

As the proliferation of DER on electric distribution systems increases to levels approaching that of the local distribution loads, challenges caused by reverse power flow and sustained energization become more prevalent. These challenges include adverse impacts on voltage regulation, short-circuit protection and overvoltage protection.

At present, mitigations to accommodate the interconnection of DER are identified during impact studies of individual DER projects, and the associated costs are borne by the specific DER project owner(s) rather than electric customers in general. Therefore, there are no generalized projects included as part of this GMP to preemptively mitigate adverse effects of DER.

6.3.2 Energy Storage

Energy storage technology will play an important role in the integration of intermittent renewable resources. Energy storage system provides the energy and capacity when intermittent resources such as solar or wind might be lacking. However, combining renewable generation with an energy storage system will improve the reliability, capacity and availability of the intermittent resources to a point where the system can rely on them when planning the system.

FG&E has installed its first utility scale energy storage facility in Massachusetts. The justification for the energy storage facility is based upon a non-wires alternative evaluation. The 2 MW/4MWh utility scale energy storage system is designed to defer the need for a costly substation expansion. The energy storage system has the ability to serve over 1,300 homes for over two hours. This energy storage system is designed to reduce peak loading on the substation equipment as well may provide voltage regulation and frequency regulation to the market. This is a significant size energy storage device equating to over 2% of the system peak for the Massachusetts service territory. Based upon the Company's experience, utility scale energy storage can be installed for approximately $2 to $3 per watt.

The energy storage system is designed to dispatch the battery in a manner that provides the most benefit to the Company and its customers. At the time of substation peak, the battery will be discharged to reduce loading on the substation transformer as well as lower the overall system peak which will reduce transmission capacity costs to our customers.

The energy storage system may also be entered into the ISO-NE frequency regulation and capacity markets. ISO-NE will have the ability to dispatch the capacity at the time it needs for frequency regulation as well as reducing our peak hour loading that is used to calculate our capacity charges. The energy storage system produces a revenue (savings) stream that will directly benefit our customers by reducing their bills without needed to take any action on their own.

The energy storage system is the first installed on the Company's system. The Company intends to learn from this non-wires alternative (NWA) project and confirm the benefits to the distribution system and its customers. Reliable operation of the energy storage system during the peak hours is important to the deferral of the substation expansion.

This is one example of a utility scale energy storage installation. Behind-the-meter energy storage can also be effective at shaving peak load and accounting for intermittent DERs on the system. At this time, the Company is not proposing a particular project. However, energy storage will continue to be an alternative that is reviewed and proposed as part of NWA analysis.

6.3.3 Electric Vehicles

Electric Vehicle (EV) adoption rates are reaching a tipping point where customer desire will rule over price point. Electric system planning must accommodate the additional load while providing incentives and rate mechanisms to encourage customers to charge vehicles during off peak hours.

UES is proposing a two pronged approach to electric vehicle charging. First, effective EV charging rates incent customers to charge their EVs when it is most beneficial to the system during nighttime hours. Improving load factor during off peak hours allows the system to operate in a more optimized manner. Second, the system needs to be planned in advance for the increase in EVs. System planning that considers DER, including generation resources, on the system in combination with controllable loads enables the utility to design and operate a safe and reliable grid. Controllable loads such as EVs may benefit the system during times of peak PV as well as low loads during the shoulder months of the year.

UES is proposing a public EV Program that includes make-ready infrastructure investment to provide for the installation of required electrical infrastructure up to the charging station with no customer contribution. The Company will own all infrastructure up to the charging station (including assets behind the meter). The Company will install the infrastructure on the utility side of the meter and would contract with third-party electrical contractors to install infrastructure behind the meter. Applicable customers will be required to enroll in corresponding EV TOU rates and provide the EVSE at their cost.

UES's investment will include (but not be limited to): distribution primary lateral service feed, transformer and pad, service meter, service panel, construction, conduit and conductor necessary to connect the EVSE. The program is focused on public Level 2 and DC Fast Charging (DCFC) stations. Economic analysis of the proposed EVSE program using the Company's internal rate of return primarily used for evaluating electric expansion projects has demonstrated the prudency of these investments.

This program will be presented separately from the overall Grid Modernization Plan.

6.3.4 Active Demand Response Program

When appropriate, the Company will implement an Active Demand Response Program ("ADRP") approach as a Non-wires Alternative ("NWA") to defer the costs of traditional infrastructure upgrades and improvements. This approach will be open to all DER approaches that display the potential to provide the load relief described in this document. These approaches could include a combination of customer load curtailment, storage, generation, and/or any other approach deemed appropriate for a particular site as well as Company owned assets such as storage and/or generation. Generally, these approaches would apply to C&I customers' equipment and Company owned equipment.

Each instance would outline the suggested approach, load relief impact, cost estimate of completing the project, project schedule, quantifiable benefits, and net lifecycle cost (installed, maintenance, and operations costs minus quantifiable benefits) compared to a traditional approach.

Since the upgrade and/or improvement projects would be of a critical nature, the NWA demand reduction approach would have to be available when needed and available over a period of years.

Customer C&I Load Curtailment

This approach is technology agnostic and provides an incentive for verifiable shedding of load in response to a signal or communication from the Company coinciding with circuit peak conditions. Customers would be incented based on their average performance but must be available for all events and meet a minimum pre-determined load curtailment level. The typical technologies or strategies used to curtail load may include:

- Energy management systems,
- Building management systems,
- Software and controls,
- HVAC controls (manual, networked system or integrated),
- Lighting with controls (manual, networked system or integrated),
- Process offsets,
- Any open ADR compliant technology,
- Properly permitted generation,
- Startup sequencing, and

- Other customer facility specific approaches.

Since the approach is technology-agnostic and performance-based, the Company will be able to incent the performance of customers adopting innovative and emerging demand reduction technologies, including energy storage technologies (see later section). Customers can use any technology or strategy at their disposal and earn an incentive based on their curtailment performance. To participate, customers must be able to contract not only for a kW reduction amount but for a number of years' commitment.

Customer C&I Storage Performance Approach

The C&I Storage Performance approach recognizes that Large C&I customers with demand charges, direct capacity costs, and time of use rates have a different value proposition from residential and small and medium C&I customers. C&I customers installing storage will have the same obligations and opportunities as the C&I Load Curtailment option. Due to the increased capital and operating costs of such projects, customer and developer risk, and lack of current clear access to or mutual exclusivity of revenue streams for energy storage technologies, the Company would have to offer increased performance incentives for C&I storage performance, significantly above the proposed technology-agnostic Interruptible Curtailment performance incentives discussed above.

For both customer options, the Company will establish incentive levels, number of years' obligation, penalties for non-performance and other parameters for participation deemed necessary to meet the specific load relief requirement. The capacity reduction requirement will include a capacity premium designed to compensate for non-performance or reduced performance from participating loads for any given event.

UES would likely need to procure more kW than the C&I Curtailment commitment and the C&I Storage Performance commitment to mitigate the risk of non-performance and ensure designed capacity requirements are met. Customers may bundle Curtailment and Storage into one project.

See the table below as an example for commitments needed for a 5,000 kW traditional upgrade.

	Curtailment kW	**Storage kW**	**Company Owned kW**
Scenario 1	5,000 (6,500)	-	-
Scenario 2	3,000 (3,900)	2,000 (2,300)	-
Scenario 3	2,000 (2,400)	1,500 (1,750)	1,500 (1,500)

Table 16: Example Demand Response

Note: numbers in ( )'s indicate the commitment needed

Company Owned Load Curtailment and Storage:

UES will also evaluate a Company Owned Equipment ("COE") approach by installing generators, storage, and/or alternative technologies or approaches yet to be readily or commercially available. These can be combined with customer curtailment and storage strategies to meet the capacity requirement.

Detailed Discussion of Benefits and Costs:

Costs and benefits are site specific. From a benefit perspective, there are monetary and non-monetary benefits associated with each NWA project. This is similar for costs. Projects could be made up of a combination of two or more approaches. Potentially, the life of NWA approaches could be fairly less than a traditional investment, which would lead

to equipment replacement sooner than a traditional investment would need replacement. Quantifiable estimated costs for various approaches are included in the table below.

		NWA		
Technology/Approach	Cost/ kW installed	Unitil Upfront Incentive or Cost	Unitil Incentive Annually P4P Cost/kW	Total cost/kW over 10 Years
Customer Owned [1]				
Battery Storage	$ 1,500	-	$ 200	$ 2,000
Gas Generator	$ 1,000	-	$ 175	$ 1,750
Diesel Generator	$ 900	-	$ 175	$ 1,750
Demand Response	-	-	$ 100	$ 1,000
Energy Efficiency [2]	$ 2,000	$ 3,000	-	$ 3,000
Company Owned [3]				
Storage	$ 1,500	$ 1,500	-	$ 1,500
Gas Generator	$ 1,000	$ 1,000	-	$ 1,000
Diesel Generator	$ 900	$ 900	-	$ 900

[1] Customer responsible for maintenance, taxes, permitting and fuel - not included in costs

[2] Based on weighted average incentives and costs from 2018-2020

[3] Company responsible for maintenance, taxes, permitting and fuel - not included in costs

Table 17: Representative Costs by Approach

In general, Load Curtailment is the lowest cost option. At the same time, it is the most difficult to procure and maintain the level of savings committed since it relies on large commercial and industrial customers that either may not exist on a particular circuit, may not have interest in participating, do not have the Load Curtailment opportunities or after committing to the program reduce the level of participation or stop participating. The Company is not proposing a particular project associated with demand response at this time. Demand response will be evaluated as part of a NWA analysis and implemented where cost effective.

6.4 Advanced System Planning

Real-time system planning is foundational to the optimization of the electric system. The modern grid is constantly changing. Intermittent generation resources and added loads from electrification can drastically change operating conditions within moments. Real-time system planning enable grid operators the tools to make the necessary adjustments to optimize the system. Real-time system planning increases the safety, reliability and security of the electric system. In addition to the Company's GIS system and its new methodologies for electrification and DER forecasting, the Company is focused on two new initiatives: hosting capacity analysis and map and locational value analysis.

6.4.1 Hosting Capacity Analysis and Map

Under the present tariff model, those wishing to interconnect onto electric distribution system submit an application with all of the applicable information along with the location of the interconnection. The utility then evaluates each application to determine if any system improvements are required. This process works well, but without knowledge of the general capacity and limitations of specific areas, some applications are likely to be determined to be economically impractical. If these developers or DER owners had a greater visibility into the ability for the grid to accept DER, this should reduce some of the iterative analysis by the utility and developer trying to identify a good location. The overall goal is to improve the quality and practicality of the applications submitted for review.

6.4.1.1 Description

Evaluate the existing capacity of each substation and mainline circuit to determine how much DG could be added without the need for distribution system upgrades. The results of the study will help the Company encourage the development of DG on feeders where it can be readily accommodated. The study will also identify substations that require upgrades to accommodate more DG. The general results of the study will be posted on the Unitil website as an interactive map to allow DG developers and customers to enter a proposed location to when siting future DG to receive the available capacity for the proposed location. This map will be updated annually (or sooner) to keep the information up-to-date.

6.4.1.2 Benefits:

The circuit capacity study will help the Company and DG developers to better plan for DG growth. It will also help speed the process for DG applications and system upgrades. The benefits of DER Enablement ultimately depend on how much DER is installed in the service territory. Large DG developers will no longer end up submitting multiple applications in order to identify suitable locations where DG can readily interconnect with the grid. Often times when an impact study results in system improvement, the developer cancels the project and moves on to another site. This lost time for the developer and for the Company will result in greater efficiency, lower costs and decreased time to approval to interconnect.

6.4.1.3 Project Timeline and Cost Estimate:

At the present time, the Company assumes that the only costs associated with this project is internal labor and no incremental costs are expected. The benefits are also hard to quantify due to the relatively small amount of interconnection applications received on an annual basis.

DER hosting capacity, is challenging to define, because each circuit has its own characteristics and these characteristics change over time. The hosting capacity of a feeder is the amount of DER a feeder can support under its existing topology, configuration, and physical response characteristics without affecting power quality or reliability. Many considerations need to be evaluated depending on where the DER is located. The utility needs not only to look at the grid in the area of the interconnection (i.e. transformer and wire capacity, voltage control, etc.) but they also need to determine if this installation will have any effect on the overall loading on the circuit, substation or even back flow of power onto the subtransmission or transmission systems. This is a highly variable calculation depending on the situation on each individual circuit. There are many additional concerns that require analysis on a case-by-case basis for specific

applications, but general loading information can be supplied at a substation or circuit level prior to receiving specific applications.

UES will develop an approach to evaluate the hosting capacity of each substation and circuit to determine how much DG could be added without the need for distribution system upgrades. The Company's goal is to present this data in a usable manner to those who are interested in the information. The results of the study will help the Company encourage the development of DG on feeders where it can be readily accommodated. The study will also identify substations that require upgrades to accommodate more DG.

Developing the benefits for integrating DERs into the grid is a more complicated calculation than identifying the circuit capacity. The benefits include but might not be limited to the generation energy, generation capacity (distribution and transmission level capacity), reduction in losses, environmental, and other benefits. The circuit capacity study will help the Company and DG developers to better plan for DG growth. The benefits of DER Enablement ultimately depend on how much DER is installed in the service territory. No monetized benefits are assigned to DER Enablement as part of this plan.

6.4.2 Locational Value Analysis

Locational value analysis is used to determine the value a DER has to the distribution system and will service to improve the overall customer value proposition. Locational value analysis is a relatively new concept to DER interconnections but is an important consideration when trying to maximize the benefits of the DER to the system and its customers. The precise way to calculate locational value has not been developed yet, but the models continue to get more accurate over time.

Locational value analysis is difficult because conditions on the distribution system change very quickly based upon changes in load and other distributed resources. These changes can have a large impact on the value of a DER in a given location. Locational value analysis is still in its infancy. Locational value analysis is evolving as utilities understand more about the capacity, reliability, availability and life span of DER assets.

Developing the benefits for integrating DERs into the grid is a more complicated calculation than identifying the circuit capacity. The benefits include but might not be limited to the generation energy, generation capacity (distribution and transmission level capacity), reduction in losses, environmental, and other benefits. The circuit capacity study will help the Company and DG developers to better plan for DG growth. The benefits of DER Enablement ultimately depend on how much DER is installed.

Understanding locational value is essential for utilities to plan for and rely on cost-effective DER to defer distribution system upgrades. The hypothesis is that as the value of DER can be accurately calculated it will lead to more distribution system investment deferrals.

At the present time, the Company is not proposing a particular approach or project associated with locational value model development. The Company looks forward to working with the Commission and interested stakeholders in the open docket on locational value analysis. The Company intends on making any modifications to its planning process required following the outcome of the open docket.

6.5 Enhanced Customer Services

6.5.1 Data Sharing Platform

6.5.1.1 Description

UES, filed a proposed approach for data sharing in Docket No. DE 19-197. The Company's proposal here is in line with the recommendations made in testimony[1]. RSA 378:50-54 provides clear direction on several foundational components of the online energy data platform, and this proposal incorporates these items into the proposed design presented as part of the "straw proposal". Two of these foundational components are at the core of this proposal as required by the enabling statute: (1) suitability for Green Button Alliance approval, and (2) the creation of and adherence to a "logical data model". There are numerous functional use cases of value to interested parties that warrant consideration for inclusion in options for platform design. Development of the unique functionality necessary to support the specific data and output for all desired outcomes would require an enormous and potentially unrealistic level of up-front design and requirements gathering, likely necessitating a traditional "Waterfall" style software development lifecycle. "Waterfall" projects – where project activities occur in linear, sequential phases – by their nature traditionally incur a much longer time-to-launch trajectory with all of the accompanying cost and obsolescence risks that can follow. In an attempt to avoid this, an "enabling platform" is proposed that securely provides a core set of customer energy usage and billing data points in a standardized data format. The Company refers to this architecture as a "Virtual Energy Data Platform", the structure of which is depicted in the following figure.

[1] Reference Docket No. DE 19-197 Joint Testimony of Thomas Belair, Riley Hastings, and Dennis Moore for Eversource and Justin Eisfeller, Kimberly Hood, and Jeremy Haynes for Unitil.

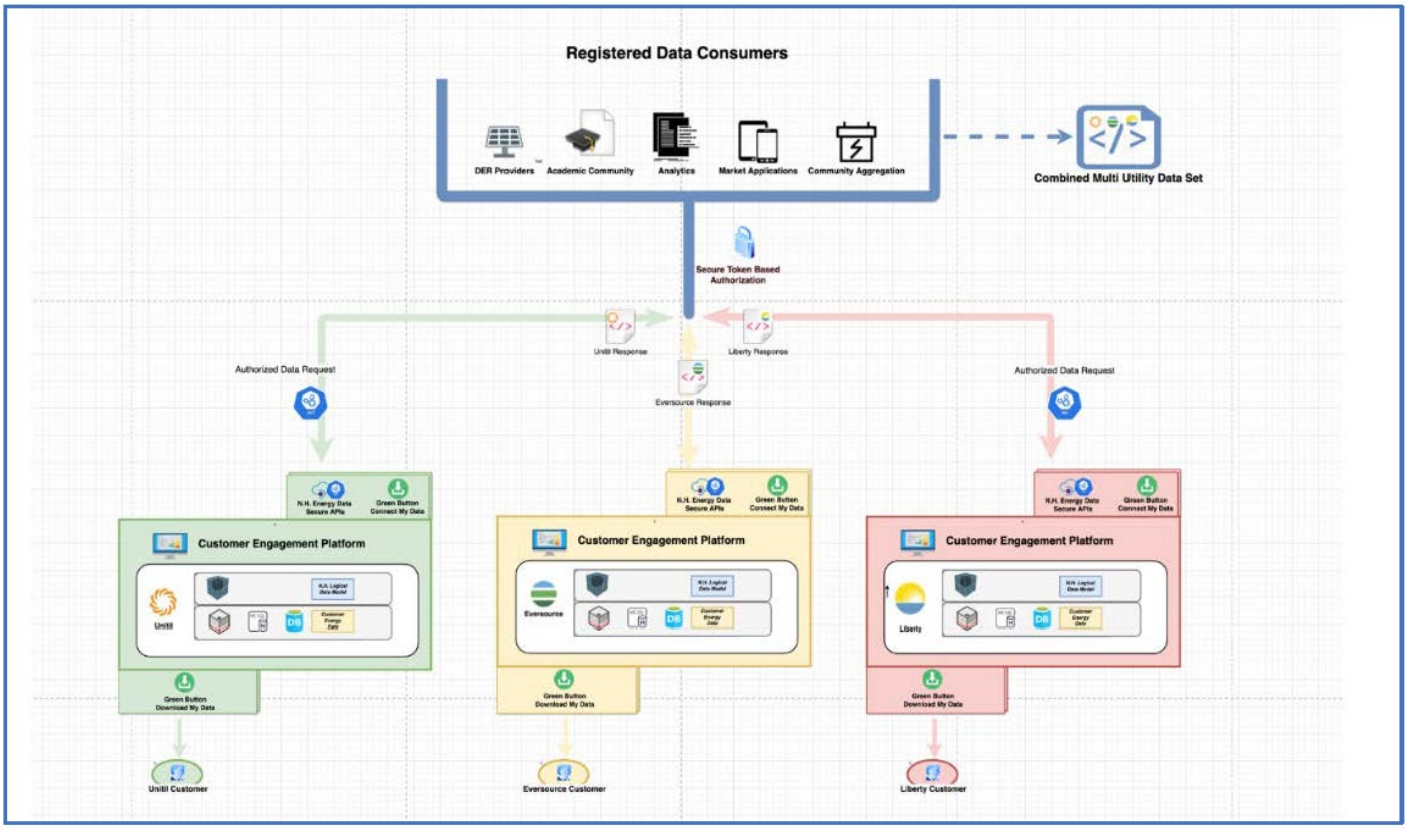

Figure 7: Virtual Energy Data Platform

The virtual platform model is designed to be extensible in an effort to provide the greatest level of cost mitigation and flexibility.

Logical Data Model

UES will have unique challenges associated with the process of mining and combining customer energy data from individual, disparate systems to the platform. Numerous technical and non-technical hurdles exist with retrieving and processing the data necessary to support the platform. For example, these data may exist in various vendor relational database systems, they may exist in flat or unstructured data files, or even in legacy mainframe systems. All of these scenarios will require the data extraction and parsing systems (the "extract" portion of the traditional ETL, or extract, transform and load model), representing a complex and non-trivial exercise.

After the Company has completed all of the work necessary to identify and extract the required data from internal systems, a second challenge unique to each company arises: combining all of the data as the result of these "extraction" efforts into a single, cohesive, data set that can be interpreted and processed by third-parties (the "transform" portion of the ETL model). Without complex standardization and coordination across the utilities, this would be a near impossibility. The introduction of a "Logical Data Model" attempts to solve some of these problems.

The model provides a common abstraction with agreed upon semantics for field names and data conventions, allowing the utilities to "speak the same language" with common terms and agreed upon units of measurement. The Energy Service Provider Interface (ESPI) data standard released and maintained by the North American Energy Standards Board

(NAESB) is proposed to be used as the basis for the model. If data fields are required that are above and beyond what is offered in the ESPI model, the desired approach is to work with the governing body to extend the model, however the standard is already quite robust containing constructs for various energy usage components such as: Usage Points, Meter Readings, Intervals, Reading Types, etc.

The proposed Logical Data Model will act as a "mapping layer" that sits on top of the native utility data sets. Because of this mapping layer, changes are not required to their existing back end systems to support this. However, it would still require a non-trivial data mapping exercise. Adherence to this logical data standard is a cornerstone of the "Virtual Energy Data Platform" as this is what allows multi-utility data to be combined by the API consumer.

Single Customer Data Download and Single Customer Data Sharing via Green Button standards

UES's proposed Virtual Energy Data Platform specifies the use of Green Button Download My Data to provide single customer energy usage data sets directly to the customer. The utilities would allow customers to download their own energy usage data directly from their customer engagement platforms using the Green Button Download My Data standard, and the platform Logical Data Model by design will support this capability. Note that the Green Button standard does not presently accommodate multi-customer aggregated data, and as a result, a different standardized file format will be employed for that data.

Green Button Download My Data allows access to energy usage data directly by a retail customer from the utilities' consumer-facing web portals, using a standard web browser. Vendors wishing to consume data in this format would need to code and create their own tools to read the downloaded files accessed via API. As an alternative, a helper style sheet can also be downloaded that allows the XML data to be transformed into a more "human readable" format. In addition, the platform can alternatively provide a downloadable comma-separated values (CSV) file to support smaller third parties who do not have the technical capabilities to process a Green Button XML file.

Aggregate Customer Data Download

In addition to the individual customer level energy data discussed above, SB 284 also provides a purpose for the platform to facilitate access to aggregated data, stating that: "By enabling the aggregation and anonymization of community-level energy data and requiring a consent-driven process for access to or sharing of customer-level energy usage data, the state can open the door to innovative business applications that will save customers money as well as facilitate municipal and county aggregation programs authorized by RSA 53-E." In the data platform design presented below, varying degrees of utility-provided data aggregation tools are offered for consideration of value and usefulness.

UES is proposing a technical architecture that is designed to allow for incremental development, flexibility and scalability, while leveraging industry standards such as Green Button to allow for maximum interoperability with other systems and platforms.

Unitil Virtual Data Platform

At the heart of the Company's proposed design are three key components: the Logical Data Model, the Green Button Download/Connect My Data protocols for automated standards based data sharing, as well as a collection of robust APIs (application programming interfaces) that serve as the foundation for a virtualized data platform.

The use of the Green Button APIs will allow the Utilities to automate customer authorization and secure delivery of data directly to authorized third parties, adding ease of use and reducing complexity for customers.

GBC requires implementing multiple standards:

- NAESB REQ.21 Energy Services Provider Interface and
- IETF Oauth 2.0 (RFC 6749 and RFC 6750).

Using these standards will provide a retail customer with the ability to "authorize" a verified third party to access data provided by the utilities without any further interaction with the retail customer. The standards support the ability for the utilities to implement restricted access to these endpoints based on various screening and approval steps performed by the utilities for a given third party. Similar to data downloaded using the Green Button Download My Data standard, vendors would need to code and create their own tools to read the XML files access via the APIs. Helper style sheets can be provided to assist with rendering these XML data files into something that is more "human friendly".

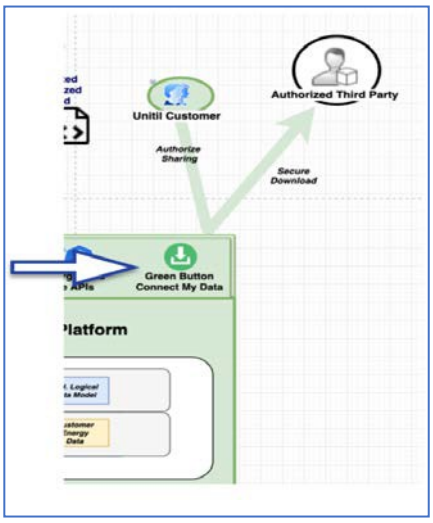

Figure 8: Green Button Download

Each participating utility will expose a library of decentralized REST accessible APIs over Secure Socket Layer connections allowing for automated retrieval and processing of multi-customer data by approved third-parties.

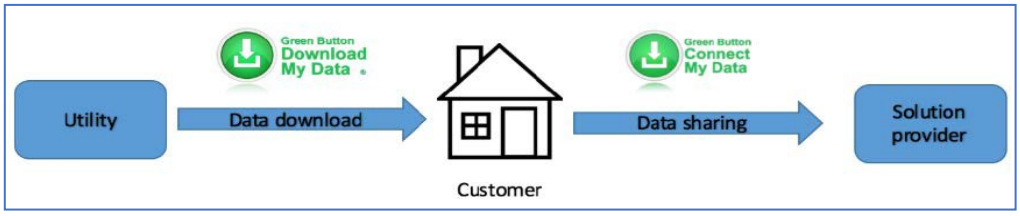

Figure 9: Green Button Download and Connect My Data Overview

The interface for these APIs, as well as the data formats returned will be exactly the same for each implementing utility and will provide standard interfaces for on-demand or scheduled energy data transfers to external requestors. Even though the back-end logic for extracting and transforming the data for each utility will be unique, the APIs will be programmed against the logical data model abstraction, ensuring simple combination of multiple Utility data sets irrespective of underlying differences in data storage, nomenclature and processing.

The APIs will implement standard token-based authentication and authorization similar to ISO-NE's API model and will return cleansed, validated and cryptographically secure data sets enabling the creation of any number of market applications and analyses. Vendors and third parties will need to request and receive an API access token in order to request data from the APIs. The API access tokens can be crafted to allow and deny access to specific granular data and data types. Once authorized, vendors and third-parties can automate analytics and combining of data using the APIs and programmatic means. Figure 12 depicting shows how single customer energy data downloads would work using both Green Button Download and Connect My Data as well as how a multi-customer (aggregated) energy use would work in a town, for example, that has areas served by three utilities.

Virtual Data Mart - Aggregation and Brokering

The decentralized API model enables many of the desired platform use cases described by stakeholders during our technical discovery sessions, but not without some additional work by the consumers of the data. For example, to retrieve and build an aggregated data set across multiple utilities, the consumer is required to make multiple API calls (one to each participating utility end- point) and combine the data themselves.

The Utilities recognize that although technically feasible, this may not represent the ideal user experience, and have designed the platform to be purpose built to allow for an "aggregation" endpoint or an "API of APIs". Doing so introduces an additional, centralized, API gateway allowing for authorized consumers to make a single call to a centrally exposed statewide API Hub that, assuming the appropriate access tokens are in place, would broker calls behind the scenes to each of the individual utility APIs and aggregate the data based on to be defined industry aggregation standards, to deliver the combined multi-utility data set seamlessly. Thus, the same data and data sets would be made available to the customer as if calling each utility endpoint individually, but that information would be provided through a single interface rather than through interactions with each utility. For individual residential customers, the incremental benefit would likely be minimal. However, to entities like commercial customers with locations in the territories of multiple utilities, the added convenience would likely be more valuable.

Virtual Data Mart - Centralized Web Portal

The API architecture proposed would also readily facilitate the creation of a centralized Web Portal that provides combined and aggregated data by municipality should the incremental cost/benefit analysis justify this work. This web portal could provide formatted reporting, stylesheets, templates and other user-friendly ways to consume aggregated data and would utilize the aggregation service and the decentralized APIs provided by the virtual platform.

Virtual Data Mart – System and Third-Party Data

As depicted below in the figure the platform also introduces the ability for viewing limited forms of system level data from the utilities and provides that data via the Virtual Data Mart. The specific types of system data offered will ultimately be determined by security considerations and the outcome of other Commission proceedings, such as the ongoing Grid Modernization docket. The Utilities acknowledge that a variety of approaches exist to solve this problem, each accompanied by unique challenges, complexities, and costs considerations. A full cost-benefit analysis must be

performed to determine the value and desirability of this functionality before committing to an overly complex (and potentially expensive) solution.

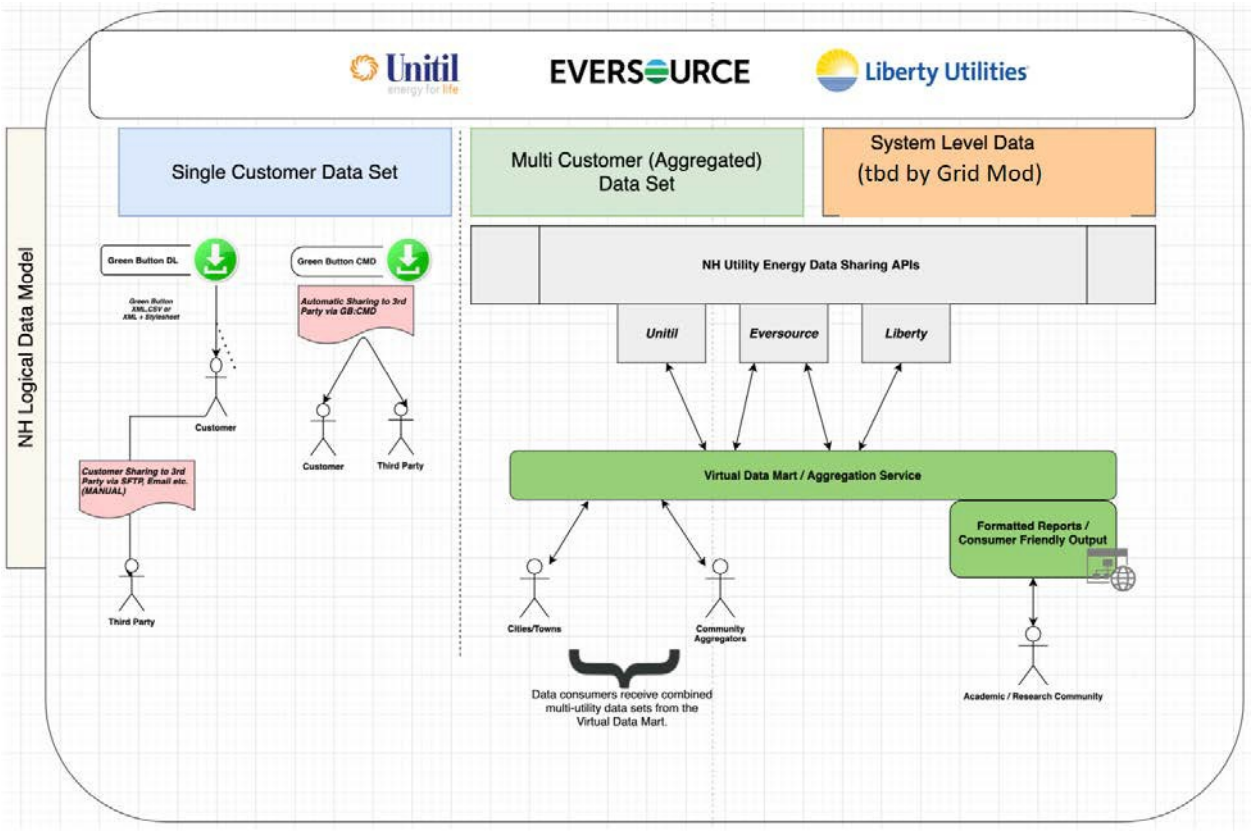

Figure 10: – Green Button Download and Connect Plus Aggregation with Data Mart

Cyber Security and Privacy

The Utilities recognize that data repositories storing customer data represent high-risk targets. Bad actors regularly work to steal customer information for economic gain and to support social engineering activities. The data platform is intended to contain various customer data which requires security controls to adequately protect the data. The controls proposed by the Utilities are consistent with controls currently in use. These controls are based on industry standards including the NIST Guidelines for Smart Grid Cyber Security, NISTIR 7628, and the DataGuard Energy Data Privacy Program, developed by the DOE. The platform must also ensure compliance with, at a minimum, the following state and federal mandated standards:

- PUC 300 Rules for Electric Service
- 18 CFR § 125.1 Preservation of Records of Public Utilities and Licensees
- 18 CFR § 125.3 Schedule of Records and Periods of Retention, and
- Consumer Data Breach Notification Law, RSA 359-C:19.

Understanding the threat landscape and risks helps to ensure the controls are appropriately designed. The following risk scenarios should be considered in designing data protection controls. These risks are the most significant but should not be considered all-inclusive until further information is available on the final design requirements, which could impact the threat landscape.

- Confidentiality of customer data could be compromised by unauthorized access to customer data, resulting in a data breach where the data could be sold on the Dark Web.
- Confidentiality of usage data could be compromised and used to target customers' privacy and allow an attacker to monitor behavior patterns.
- Integrity of customer data could be impacted by unauthorized access to customer data, resulting in decision-making based on invalid data.
- Unauthorized access to the data platform could result in a compromise and theft of user credentials, increasing the ability of an adversary to potentially access systems outside of the data platform and attack other energy system infrastructures.
- Third parties receiving data from the portal may not have sufficient data protection controls to ensure the risk of a compromise of customer data is minimized.
- Third-parties requesting data from the portal may be Foreign-Owned, Controlled, or Influenced (FOCI), resulting in data being provided to a nation state for purposes other than intended by the Commission or the Legislature. This situation could result in a violation of customer privacy or improve the likelihood of an attack on the power grid

While the Utilities understand that all risk cannot be eliminated, the utilities have a responsibility to ensure that customer and operational data are adequately protected, including when provided to a third party for legitimate business reasons. The Utilities plan to incorporate process and system controls into the platform, commensurate with the risk to customer privacy as well as critical infrastructure. The requirements are intended to ensure the Confidentiality, Integrity, and Availability (CIA) of the systems and data. Consistent with NIST Guidelines for Smart Grid Cyber Security, NISTIR 7628, the Utilities plan to implement a comprehensive cyber program to protect any actual data stored via the platform. These program requirements include implementing appropriate privacy impact assessments, appropriate access controls to the systems and data, security awareness training for non-utility staff that may support the portal, incident response procedures, media protection, supply chain, and appropriate system development and maintenance procedures and controls.

The following controls will be required for the platform. These controls are the key controls and others will likely be required as the system is designed:

- Access and Authentication Controls
- Configuration Management
- Encryption
- Logging and Monitoring
- Vulnerability Management

Another important step in reducing the risk of sharing Customer and Operational data is an assessment of the security posture of the third-parties that request data. The Utilities propose to adopt a common cyber security assessment process. Third-parties will complete the assessment and be certified to access data from all utilities, if appropriate. Third-parties will be reassessed annually or immediately following a change in their environment or a cyber incident. Third-parties will also be required to sign a Mutual Non-Disclosure Agreement (NDA) with the Utilities. This non-disclosure will address the requirements of the third party to protect and keep confidential customer energy use data, security and

retention requirements. Additional NDAs from departments such as purchasing or IT may also be required, as appropriate.

The proposed common cyber security assessment would evaluate:

- Obligations of third-parties and contractual relationships;
- Oversight of third-party certification/vetting and annual re-certification process;
- Monitoring of third-parties for appropriate use of data;
- Liability for third-party breach of privacy rules;
- Protection of Customer Data and utility infrastructure from compromised third-parties;
- Data breach notification to utilities, customers, the Commission and stakeholders;
- Process for decertification, revoking data platform access, and third-party appeal process;
- Creation of reference materials (links, training, communications, User Guides, Business Intelligence references)

Project Build Summary

The following components make up the final build for a version of the proposed data sharing platform integrated with a multi-utility state-wide data sharing platform (such as the one proposed in DE 19-197).

- Backend data collection from source systems and mapping to Logical Data Model
- Development of UES hosted, Green Button enabled data sharing APIs that will handle all: authorization, authentication and data retrieval.
- Central Data Hub (or API of APIs) – Central aggregation point that can consume and present data from multiple utility APIs. This will be developed jointly by the utilities. These costs are not included in this proposal as the joint proposal is pending review and approval by the Commission.

6.5.1.2 Benefits:

There is a consistent trend with the data offerings that raises questions as to the value of investing in a data platform. Today, customers may download, and otherwise use their energy usage data for a variety of reasons. But to date, very few customers have leveraged these options. This project seeks to enable expanded uses for energy usage data designed for additional user types. The Utilities believe the limited engagement with current data service offerings should be taken into account when deciding the size and scope of a statewide data platform for New Hampshire. Alternatively, the Utilities understand that automating the transfer of energy data might spur more use. The actual use of customer energy data will of course be taken into consideration in the benefits when determining the cost effectiveness of implementing any solution. If the platform is utilized, it should be because the benefits of such a platform are clearly-defined and demonstrated to provide meaningful value to a sizeable number of customers.

This project will have the following benefits to our customers:

- enable customers to better manage their energy consumption
- lower monthly electric bills,
- benefit from new products and services offered;
- lower transmission capacity costs;
- deferred spending on capacity improvements;

- lower GHG emissions;
- data to support community aggregation; and
- DER providers can gain access to a larger consumer market

6.5.1.3 Project Timeline and Cost Estimate:

This project is estimated to take one year to complete. Ongoing maintenance, support and software licensing fees will apply to the platform on an annual basis going forward.

Year	1	2	3	4	5	6	7	8	9	10	Totals
Benefits (000s)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**
Capital Costs (000s)	$449	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$449**
O&M Costs (000s)	$0	$41	$41	$41	$41	$41	$41	$41	$41	$41	**$373**
Total Costs (000s)	**$449**	**$41**	**$41**	**$41**	**$41**	**$41**	**$41**	**$41**	**$41**	**$41**	**$821**

Table 18: Data Sharing Benefits and Costs

Data sharing is a foundational tool that will allow customers and interested third parties the ability to use the data to inform behaviors, products and programs leading to a reduction in energy consumption. Accurate and timely data will empower customers with the information required to make educated decisions that will have a positive effect on the distribution system and customer bills. Cyber security and privacy can be a challenge with increased data sharing. The platform will be secure and ensure customer privacy above all else. Customers trust the Company to protect them and their data. Annual maintenance, support and software licensing fees will be required to keep the platform current by implementing new functionalities and programs.

6.5.2 Customer Engagement Management System

This is a proposal for continued investment in technologies designed to support the customers' experience and their satisfaction in all facets of that experience. This project will strengthen current service offerings, make enhancements to our customer web portal (or Customer Experience Management Solution), and add self-service options that enable customers to better manage their energy usage and accounts. These planned enhancements include a mobile app, artificial intelligence and chat features, and a robust notification engine to proactively alert customers regarding payment activity, changes in usage patterns, outages, and scheduled appointments.

This project will design, develop, test and implement a robust, personalized self-service solution that provides a responsive web experience, mobile application, and tailored, timely and proactive notifications for customers over an estimated 18-month period. The CEM project is a foundational element to providing customers with energy information, products and services that align with the Company's mission and strategic customer vision roadmap.

This is a foundational project that enables larger product offerings such as TOU rates and as such quantifiable benefits are difficult to calculate for this stand-alone project. The qualitative benefits include: 1) robust content management tools for web based forma and customized tools, 2) a configurable enterprise notification platform enables real-time service alerts for outage events, TOU rate conditions, and service appointments (to name a few), 3) a mobile application to improve accessibility and ease of use, and 4) provides a foundational platform that enables strategic enhancements such as predicative analytics and artificial intelligence automation.

This project will be presented separately from the overall Grid Modernization Plan.

6.6 Innovative Rate Design

Technology adoption rates continue to increase as DERs become more affordable and interconnections to the distribution system continue to increase. The Company's vision of the advanced grid as an enabling platform provides customers with the ability to achieve benefits and transform the manner in which people meet their evolving energy needs.

UES will implement a suite of TOU rate offerings to enable customers the ability to realize a benefit for their technology investment and usage patterns. TOU rates are designed to enable customer adoption of distributed energy resources, transportation electrification, and individualized energy management to reduce carbon emissions from the electricity sector while saving customer's money in the process.

The overarching objective of rate design is the development of pricing for grid services that adhere to the principles of fairness, transparency and economic efficiency. Transparent and economically efficient pricing structures will ensure a viable and sustainable long term model that provides sufficient revenue to support the modernization of the electric system. Innovative rate design encourages appropriate behaviors and assures fairness and equity among customers.

Technology innovation has both accelerated and reinforced this transformation as customers now have access to services, markets and home energy technologies previously unimagined. Advancements in technology are driving down the cost of clean energy, making it more affordable for consumers. Energy markets continue to develop as innovators develop new tools to control and manage energy usage and market new energy services directly to end-use customers.

A suite of TOU rates will help customers better manage their own energy consumption to reduce peak demand and lower system costs while enabling new technologies and distributed resources. The Company recognizes that varying customer behaviors may necessitate a suite of EV charging rate structures, including fixed rates and TOU rates. The suite of TOU rate offerings proposed includes a "whole-house" residential TOU rate, a "low demand" residential EV TOU charging rate, a "low demand" small commercial and industrial ("C&I") EV TOU charging rate, and a "high demand" large C&I EV TOU rate. These rates serve as a foundation for EV programs, energy storage BYOD programs, and other future customer investments in DERs.

One concern about adoption rates is lack of awareness or understanding of the utility bill. This concern can be compounded as rate options become more complicated with prices changing multiple times a day. Customers who invest in technology tend to be more willing to participate in alternative rate plans in an effort to receive a benefit from their investment. I

Customers who have implemented technology that can automatically shift loads are more likely to participate in alternative rate plans. Customer education is an important aspect to innovative rate design. A strong customer communication, education and outreach plan is required to support new rate offerings. Customers will be more likely to adopt new rate structures if they are aware of and understand the new rates. Offering tools that help customers compare rate offerings is critical for beneficially influencing individual usage patterns and resulting bill impacts. To educate customers more effectively, it's important to understand our customers and communicate how new rate structures can benefit them specifically. Shadow billing tools will be beneficial to customers in their evaluation of the impact different rate plans would have on their particular situation.

7 BENEFIT/COST ANALYSIS

One of the most effective ways to evaluate "foundational" grid modernization investments is on a benefit-cost basis. However, most foundational grid modernization projects do not result directly in benefits to the customer. In this case, the cost of the "foundational" investment is included in the benefit-cost analysis of the project which delivers the benefits. For instance, a FAN project in and of itself does not lead to quantifiable benefits. However, when a field area network is combined with the VVO project, the benefits can be quantified and compared to the cost. In this example, if the FAN project is evaluated as a stand-alone investment, it would never not pass a benefit-cost analysis. However, the VVO project would generally provide enough saving to pass a benefit-cost analysis, but the project will not be effective without the FAN project. A portfolio approach to all of the projects proposed will provide the best indication if the Plan as presented provides benefits that exceed the estimated costs.

The Company examined the benefits that each project could provide. Some projects were relatively easy to estimate, including those that yield operational or direct customer cost savings. Other project benefits, like those that might improve the satisfaction of customers, are harder to quantify. Benefits that improve the operation of the grid and reduce costs overall are designated as "grid" benefits while those that lower the costs for customers on their bill (reduced energy consumption or capacity), or reduce the effects of outages are designated as customer benefits. Appendix C provides the inputs and output of the benefit cost analysis.

The table below shows examples of benefits that are more or less difficult to quantify and monetize.

Easier to quantify and monetize	Harder to quantify and monetize
Operational cost savings	Value of customer satisfaction
Cost of electricity	Value of distributed generation
Value of saving energy	Value of reducing carbon emissions
Value of reducing outages	Value of reducing blackouts

Table 19: Examples of Benefits That Are Easier/Harder to Quantify

The grid modernization projects presented here support the transition to the enabling platform while delivering benefits that exceed the costs. The table below identifies the benefits and costs associated using a 20 year and 15 year NPV analysis.

	20 Year NPV

Projects	NPV Benefits (000's)	NPV Capital Costs (000's)	NPV O&M Costs (000's)	B/C Ratio
Field Area Network	$0	$2,541	$586	-
ADMS and DERMS	$0	$1,855	$543	-
Volt/VAR Optimization	$21,841	$14,985	$0	1.46
SCADA	$9,040	$4,816	$0	1.88
Mobile Damage Assessment	$8,412	$385	$281	12.63
AMI/OMS Integration	$1,445	$92	$64	9.26
Data Sharing Platform	$0	$385	$329	-
Totals	$ 40,739	$ 25,059	$ 1,804	1.52

Table 20: Benefit Cost Analysis – 20 Year NPV

	15 Year NPV			
Projects	NPV Benefits (000's)	NPV Capital Costs (000's)	NPV O&M Costs (000's)	B/C Ratio
Field Area Network	$0	$2,541	$430	-
ADMS and DERMS	$0	$1,855	$451	-
Volt/VAR Optimization	$16,500	$14,985	$0	1.10
SCADA	$6,806	$4,816	$0	1.41
Mobile Damage Assessment	$7,221	$385	$237	11.61
AMI/OMS Integration	$1,241	$92	$54	8.50
Data Sharing Platform	$0	$385	$278	-
Totals	$31,768	$25,059	$1,450	1.20

Table 21: Benefit Cost Analysis – 15 Year NPV

Key Observations for Benefits and Costs

- The investments will not “pay for themselves” through operational efficiency and cost reductions alone
- The benefits primarily accrue to customers, either through electricity cost savings (the value of a kWh or kW) or the value of reducing outage minutes (Lawrence Berkley National Lab’s (LBNL) ICE calculator)

- The cost savings for customers created by VVO will create downward pressure on electricity bills, even though the grid modernization investments in the STIP increase the revenue requirement – investments cost money, but customers save energy which holds the line on bills

8 METRICS

It is important for our customers, stakeholders, and Commission to have a manner in which to measure progress towards grid modernization and implementation of the plan. These proposed metrics have been influenced by the Company's experience in other jurisdictions.

Due to the complexity and data intensive nature of these metrics, the Company has not yet had the opportunity to calculate a baseline for all metrics. In some cases, the Company does not have the necessary equipment installed in the field to allow for measurement and verification. In other cases, the Company is reviewing and updating its GMP and the detailed design work has not been completed to support the development of a baseline or target. The Company will calculate baselines and targets once the metrics are finalized.

The purpose of these metrics is to determine how performance can be changed because of grid modernization activities. Weather, customer behavior, economic conditions and other factors will have a significant influence on the parameters being measured under these metrics. As the Company begins to implement its grid modernization plan, the changes resulting from grid modernization may be subtle and difficult to detect. The use of baselines against which to measure ongoing performance will help develop an understanding of how the Company's grid modernization efforts are "moving the needle" in terms of progressing towards the achievement of the Department's Grid Modernization objectives.

The metrics use the following definitions for infrastructure metrics filings:

Grid Modernization Device - Any device that meets the requirements of either a fully automated or a partially automated device. This includes primary devices (breakers, reclosers, sectionalizers, switches, capacitor banks, voltage regulators, etc.) that are included in the grid modernization plan.

Fully Automated Device - Meets all of the following requirements:

- Reacts to system conditions to isolate or restore portions of the electric system;
- Communicates system quantities (e.g., voltage, trip counts) to a central location, such as SCADA; and
- The state of the device can be remotely controlled by dispatch.

Partially Automated Device – Meets at least one of following requirements:

- Reacts to system conditions to isolate or restore portions of the electric system;
- Communicates system quantities (e.g., voltage, trip counts) to a central location, such as SCADA;
- The state of the device can be remotely controlled by dispatch; or
  AND capable of upgrade to a fully automated device without full replacement.

Sensor – Equipment that records and sends information of the electric system that can be used to improve the efficiency or effectiveness of workforce or asset management (e.g., Fault locators that would help pinpoint a problem for more efficient crew deployment).

These proposed metrics will be broken down into 1) infrastructure metrics which tracks the implementation of grid modernization technologies and 2) performance metrics that measure progress towards the objectives of grid

modernization. These metrics are designed to measure quantitative benefits associated with grid modernization benefits.

Metric	Grid Intelligence	Advanced Metering Systems	DERs	Planning and Forecasting	Enhanced Customer Services	Innovative Rate Desgn
Performance Metrics						
VVO Baseline	X					
VVO Energy Savings	X					
VV Peak Load Impact	X					
VVO Distribution Losses	X					
VVO Power Factor	X					
VVO Estimated GHG Impact	X					
VVO Related Voltage Complaints	X					
Number of customers on TOU Rates					X	X
Numer of customer enrolled in CEM services					X	X
Percent of meters providing interval metering		X				
Percent of System with Unbalanced Load Flow and Control Capabilities	X			X		
Control Functions Implemented by Circuit	X					
Number of Customers benefiting from Grid Mod investments	X	X	X	X		
Reliability Focused Grid Modernization Investments - Outage Duration	X					
Reliability Focused Grid Modernization Investments - Outage Frequency	X					
Inrastructure Metrics						
Grid Connected DG Facilities			X	X		
System Automation Saturation	X					
Numbers of Devices or Technoloies Deployed	X	X				
Associated Cost for Deployment	X	X	X	X	X	X
Reason for deviation between acutal and planned deployment	X	X	X	X	X	X
Projected deployment	X	X	X	X	X	X

Table 22: Proposed Performance Metrics

8.1 Performance Metrics – Baselines and Targets

The following performance metrics are designed to measure progress towards grid modernization. In some cases, the Company is able to provide baseline quantities for the proposed metrics. However, in some cases the baseline is not able to be provided without the installation of specific equipment used for measurement and verification.

8.1.1 Volt VAr Optimization (VVO) Baseline

8.1.1.1 Objective

Establish a baseline impact factor for each VVO enabled circuit which will be used to quantify the peak load, energy savings and greenhouse gas ("GHG") impact measures.

8.1.1.2 Assumptions

VVO dynamically controls and coordinates multiple devices to manage both voltage and reactive power. System-wide efficiency is achieved by simultaneously coordinating operations using continuous measurements from multiple sensors distributed across the circuit. Once a circuit has VVO enabled, a M&V process will be performed through operating VVO using a predetermined time period and series. Based on the results of this M&V process, a circuit level VVO impact and baseline will be created.

8.1.1.3 Calculation Approach

The following data will be tracked and reported on a substation and circuit basis:

a. Determine circuit loads through measurements during on/off periods
b. Apply temperature corrections.
c. Develop load profiles.

As part of the baseline data capture, each VVO circuit will capture hourly circuit data for real and reactive power.

8.1.1.4 Organization of Results

This information will be provided for each VVO enabled circuit and serve as the baseline variable for calculating demand reductions or serve as variables for other calculations, such as reductions in GHG emissions. This calculation will be performed once and will support both circuit and system level impacts.

8.1.1.5 Organization of Results

This information will be provided for each VVO enabled circuit and serve as the baseline variable for calculating demand reductions or serve as variables for other calculations. This will be performed annually, and support both circuit and system level impacts.

8.1.1.6 Baseline

The baseline will be calculated through measurement and verification after each circuit and/or substation is placed into service. The Company recommends that each VVO circuit will undergo an M&V process, the results of which will be used to estimate the impact the system has on system load. Baselines will be reported during the first annual report following the field measurement and verification.

8.1.1.7 Target

This is the baseline for the VVO metrics. Therefore a target is not appropriate for this metric.

8.1.2 VVO Energy Savings

8.1.2.1 Objective

Quantify the energy savings achieved by VVO using the baseline established for the circuit against the annual circuit load with the intent of optimizing system performance.

8.1.2.2 Assumptions

Once a circuit has VVO enabled, a measurement and verification process will be performed through operating VVO using a predetermined time period and series. Based on the results of this M&V process, a circuit level VVO impact and baseline will be created.

8.1.2.3 Calculation Approach

The following data will be tracked and reported upon on a substation and circuit basis:

a. Annual energy delivered in kilowatt hours (“kWh”) for the most recent three year time period prior to when the system is placed into service.

Energy Savings will be represented by the net impact of VVO using the baseline established for the circuit against the annual circuit load.

8.1.2.4 Organization of Results

This information will be provided for each VVO enabled circuit and serve as the baseline variable for calculating demand reductions or serve as variables for other calculations. This will be performed annually, and support both circuit and system level impacts.

8.1.2.5 Baseline

The baseline will be calculated through measurement and verification after each circuit and/or substation is placed into service. The measurement and verification process will require equipment and technology that the Company does not presently have installed. Baselines will be reported during the first annual report following the field measurement and verification.

8.1.2.6 Target

UES's benefit/cost model assumed a 2% reduction in energy consumption.

8.1.3 VVO Peak Load Impact

8.1.3.1 Objective

This metric is designed to quantify the peak demand impact VVO/CVR has on the system with the intent of optimizing system demand. This impact metric provides a peak load impact of VVO for selected circuits and peak periods.

8.1.3.2 Assumptions

For this metric, the Company will use active circuit M&V peak demand reduction results from individual circuits.

8.1.3.3 Calculation Approach

This metric will use the following data:

- Circuit level M&V estimated hourly demand reduction
- Circuit level hourly on/off VVO Status
- Circuit level hourly peak demand
- System Level yearly peak time

UES will apply the corresponding M&V estimated hourly demand reduction on all circuits with active VVO for the appropriate peak hour. As some circuits have different peak times, using the appropriate demand estimated reduction for the correct hour is important. This will result in a single (GW) estimated demand reduction attributed to VVO.

8.1.3.4 Organization of Results

The Company will provide individual circuit VVO performance, estimated demand reduction, as well as the summation of total system impact.

8.1.3.5 Baseline

The baseline will be calculated through measurement and verification after each circuit and/or substation is placed into service. The Company has the ability to measure peak demand on each circuit. However, in order to accurately develop a baseline, the peak demand will be measured during the measurement and verification process to eliminate any

influence by customer load additions and reductions between now and when the VVO system is implemented on a given circuit. Baselines will be reported during the first annual report following the field measurement and verification.

8.1.3.6 Target
UES's benefit/cost model assumed a 2% reduction in peak demand.

8.1.4 VVO Distribution Losses

8.1.4.1 Objective
VVO reduces circuit demand by flattening and lowering circuit voltages, primarily by using voltage regulators. At the same time, VVO actively controls capacitor banks to maintain circuit power factors near unity. This distribution automation project will implement better voltage regulation to improve power quality and reduce losses. This includes the coordinated operation of a voltage regulator with a transformer load-tap changer at a substation.

Electrical loss in the circuit can be investigated using the difference between power provided by the circuit regulator and the total power delivered to the consumer loads. This impact metric presents the difference between circuit load measured at the substation via the SCADA system and the metered load measured through AMI.

8.1.4.2 Assumptions
There are many elements that contribute to differences between circuit load data and the hourly measurements. These factors include:

- Unmetered load, such as street lights
- Electricity theft
- Circuit line losses

8.1.4.3 Calculation Approach
Using hourly data for real and reactive power, one can determine hourly line losses. This represents both technical and non-technical, e.g., theft, losses.

8.1.4.4 Organization of Results
This information will be provided on an annual basis for VVO enabled circuits. Results will be based upon the results at the end of each calendar year.

8.1.4.5 Baseline
The baseline will be calculated through measurement and verification after each circuit and/or substation is placed into service. The measurement and verification process will require equipment and technology that the Company does not presently have installed. Baselines will be reported during the first annual report following the field measurement and verification.

8.1.4.6 Target
UES's benefit/cost model assumed a 2% reduction in peak demand and consumption. It is estimates that the line losses will be reduced by 2% as well.

8.1.5 VVO Power Factor

8.1.5.1 Objective

VVO reduces circuit demand by flattening and lowering circuit voltages, primarily by using voltage regulators. Simultaneously, VVO actively controls capacitor banks to maintain circuit power factors near unity. Power factor is an indication of how efficiently the distribution system is delivering power. A distribution system operating at unity power factor delivers real power more efficiently than one operating at either a leading or lagging power factor. This performance metric seeks to quantify the improvement that VVO is providing. However, power factor alone is not sufficient to accurately describe the impact VVO has on the system. At low demand levels, a poor power factor is not as significant as at high demand levels. Therefore, some qualifications must be made to accurately track power factor.

8.1.5.2 Assumptions

Performance will be based on circuit level hourly power quality measurements at the substation.

8.1.5.3 Calculation Approach

This metric will use the following data:

- Circuit level hourly Power Factor
- Circuit level hourly on/off VVO Status
- Circuit level hourly peak demand

For this performance metric, only power factors corresponding to greater than 75 percent of a circuit's peak annual demand will be used. This qualified data will then be averaged to provide a circuit by circuit power factor performance metric. These averages will then be used to generate a system power factor performance, weighted by the peak demand of each respective circuit.

8.1.5.4 Organization of Result

The results of this metric will be reported in a tabular format on a circuit by circuit basis and a total system tally. Power factor is a dimensionless metric.

8.1.5.5 Baseline

The baseline will be calculated through measurement and verification after each circuit and/or substation is placed into service. The measurement and verification process will require equipment and technology that the Company does not presently have installed. The baseline will be measured with VVO disabled and then again with VVO enabled to develop a baseline. The baseline for this metric will be reported in the first annual report after the measurement and verification is completed.

8.1.5.6 Target

UES has not developed circuit by circuit targets for this metric yet. However, the targets will be developed to operate the circuits as close to unity power factor as practicable.

8.1.6 VVO Estimated GHG Impact

8.1.6.1 Objective

This metric is designed to quantify the overall Greehouse Gas (GHG) impact VVO has on the system. A GHG reduction estimate will be derived from the circuit level energy savings.

8.1.6.2 Assumptions

For this metric, the Company will utilize active circuit M&V energy reduction results from individual circuits. No M&V results older than five years will be used. To calculate GHG reductions, the Company will use industry standard values for displaced GHG.

8.1.6.3 Calculation Approach

This metric will use the following data:

- Circuit level M&V estimated Energy Reduction
- Circuit level hourly on/off VVO Status
- Circuit level hourly energy
- Industry standard CO_2 Emissions Factor (Tons/MWhr)

UES will accumulate all hours with active VVO and use the respective M&V energy reduction estimate, applied against the hourly demand. This will result in a single Gigawhatt Hour (GWhr) estimated energy reduction attributed to VVO.

CO_2 avoided due to VVO will be calculated by multiplying the above energy reduction by a typical generation emissions factor based upon metric tons per MWh.

Formula: CO_2 Emissions (tons) = Energy Savings (MWhs) x CO_2 Emissions Factor (tons / MWh)

The calculation will use the GHG emissions factors consistent with those used in the most recent version Three-Year Energy Efficiency Plans.

8.1.6.4 Organization of Results

Each Company will provide individual circuit VVO performance, estimated energy reduction, as well as the summation of total system impact.

8.1.6.5 Baseline

The baseline will be calculated through measurement and verification after each circuit and/or substation is placed into service. The measurement and verification process will require equipment and technology that the Company does not presently have installed. Baselines will be reported during the first annual report following the field measurement and verification.

8.1.6.6 Target

The target for this will be to reduce GHG emissions by 2% in line with the 2% reduction in energy consumption and peak demand.

8.1.7 VVO Related Voltage Complaints

8.1.7.1 Objective

The primary focus of the VVO investments is to manage circuit voltages at a lower threshold while maintaining minimum voltage service requirements for all customers on a substation and circuit. Since VVO will be actively managing voltages, there is a desire to track and report on the potential for the introduction of VVO-related voltage complaints. While VVO is not an active solution in use by the Company today, there may be historical low voltage causes that exist outside of a customer's service connection and equipment. Certain voltage issues, such as those that are ultimately determined to have been caused by customer-owned equipment, will not be mitigated by the Company's VVO investments. The

8.1.7.2 Assumption

Prior to the requirement to track and report on whether VVO investments could potentially contribute to customer voltage complaints, there was never a need for the Company to track customer voltage complaints in this manner. In an effort to develop a baseline for this metric, the Company must manually review the available records to determine the cause and remedy of the voltage issue that led to the customer complaint.

Going forward, the Company intends to specifically track customer voltage complaints to determine if VVO investments led to the voltage condition giving rise to the customer complaint. The Company currently tracks customer voltage complaints in its Customer Information System ("CIS") and plans to revise the system coding to better capture the data necessary to determine if a voltage issue was impacted by VVO investments.

8.1.7.3 Calculation Approach

This metric will track and report on the following:

- Quantity of voltage complaints for the current year that are deemed caused by VVO voltage management by circuit for circuits that will have VVO installed.
- Three-year average of all voltage complaints by circuit covering the most recent three years
- Compare the current year quantity of voltage complaints with the three-year historic average

Formula: Voltage Complaint Baseline = AVERAGE ('Voltage Complaints Year N' +' Voltage Complaints N-1'+' Voltage Complaints N-2')

8.1.7.4 Organization of Results

The baseline voltage complaints and the annual VVO related voltage complaints (one VVO investments are active and enabled) will be provided on an annual basis for each circuit. Results will be based upon the results at the end of the calendar year. This will provide an opportunity to assess the effectiveness of the VVO investments while minimizing the introduction of new customer impact.

8.1.7.5 Baseline

Utilizing the assumptions discussed above, the Company will calculate the baseline to use to measure process under this metric.

8.1.7.6 Target

The goal of this metric is to minimize the quantity of voltage complaints related to VVO. At the present time, the Company does not have VVO so therefore no VVO related voltage complaints.

8.1.8 Number of Customers on TOU Rates

8.1.8.1 Objective

The objective of this metric is to measure the quantity of customers (by rate class) that are taking advantage of TOU rates. Increase in this metric is a measurement of the success of the TOU implemented by the Company.

8.1.8.2 Assumption

The assumption behind this metric is that a well-designed TOU rate that is transparent and understood by customers will lead to changes in customer behaviors and have a positive impact on the system.

8.1.8.3 Calculation Approach

UES will use its CIS system to identify the quantity of customers by rate class that are enrolled in TOU rates.

8.1.8.4 Organization of Results

The results will be based upon the end of the calendar year.

8.1.8.5 Baseline

UES does not currently has TOU rates in effect. More work will be required to determine appropriate baseline and targets.

8.1.8.6 Target

UES does not currently has TOU rates in effect. More work will be required to determine appropriate baseline and targets.

8.1.9 Number of Customers Enrolled in CEM Services

8.1.9.1 Objective

The objective of this metric is to measure the effectiveness of the Company's Customer Engagement Management project.

8.1.9.2 Assumption

The assumption behind this metric is that a well-designed customer interface to the Customer Engagement Management system that is transparent and understood by customers will lead to customers becoming more educated about their energy usage leading to educated decisions that benefit the customer and the grid.

8.1.9.3 Calculation Approach

UES will use its CIS system to identify the quantity of customers by rate class that are enrolled in TOU rates.

8.1.9.4 Organization of Results

The results will be based upon the end of the calendar year.

8.1.9.5 Baseline

UES does not currently have the CEM in place. More work will be required to determine appropriate baseline and targets.

8.1.9.6 Target

UES does not currently have the CEM in place. More work will be required to determine appropriate baseline and targets.

8.1.10 Percent of Meters Providing Interval Metering

8.1.10.1 Objective

The objective of this metric is to measure the Company's transition from its previous TS2 system to the PLX system that will provide for interval metering.

8.1.10.2 Assumption

The assumption behind this metric is that PLX metering will increase the opportunity for enhanced rate plans. As this number of PLX meters increases, the number of customers able to take advantage of these enhanced rate offerings should also increase.

8.1.10.3 Calculation Approach

UES will use its AMI system to identify the quantity of customers who have a PLX meter installed.

8.1.10.4 Organization of Results

The results will be based upon the end of the calendar year.

8.1.10.5 Baseline

At the end of 2020, the Company had 6,800 PLX meters installed.

8.1.10.6 Target

Any new meter installation will receive a PLX meter that is interval capable and any meter that is replaced will be with a PLX meter that is interval capable. This equates to approximately 2,500 interval capable meters being deployed annually.

8.1.11 Percent of System with Unbalanced Load Flow and Control Capabilities

8.1.11.1 Objective

This metric will demonstrate the progress in the ADMS investment by tracking the circuits that have been equipped with unbalanced load flow capabilities. This metric will support the objective of optimizing system performance and more specifically improve asset utilization, improve reliability and integrate distributed energy resources. ADMS gives system operators increased visibility on the real-time output of generating facilities. This metric is designed to demonstrate that the model is an accurate representation of field conditions.

8.1.11.2 Assumptions

A circuit will be assumed to have ADMS unbalanced load flow capability when all feeders are modeled daily with no unwarranted voltage or capacity violations.

8.1.11.3 Calculation Approach

This metric will track and report on the number circuits that have been successfully modeled (model conversion) within the ADMS system.

8.1.11.4 Organization of Results

This information will be provided on an annual basis. Results will be based upon the results at the end of the calendar year.

8.1.11.5 Baseline

The baseline for this metric will start at zero since no circuits have been modeled in ADMS yet.

8.1.11.6 Target

The target for this metric based upon the ADMS deployment schedule

8.1.12 Control Functions Implemented by Circuit

8.1.12.1 Objective

This metric will show the progress in the ADMS investment by tracking the control functions implemented at the circuit level. This metric will support the objective of optimizing system performance and more specifically minimize electrical losses and improve reliability.

8.1.12.2 Assumptions

A control function will be defined as the ability to automatically issue command to field devices based on real-time system condition (such as VVO or distribution automation), and a circuit will be included in this metric when all devices have met the grid modernization control capability as defined in the grid mod plan.

8.1.12.3 Calculation Approach

This metric will track and report on circuits with control function implemented. In addition, the Company will report on the number of customers on each feeder affected by this technology.

8.1.12.4 Organization of Results

This information will be provided on an annual basis. Results will be based upon the results at the end of the calendar year.

8.1.12.5 Baseline

The baseline for this metric will start at zero since the specific control functions laid out as part of the Company's plan have not been deployed.

8.1.12.6 Target

The target for this metric will be based on the ADMS deployment plan.

8.1.13 Numbers of Customers that benefit from Grid Mod Investments

8.1.13.1 Objective

This metric will show progress by tracking the numbers of customers who have benefitted from the installation of grid modernization devices. This metric will support the objective of optimizing system performance.

8.1.13.2 Assumptions

A customer will benefit from grid modernization investment when the planned grid modernization functionality has been installed on their circuit. For instance, if VVO is enabled on the circuit, all customers on the circuit will benefit from the investment.

8.1.13.3 Calculation Approach

This metric will track and report on the following:

Circuit number
Number of customers impacted (customers will only be counted once even if covered by multiple grid modernization investments.

8.1.13.4 Organization of Results

This information will be provided on an annual basis. Results will be based upon the results at the end of the calendar year.

8.1.13.5 Baseline

The baseline for this metric will start at zero since this will be tracking only the customers that benefit from Grid Modernization investments. A table with the type of device, circuit number where installed and number of customers benefitted will be provided to support the tracking of this metric.

8.1.13.6 Target

The baseline for this metric will be based on the ADMS deployment plan.

8.1.14 Reliability-Focused Grid Modernization Investments' Effect on Outage Durations

8.1.14.1 Objective

This metric will compare the experience of customers on circuits with the planned grid modernization investments as compared to the prior three-year average for the same circuit. This metric will provide insight into how grid modernization can reduce the duration of outages.

8.1.14.2 Assumptions

Outages and their impact are typically situational in nature. There are several project proposed with the benefit of improved reliability performance such as SCADA, AMI/OMS Integration and Mobile Damage Assessment. The circuit must have three years of SAIDI history to be included in the metric. Additionally, numerous factors, such as a Company's tree trimming cycle, weather and vehicular accidents, can impact system reliability, regardless of a Company's grid modernization investments.

8.1.14.3 Calculation Approach

This metric will track and report on the following:

- Circuit level SAIDI (CKAIDI) for circuits that have DA enabled in the GMP plan year
- Three-year average circuit level SAIDI covering the past three years

- Compare the current year circuit SAIDI with the three-year historic average SAIDI of the circuit

Formula: AVERAGE ('CKAIDI Year N'+' CKAIDI Year N-1'+' CKAIDI Year N-2') - 'CKAIDI Year N' = if greater than 0, positive impact.

8.1.14.4 Organization of Results

This information will be provided on an annual basis. Results will be based upon the results at the end of the calendar year.

8.1.14.5 Baseline

The metric will use the circuit three-year SAIDI average as the baseline. It will compare the SAIDI results of the plan year to the circuit's three-year historic average.

8.1.14.6 Target

The target for this metric is to have the current year circuit level SAIDI (CKAIDI) to be less than the average of the CKAIDI of the preceding three years.

8.1.15 Reliability-Focused Grid Modernization Investments' Effect on Outage Frequency

8.1.15.1 Objective

This metric will compare the experience of customers on circuits with the planned grid modernization investments as compared to the prior three-year average for the same circuit. This metric will provide insight into how grid modernization can reduce the duration of outages.

8.1.15.2 Assumptions

Outages and their impact are typically situational in nature. There are several project proposed with the benefit of improved reliability performance such as SCADA, AMI/OMS Integration and Mobile Damage Assessment. The circuit must have three years of SAIDI history to be included in the metric. Additionally, numerous factors, such as a Company's tree trimming cycle, weather and vehicular accidents, can impact system reliability, regardless of a Company's grid modernization investments.

8.1.15.3 Calculation Approach

This metric will track and report on the following:

- Circuit level SAIFI (CKAIFI) for circuits that have DA enabled in the GMP plan year
- Three-year average circuit level SAIFI covering the past three years
- Compare the current year circuit SAIFI with the three-year historic average SAIFI of that circuit

AVERAGE ('CKAIFI Year N'+' CKAIFI Year N-1'+' CKAIFI Year N-2') - 'CKAIFI Year N' = if greater than 0, positive impact.

8.1.15.4 Organization of Results

This information will be provided on an annual basis. Results will be based upon the results at the end of the calendar year.

8.1.15.5 Baseline

The metric will use the circuit three-year SAIFI average as the baseline for this metric. It will compare the SAIFI results of the GMP plan year to that three-year historic average.

8.1.15.6 Target

The target for this metric is to have the current year circuit level SAIFI (CKAIFI) to be less than the average of the CKAIFI of the preceding three years. At this point the plan does not call for projects designed to affect SAIFI, so this metric will be included if and when projects designed to affect SAIFI are proposed.

8.2 Infrastructure Metrics

The following infrastructure metrics are designed to measure progress towards grid modernization plan. In some cases, the Company is able to provide baseline quantities for the proposed metrics. However, in some cases the baseline is not able to be provided without the installation of specific equipment used for measurement and verification.

8.2.1 Grid Connected Distribution Generation Facilities

8.2.1.1 Objective

One of the primary objectives of grid modernization is to facilitate the interconnection of DERs and to integrate these resources into the Company's planning and operations processes. This infrastructure metric will quantify the DER units connected to the system on a circuit level and substation level basis. It is important to note that DER developer decisions regarding DER interconnection may be influenced by tax incentives, subsidies, costs, and availability of the technology, which, in turn, will influence these metrics.

8.2.1.2 Assumptions

The data used in these calculations consider units that have an executed Interconnection Service Agreement ("ISA") and are in service and connected to the distribution system.

8.2.1.3 Calculation Approach

The following data will be tracked and reported upon on a substation and circuit basis:

a. Total number by technology or fuel type – count of units by technology or fuel type
b. Nameplate capacity by technology or fuel type – sum total of nameplate capacity
c. Estimated output by technology or fuel type – sum of nameplate capacity * capacity factor * 8760 hours
d. Type of customer-owned or operated units by technology and fuel type – (i.e., count of Photo Voltaic ("PV"), wind, Combined Heat and Power ("CHP"), Fuel Cell, etc.)
e. Nameplate as a Percent of Peak Load – calculated as total nameplate capacity (MW) / peak load (MW).

8.2.1.4 Organization of Results

This information will be provided on an annual basis. Results will be based upon the results at the end of the calendar year. This metric is a study of the overall quantity and capacity of grid connected distributed generation facilities. Data will be provided in a tabular basis.

8.2.1.5 Baseline

The baseline for this metric are quantified and calculated based upon units in service by December 31, 2020.

The baseline quantities will include the following:

a. Total number by technology or fuel type – count of units by technology or fuel type
b. Nameplate capacity by technology or fuel type – sum total of nameplate capacity

c. Estimated output by technology or fuel type – sum of nameplate capacity * capacity factor * 8760 hours
d. Type of customer-owned or operated units by technology and fuel type – (i.e. count of PV, wind, CHP, Fuel Cell, etc.)
e. Nameplate as a Percent of Peak Load – calculated as total nameplate capacity (MW) / peak load (MW)

8.2.1.6 Target

UES is still evaluating the targets. These metrics are highly influenced by factors outside of the control of the Company.

8.2.2 System Automation Saturation

8.2.2.1 Objective

This metric measures the quantity of customers served by fully automated or partially automated device. The terms "fully automated" and "partially automated" refer to feeders for which the Company has attained full or partial, respectively, levels of visibility, command and control, and self-healing capability through the use of automation.

8.2.2.2 Assumptions

Baseline saturation rate will be calculated based on what exists on the system as of the December 31, 2020. Ideally over time this metric will decrease based on GMP installed devices since the metric is calculating the number of customers per device installed. As more devices are installed the metric decreases. Customers that can benefit from multiple devices will be counted as one for purposes of calculating the baseline. The installations will not be limited to the main line infrastructure and will include no-load lines and DSS lines.

8.2.2.3 Classification of Grid Modernization Devices

The following matrix has been provided as guidance to determine which type of equipment would be considered partially automated, fully automated or included as a sensor.

Device Type	Not Included	Partial Automation	Full Automation	Included as a Sensor
Feeder Breakers (No SCADA)		X		
Feeder Breakers (SCADA)			X	X
Reclosers (including sectionalizers, single phase reclosers, intellirupters, ASU) (No SCADA)		X		
Reclosers (including sectionalizers, single phase reclosers, intellirupters, ASU) (SCADA)			X	X
Feeder Meter (e.g., ION, with SCADA)				X
Capacitor and Regulator with SCADA		X		X
Capacitor and Regulator no SCADA	X			
Line Sensor (with SCADA)				X
Fault Indicator (with SCADA)				X
Other Fault Indicators (no SCADA)	X			
Customer Meter	X			
Distribution / step down Transformer	X			
Other Substation Breakers	X			
Fuse	X			

Table 23: Classification of Grid Mod Devices

8.2.2.4 Calculation Approach

As more automation is installed pursuant to the plan, the results of this metric will be reduced.

Formula:

$$\frac{\text{Customers Served on Circuit}}{\text{Fully Automated Device + 0.5*(Partially Automated Device)}}$$

8.2.2.5 Baseline

The baseline for this metric will be quantified and calculated based upon equipment in service as of December 31, 2020. Ideally over time this metric will decrease based on GMP installed devices. Customers that can benefit from multiple devices will be counted as 1. Customers that do not benefit from a grid modernization investment are counted as zero.

Calculation:

$$\frac{\text{Customers Served}}{\text{Fully Automated Device + 0.5*(Partially Automated Device)}}$$

8.2.2.6 Target

The target for this metric is still under development.

8.2.3 Number of Devices or Technologies Deployed

8.2.3.1 Objective

These metric measures how the Company is progressing with its plan from an equipment and/or device standpoint.

8.2.3.2 Assumptions

The number of devices for each investment will need to be determined and/or updated from the initial GMP. The number of devices installed will be compared to the total number of devices planned by circuit for each investment.

8.2.3.3 Calculation Approach

The following information will be tracked and reported upon per investment at the substation and circuit level where appropriate:

a. Number of devices or other technologies deployed
b. Total number of devices planned
c. Percent – Number of devices installed / total number of devices planned

8.2.3.4 Organization of Results

This information will be provided on an annual basis. Data will be based upon the results at the end of the calendar year. The metrics will be reported upon at the substation and circuit level where appropriate.

8.2.3.5 Baseline

UES has not completed the detailed design work necessary to determine the total number of devices planned for a given project. The detailed design work is underway and the baseline will be reported in the first annual filing.

a. Number of devices or other technologies deployed
b. Total number of devices planned
c. Percent – Number of devices installed / total number of devices planned

8.2.3.6 Target

The target for this metric has not been finalized as of yet.

8.2.4 Associated Cost for Deployment

8.2.4.1 Objective

This metric measures the associated costs for the number of devices or technologies installed and is designed to measure how the Company is progressing.

8.2.4.2 Assumptions

The cost of devices or technologies for each investment will need to be determined and/or updated from the initial GMP. The cost of devices installed will be compared to the total cost of devices planned by circuit for each investment.

8.2.4.3 Calculation Approach

The following information will be tracked and reported upon per investment at the substation and circuit level where appropriate:

a. Cost of devices or other technologies deployed
b. Total cost of devices planned
c. Percent – Cost of devices installed / total cost of devices planned

8.2.4.4 Organization of Results

This information will be provided on an annual basis. Results will be based upon the results at the end of the calendar year. The metrics will be reported upon at the substation and circuit level where appropriate.

8.2.4.5 Baseline

UES has not completed the detailed design work necessary to determine the total number of devices planned for a given project. The detailed design work is underway and the baseline will be reported in the first annual filing.

a. Cost of devices or other technologies deployed
b. Total cost of devices planned
c. Percent – Cost of devices installed / total cost of devices planned

8.2.4.6 Target

The target for this metric is still under development.

8.2.5 Reasons for Deviation between Actual and Planned Deployment for the Plan Year

8.2.5.1 Objective

This metric is designed to measure how the Company is progressing under its plan on a year-by-year basis.

8.2.5.2 Assumptions

The quantity and cost of devices or technology for each investment will need to be determined and/or updated from the initial plan on a year-by-year basis. The quantity and cost of devices or technology installed in a given investment year will be compared on a year-by-year basis and any variations will be quantified and addressed.

8.2.5.3 Calculation Approach

The following information will be tracked and reported upon per investment at the substation and circuit level where appropriate:

a. Number of devices or technology installed versus plan for a given year
b. Cost of devices or technologies installed versus plan for a given year
c. Reason for discrepancies

8.2.5.4 Organization of Results

This information will be provided on an annual basis. Results will be based upon the results at the end of the calendar year. The metric will be reported at the substation and circuit level where appropriate.

8.2.5.5 Baseline

The baselines required to complete the quantification and calculation for this metric will be provided.

a. Number of devices or technology installed versus plan for a given year
b. Cost of devices or technologies installed versus plan for a given year
c. Reason for discrepancies

8.2.5.6 Target

The targets required to complete the quantification and calculation for this metric will be provided.

8.2.6 Projected Deployment for the Remainder of the Three Year Term

8.2.6.1 Objective

This metric is designed to measure how the Company is progressing under its plan on a year-by-year basis. This will be used for the following year comparison of the plan versus the actual implementation completed in the following year.

8.2.6.2 Assumptions

The year-by-year investment plan is subject to change based upon the quantity of work completed, the availability of the technology, material lead times, contractor availability, etc. The revised investment plan each year will be used as the basis of comparison for the following year's work.

8.2.6.3 Calculation Approach

The following information will be tracked and reported upon per investment at the substation and circuit level where appropriate:

a. Number of devices or technology to be installed the following year
b. Cost of devices or technologies installed the following year

8.2.6.4 Organization of Results

This information will be provided on an annual basis. Results will be based upon the results at the end of the calendar

year. The metric will be reported upon at the substation and circuit level where appropriate.

8.2.6.5 Baseline

The metric will be used as the baseline and target for the following year's work and will be reported on an annual basis.

a. Number of devices or technology to be installed the following year
b. Cost of devices or technologies installed the following year

8.2.6.6 Target

The metric will be used as the baseline and target for the following year work and will be reported on an annual basis.

9 ANNUAL REPORTING

UES proposes to continue to follow the filing requirements for the LCIRP plan which is proposed to be filed every three years. The Company will continue to work with the Commission and the stakeholders to finalize the requirements of the LCIRP filing.

In addition, the Company is also proposing to file the following information on an annual basis. Annual reporting would take place on years in between the LCIRP filings.

- Most recent distribution and system level planning studies
- Distribution and system level load forecasts including a comparison of its ten year historic load with the prior year's 90/10 projection. Forecast should take into consideration DER and EVs.
- Circuit level and substation level load forecast in comparison to circuit or substation capacity limits
- Identification of capacity constraints and alternatives reviewed (NWA and traditional investments)
- NWA analysis for all projects in excess of $250,000
- A summary of stakeholder input, how stakeholder recommendations are incorporated into the final plan, or why a stakeholder recommendation was not incorporated into the final plan
- DG Interconnections by circuit and by type of prime mover
- Discussion of progress on grid modernization projects including reasons for deviation from the prior year's plan
- Performance and infrastructure metrics

10 STAKEHOLDER ENGAGEMENT

The Company's vision of advancing the grid is to develop and enabling platform that serves all customers and users of the system. Stakeholder engagement is designed to improve the overall transparency of the grid modernization planning process. Stakeholder engagement is an important aspect to determining the functionality desired in the advanced grid. This plan is a living document and will be flexible enough to adjust to the changing requirements of the system. This plan is a starting point. Stakeholder input is now required to adjust the course to provide the most benefit to the system and its customers.

UES has worked closely with the stakeholder group during the LCIRP, data sharing, locational value of DG, energy efficiency, value of solar and various other dockets. The Company proposes to use the process developed as part of the LCIRP docket as a means to solicit input and needs with respect to grid modernization investments.

UES proposes to meet with stakeholders during the development of the LCIRP plan. The goal of the stakeholder process is to allow meaningful opportunities for input on decisions affecting utility planning and related investments and lead to more uniform, more transparent, and more successful modernization of the grid and will have the benefit of reducing the amount of litigation necessary to review and approve.

UES will follow the stakeholder process that is required in conjunction with the LCIRP filing. However, if a stakeholder process is not detailed, the Company proposes to use the following process:

> Meeting 1: Pre-Planning Meeting – The goal of this meeting is for the stakeholder to provide some initial feedback to the Company prior to plan development, review of previous plan and any changes to assumptions.
>
> Meeting 2: Project Identification and Consideration – the Company presents preliminary findings as a result of the planning process. Stakeholders have the opportunity to provide input to the proposed alternatives and project priorities.
>
> Meeting 3: Project Plan – the Company presents the proposed plan and seeks any final input.

Ultimately, the Company is responsible for the safe and reliable operation of the electric distribution system at a reasonable cost. Any alternatives considered should have an equivalent capacity, reliability, availability and life span of the competing options. The Company is confident that this approach will increase the transparency of the planning process to the stakeholder group.

11 CYBER SECURITY, PRIVACY AND DATA ACCESS

UES views this planning process and the implementation of the plan as an opportunity for continued improvement of its cybersecurity program to meet its evolving security and compliance needs over the next ten years.

The following paragraphs describe the cybersecurity processes and procedures that the Company has adopted to prevent unauthorized access to control systems, operations, and data in accordance with existing and emerging best practices, national standards, and state and federal laws. These processes will be incorporated into future program capabilities as a framework for the further enhancement of the program.

11.1 Cyber Security Governance

11.1.1 Executive Oversight & Reporting

The Vice President of Information Technology and Chief Information Security Officer (CISO) who reports to the Executive leadership and has overall responsibility for cyber security at the Company oversees the current cyber security program. The CISO reports quarterly to the Executive leadership on the status of cybersecurity as well as other matters of significance in this area. The CISO has responsibility of proper reporting both internally and externally of cybersecurity events when they occur.

11.1.2 Application Owners

As per the Company's Written Information Security Plan (WISP) and current policies, system Application Owners (AOs) are responsible for working with the IT Department on any issues and technical problems including identified security issues or concerns. The Company periodically participates in Business Impact Analysis (BIA) where business units conduct tabletop exercises of various scenarios including cyber security events to determine overall risks to the organization as well as practical measures to mitigate risks of high impact and/or probability. The Company also participates in NERC's GridEx North America grid security exercise, where remediation exercises are vetted and potential gaps are identified.

11.1.3 Operating Model

The Information Technology Department has overall responsibility for cyber security. For new projects, IT is involved in the beginning of the process and is engaged to determine the best practices for implementation from a cybersecurity perspective. Cyber security will be a critical component of all GMP projects.

11.1.4 Risk Management

UES participates in annual Risk Management Exercises with senior managers and Executive staff where risks to company operations are identified. Their potential impact and likelihood are assessed. Appropriate mitigation measures are determined and implemented as appropriate in applicable areas of the organization. The IT department closely monitors resources such as E-ISAC, and Industrial Control Systems Cyber Emergency Response Team (ICS-CERT) for current cybersecurity risk identification.

11.1.5 Policy Development & Deployment

Policies and other procedural controls are implemented as the result of industry best practice, past experience, information garnered from internet sources, and research through professional organizations.

11.1.6 Standards Development & Sustainment

Standards at the Company are largely derived from published standards adapted to meet the Company's specific circumstances. Experiential knowledge, joint exercises with other entities, outside consultants, and independent research with on-line resources are the basis for most of the standards in place.

11.2 Cybersecurity Asset Management & Protection

11.2.1 Cyber Control Framework

UES maintains the WISP and related policies for the maintenance and protection of cyber assets. The WISP and related policies detail processes and procedures for the management of assets, security of systems, and maintenance of Personally Identifiable Information (PII) privacy.

11.3 Cybersecurity IT & OT Technical Controls

11.3.1 Standards & Control Implementation

The WISP details controls and standards for the securing of systems and handling of PII. Details such as password requirements, access control for PII, and protection controls for data are enumerated in the document. The WISP is supported by other polices such as Asset Management, Backup and Recovery, Change Management, and Security Administration to define the cyber security posture.

11.3.2 Security Planning & Architecture

The overall security environment is designed around the corporate network perimeter shielding or segregating the more sensitive ADMS, SCADA and control environments. Operational control networks, such as ADMS and SCADA are isolated.

11.3.3 Intrusion & Threat Detection

The Company employs Intrusion Detection and other threat detection tools within its network environments. Systems and networks are monitored for anomalous events with automatic notifications to appropriate personnel. The Company also completes penetration tests to evaluate the security of its network and modifies security protocols when risks are identified.

11.3.4 Incident & Event Management

The WISP details the response plan for the investigation and subsequent reporting in the event of a suspected security breach.

11.3.5 Vulnerability Assessment

The Company actively assesses cyber security vulnerabilities with internal and external expertise. Assessment methods include external penetration tests, compliance review against standards, industry collaboration, and monitoring of online resources. The Company evaluates vulnerabilities for their potential impact to the Company and prioritizes for remediation through additional technical, operational, or physical controls.

11.4 Readiness Verification

11.4.1 Program Capability Assessment

UES reviews its cyber security program against published industry standards to assess maturity level and to identify weaknesses or areas for improvement.

11.4.2 Compliance Assessment

UES participates in NERC Critical Infrastructure Protection (CIP) audits for its divisions. To date, no violations, no potential violations, and no recommendations have been received. The Company assesses NERC CIP compliance against all GMP activities. The Company engages an outside entity for Payment Card Industry (PCI) compliance and testing activities.

11.5 Incident / Event Investigations

The Manager, Cyber Security and Compliance is responsible for conducting the investigation of suspected breaches at the Company.

11.6 Risk and Threat Management and Reporting

11.6.1 Assessment & Ranking of Threats & Risks

Threat information from outside sources and log activity is evaluated for its potential impact to the Company. Threats are prioritized for remediation through additional technical, operational, or physical controls.

11.6.2 Compliance Reporting

Unitil has established processes for the reporting of incidents related to NERC CIP and/or PCI compliance.

11.6.3 Report Compilation

Report compilation for the data security and privacy events is the responsibility of the Manager, Cyber Security and Compliance. The Manager, Cyber Security and Compliance acts as custodian of compliance reports according to the Company's data retention policy.

12 Summary

The traditional grid as we know it has developed over the past 100 years based upon the individual design characteristics and customer needs. This has been a methodical approach providing our customers with safe and

reliable electric service at a reasonable cost. Technology innovation and customer's desire to take control of their own energy usages is changing this paradigm.

As customers adopt new technologies, and as distributed energy resources are increasingly connected to the distribution system, the fundamental architecture of the electricity delivery system (the "grid") must change. The 20th Century electric grid, originally designed to distribute power from large centralized generating plants, must now integrate a wide array of distributed load, storage and generation resources. A grid that was designed for "one way" power flow must now accommodate two-way power flow, increasing the need for sophisticated protection, communication, metering, and intelligence. The grid must also provide opportunities for customers to understand and actively participate in energy markets to enhance efficient utilization and consumption of electricity, while delivering improved reliability and power quality.

This plan represents "foundational" grid modernization investments. This plan describes the Company's vision of the advanced grid as and enabling platform that allows and encourages new and different use cases. These use cases cannot be supported without some technology building blocks that will provide the ability for increased grid intelligence and data sharing. The foundational grid modernization investments proposed in this plan address the objectives of 1) Environmentally Friendly, 2) Safety and Reliability, 3) Customer Service, 4) Security, 5) Flexibility, 6) Affordability, 7) Demand and Asset Optimization and 8) Technology Innovation.

The projects identified in this plan are "foundational" grid modernization projects. The table below summaries the projects and the spending plan over the next 10 years.

Projects	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Field Area Network	$ 90	$ 56	$ 127	$ 626	$ 325	$ 463	$ 780	$ 811	$ 640	$ 704	$ 4,622
ADMS and DERMS	$ 668	$ 468	$ 378	$ 298	$ 170	$ -	$ -	$ -	$ -	$ -	$ 1,981
Volt/VAR Optimization	$ -	$ 383	$ 2,000	$ 2,929	$ 2,731	$ 2,862	$ 2,880	$ 3,416	$ 3,488	$ 4,292	$ 24,981
SCADA	$ -	$ 1,530	$ 1,740	$ 760	$ 790	$ 250	$ 340	$ 420	$ 550	$ 760	$ 7,140
Mobile Damage Assessment	$ 449	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 449
AMI/OMS Integration	$ 107	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 107
Data Sharing Platform	$ 449	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 449
Total	$1,763	$2,437	$4,245	$4,612	$4,016	$3,575	$4,000	$4,647	$4,678	$5,756	$ 39,729

Table 24: Foundational Grid Modernization Investments

This plan is a starting point of a long journey towards an advanced grid that provides customers with the ability to maximize the benefits of their investments. It defines some critical foundational grid modernization investments that are required to develop the grid into an enabling platform. Metrics, annual reporting and stakeholder engagement processes have been proposed to provide transparency in grid modernization planning. This plan is not designed to take the place of the LCIRP process. Instead the Company recognizes that LCIRP is designed to identify the geographical investments focused on alleviating locational constraints of the system. However, these foundational investments are required to maximize the value of the geographical investments.

APPENDIX A

MAPPING CATEGORIES AND PROJECTS/FUNCTIONALITIES TO OBJECTIVES

Category	Project/Functionality	Existing / Planned	Safety and Reliability	Customer Enablement	Security	Flexibility	Affordability	Demand and Asset Optimization	Technical Innovation	Environmentally Friendly
Grid Intelligence	Advanced Distribution Management System (ADMS)	Planned	X	X	X	X	X	X	X	X
	Distributed Energy Resources Management System (DERMS)	Planned	X	X	X	X	X	X	X	X
	Outage Management System (OMS)	Existing	X	X					X	
	Supervisory Control and Data Acquisition (SCADA)	Existing	X	X	X	X	X	X	X	X
	Volt/Var Optimization	Planned	X	X		X	X	X	X	X
	OMS/AMI Integration	Planned	X	X					X	
	Advanced Field Communications (FAN/WAN)	Planned	X	X	X	X	X	X	X	X
Advanced Metering	Advanced Metering Infrastructure (AMI)	Existing		X		X	X	X	X	X
	Interval Metering	Existing		X		X	X	X	X	X
	Meter Data Mangement System	Existing		X		X	X	X	X	X
Distributed Energy Resources	Generator Interconnections	Existing	X	X		X	X	X	X	X
	Solar Way 1.3MW	Existing	X					X		X
	Townsend Energy Storage	Planned	X	X		X	X	X	X	X
	Smart Inverters	Planned	X	X		X	X	X	X	X
	Electric Vehicles	Planned	X	X		X	X	X	X	X
	Demand Response Program	Existing	X	X		X	X	X	X	X
	Energy Efficiency	Existing	X	X		X	X	X	X	X
Advaced System Planning and Forecasting	Geospatial Information System	Existing	X			X			X	
	DER Forecasting	Existing	X	X		X	X	X	X	X
	Electrification Forecasting (EV and Heat Pumps)	Existing	X	X		X	X	X	X	X
	Hosting Capacity Analysis	Planned	X	X		X	X	X	X	X
	Locational Value Analysis	Planned	X	X		X	X	X	X	X
Enhanced Customer Servcies	Digitizing Core Services	Planned		X		X	X		X	
	Optimizing the Customer Life Cycle	Planned		X		X	X		X	
	Extending the Value-Add	Planned		X		X	X	X	X	X
	Providing Total Energy Solution	Planned		X		X	X	X	X	X
Innovative Rate Design	Residential/Business TOU	Planned	X	X			X	X	X	X
	EV TOU	Planned	X	X			X	X	X	X
	Distributed Energy Resources	Planned	X	X			X	X	X	X
	Behind the Meter Partnerships	Planned	X	X			X	X	X	X
	Make Ready Programs	Planned	X	X			X	X	X	X

APPENDIX B

Advanced Distribution Management System

Distributed Energy Resource Management System

Project Description

Advanced Distribution Management System

Project Description

December 22, 2020

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1 Introduction

As part of the Company's Grid Modernization Plan for Fitchburg Gas and Electric, Unitil is in the process of implementing an Advanced Distribution Management System (ADMS) throughout its electric service territory in Massachusetts (FG&E). Given the nature of the systems and its integration with other systems Unitil has elected to implement ADMS for its New Hampshire service territories (UES) as well. The level and schedule of deployment will differ in FG&E and UES.

An ADMS is the next step in the evolution of distribution management systems. An ADMS integrates a comprehensive set of monitoring, analysis, control, planning, and informational tools that work together with one common network model. An ADMS merges existing OMS, ADMS, unbalanced load, short circuit analysis and SCADA systems together to provide a real-time view of the distribution system.

An ADMS system can provide many different functions such as (but not limited to) self-healing automation, control for distributed energy resources, additional SCADA functions across the distribution system, real-time load flow and circuit analysis, demand response, outage restoration, direct load control and network configuration. Additionally the Company's ADMS will utilize "real-time" unbalanced load flow calculation results to automatically control distribution equipment for VVO.

2 ADMS Request for Proposal Process

Throughout 2019 Unitil developed and issued a Request for Proposal (RFP) to five qualified bidders. After a multi-step evaluation process Unitil partnered with ABB/Siena to update its existing OMS to an ADMS.

For additional information on the RFP process including the evaluation of proposals reference the Company's Advanced Distribution Management System – Recommendation for Award document.

3 Initial Corporate ADMS Deployment

Unitil's initial ADMS deployment will require new and enhanced integrations to various Unitil systems and the additional modelling of the Company's electric system in ABB's Network Manager system (ABB's ADMS platform). This will require Unitil to design and build a new secure IT network for the ADMS platform. Once complete the Company's entire electric system will be modelled in ADMS and capable of utilizing the ADMS functions described below.

ADMS Functionalities

3.1.1 Unbalanced Loadflow

The ADMS will have the ability to perform unbalanced loadflow simulations on the Unitil distribution system. Loadflow simulations will be automatically run by ADMS on a circuit by circuit basis after system changes are made or a predefined time after the previous simulations were performed for circuits that have SCADA telemetry data available in ADMS. Circuit without real-time SCADA information will have the ability to be run at an ad hoc basis utilizing user defined load levels. Simulations will also have the ability to be run manually by ADMS operators/users.

The loadflow models will have the ability to be run using current load levels as well as historical and future anticipated load levels. Loadflow results will "flag" potential voltage and loading violations as well as recommend switching steps that could be performed to mitigate the identified violations.

The loadflow models will also be utilized as the basis for many of the capabilities described below.

3.1.2 VVO

Unitil's Corporate ADMS deployment will include the integrations and testing necessary to be "VVO ready". This will include the deployment of VVO on select circuits in the FG&E territory to confirm VVO operates as designed. Remaining VVO deployment will be included in DOC specific VVO deployment projects.

Unitil is planning to deploy model based VVO algorithms with measurement verification. ADMS will automatically control LTCs, regulators and capacitor banks based on "real-time" unbalanced loadflow results to operate the system at the lower end of the acceptable voltage range to reduce electric demand and energy consumption. The Company's ADMS is capable of performing measurement based VVO algorithms when the necessary field data becomes available.

3.1.3 Fault Location

The ADMS will have the ability to perform fault location calculations based on the status of remote devices and sensors. The system will also have the ability to utilize fault current and target information from relays (either automatically provided via SCADA or that is manually entered by a system operator) and perform short circuit calculations to estimate fault location(s) with and without the status of other devices.

3.1.4 Automatic Restoration Schemes and FLISR

Unitil's Corporate ADMS deployment will include the migration of existing distribution automation schemes to ADMS. This will allow existing schemes to be enhanced and in some cases be utilized more often and to provide additional reliability benefit. It will also give Unitil to the experience of implementing automation schemes in ADMS and allow Unitil to confirm the functionality of automatic restoration schemes in ADMS.

ADMS integration of new automatic restoration schemes will be included in DOC specific projects.

ADMS will also monitor SCADA device status and recommend system switching to restore as much load as possible prior to repairs being made.

3.1.5 System Monitoring/Alarming

ADMS will perform "real-time" monitoring of the Company's subtransmission, substation and distribution systems. ADMS will alarm and provide recommended courses of actions for the following:

- Loading above predefined thresholds
- Voltages above or below predefined thresholds
- Power factor outside of predefined thresholds
- Operation of system devices

3.1.6 Switch Order Module

ADMS will be utilized as the Company's switching order management system. It will have the ability to create switching orders in a test/simulation environment by the user mimicking the proposed switching. Users will also have the ability to manually add steps to switching orders that may not be directly executable in ADMS.

ADMS will have a method for routing the switching orders to necessary parties for approval and once approved the switching orders shall be available in the "live" ADMS environment for execution.

Additionally, ADMS will have the ability to recommend switching (utilizing both remote control and manually controlled devices) based on the following:

- Fault location data and calculations to restore as many customers as possible during an outage situation.
- Future planned equipment to be out of service.
- Contingency analysis following planned or unplanned outages.

Unitil plans to require operator intervention for most ADMS switching functionality. ADMS will have the configurability to allow the user to step through and execute each switching step independently or execute portions or the entire switch order at once.

3.1.7 System Power Factor Management

Unitil plans to utilize ADMS to manage overall system (transmission tie point) power factor for compliance with ISO-NE load power factor requirements. This management will require ADMS to monitor system power factor and recommend capacitor switching (automatically switch in the future) of substation and subtransmission capacitor banks to maintain a system power factor that is compliant with ISO-NE requirements. In the event the necessary system power factor cannot be achieved with subtransmission and substation capacitor banks the system power factor management shall override VVO and utilize distribution capacitor banks as needed.

The system will be capable of managing different power factor requirements for FG&E and UES.

3.1.8 Manual Load Shed

Unitil plans to utilize ADMS to manage the Company's ISO-NE manual load shed process. This management requires ADMS to monitor system and circuit loads and recommend circuits to de-energize based on real-time loading to meet a specified percent of system load to shed. This functionality will also take into account critical loads. For simulated load shed tests the system will report the "pre-load shed" system load as well as the anticipated "post-load shed" system load. In the event an actual load shed event is needed the user will be able to run the simulation, confirm results, create the switching order and then transfer the switching order to the "live" environment for execution.

The system will be capable of managing different load shed requirements for FG&E and UES.

3.1.9 Simulation Mode

The ADMS will have the ability to run all functionalities in "simulation" mode within the "production" environment and have the ability to run "what if" scenarios at past and future load levels.

Scenarios evaluated in simulation mode will have the ability to be routed and approved if necessary and be transferred out of simulation mode for future execution by an operator in the "live" ADMS environment.

3.1.10 Test/Training Environment

ADMS will have two discreet environments one for "production" and one for "testing/training". ADMS will have the ability to run all functionalities in the "test/training" environment. This environment is intended to be used when training employees on the use of ADMS, testing new functionalities of ADMS prior implementing in the "production" environment and during company-wide electric storm drills.

The "test/training" environment will be separate from the ADMS "production" environment such that any changes or scenarios implemented in the "test/training" environment will not be transferrable to the "production" environment.

The "test/training" environment will have the ability to be pre-loaded with historical and fictional scenarios to simulate day-to-day operation or major storm scenarios.

3.1.11 ADMS Data Archiving

The ADMS will have the capability to archive system and device statuses for future evaluation and use. At the minimum the following archiving requirements are required:

- System loads, system power factor, equipment loading and device status at pre-determined time intervals (e.g. every hour)
- The data and time a device changes state
- Switching orders with the time stamp for each step
- Ability to save simulations / "what-if" scenarios

ADMS Integrations

In order to perform all the required functionality of ADMS integrations with the following systems will need to be enhanced or created.

3.1.12 GIS

The existing integration between GIS and OMS will be enhanced to provide ADMS with the necessary circuit topology, connectivity information and technical data (equipment rating, impedances, etc.) required to perform unbalanced loadflow and circuit analysis.

This will require the population of technical data and modifications to how many types of equipment are modelled in GIS as well as enhancements to the GIS to OMS/ADMS conversion process. This will also require the detailed modelling of substation and subtransmission equipment in GIS.

This will also require Siena to develop a symmetrical component calculation algorithm that will utilize GIS technical data (conductor impedance data and construction configuration) and line segment length to calculate and assign sequence impedances to line segments for use in short circuit analysis.

Additionally, due to the "real-time" nature of ADMS Unitil will need to develop new internal workflows to allow GIS to be updated as system modifications are placed in service and not lag behind equipment being installed in the field.

3.1.13 SCADA

When Unitil awarded the ADMS project to ABB it was planned that the Company's existing ACS SCADA master would be integrated with ADMS utilizing an ICCP interface.

Early in the ADMS implementation process it become apparent that integrating the existing ACS SCADA master with ADMS would create usability concerns, future maintenance challenges and additional ongoing costs. After careful consideration and evaluation it was determined that Unitil will transition from its current ACS SCADA master to the ABB SCADA master.

This transition will include the establishment of the ABB SCADA historian that will archive SCADA data. Siena will also create customized SCADA reports that will allow for the simplified querying of SCADA data and provide it in a format that is easily usable by Unitil personal.

Additional information regarding the decision to transition to the ABB SCADA master can be found in the Company's Advanced Distribution Management System – Recommendation to Transition to ABB SCADA.

As was the case with GIS, Unitil will need to develop new internal workflows to allow SCADA to be updated as system modifications are placed in service and not lag behind equipment being installed in the field.

3.1.14 Net Meter Photovoltaic Output Estimation

Unitil will be developing a method for ADMS to estimate the "real-time" output of net metered photovoltaic (PV) generation output. This will be done by determining a calculated relationship/factor between "large-scale" PV that has real-time SCADA telemetry and net metered PV.

Siena will utilize this relationship/factor to develop an algorithm that will assign "real-time" generation output to net metered PV utilizing large DG SCADA telemetry and nameplate DG capacity.

3.1.15 Metering System(s)

Unitil will be developing a new integration between the Company's metering system and ADMS. This integration will provide ADMS metering information for each customer on the system that will be utilized along with SCADA information to calculate assumed "real-time" customer consumption and generation output.

Additional information on this integration can be found in the Company's Electric Customer Profiles for ADMS – SOW.

3.1.16 Siena Reports

Siena has developed several custom reports to allow Unitil to easily query reliability data from OMS. These reports will be updated to allow for the querying of SCADA historian and ADMS information.

Due to the secure IT network the existing Siena Reports will only be accessible from the secure IT network. To provide non-ADMS users with necessary outage data new "dashboards" and automated reports will be created that can be accessed via the Corporate IT network.

Many other OMS system integrations will be modified as needed to achieve the necessary ADMS IT secure network requirements.

Schedule

Unitil's ADMS deployment and system integration improvements began in early 2020. This initial Corporate ADMS deployment, including the functionalities described in section 3.1 above is expected to be completed by the end of 2023 with FG&E scheduled to be complete by the end of 2022 and UES being complete by the end of 2023.

Deployment of VVO and the transition to ABB SCADA (with the exception of the substations/circuits to confirm VVO functionality) are included in DOC specific VVO and SCADA projects.

4 Future Corporate ADMS Deployment

In addition to the ADMS functionalities and integrations described above in section 3 Unitil is proposing the following ADMS "enhancements" that are outside the scope of the current Corporate ADMS deployment project.

Distributed Energy Resource Management System (DERMS)

While not part of the initial implementation of ADMS it is Unitil intention to implement a DERMS in the future. The Company's vision is to utilize ADMS/DERMS to manage and control multiple DER facilities and other infrastructure (electric vehicle charging stations, load curtailment, etc.) including both company owned and customer owned facilities. DERMS will provide the information and control necessary to effectively manage the technical challenges posed by a more complex grid. The DERMS system provides the utility the ability manage the impact of DER and operate the system more efficiently.

DERMS is an integral module of the ABB ADMS that Unitil is in the process of implementing. After the initial Corporate ADMS deployment it is the Company's intention to purchase and activate the DERMS license and integrate systems and data as needed for deployment.

Unitil will require significantly more visibility and control of the DERs that will participate in the DERMS program including real-time invertor status, real and reactive power output, and voltage information. In the cases of energy storage Unitil will also need real-time information on available storage and dispatch control over the energy storage facility. It is the Company's vision that these will be integrated via the Company's SCADA/ADMS.

Initially Unitil plans to utilize DERMS to manage real and reactive power needs, but the system will have the capability to perform voltage management and be integrated into the VVO algorithm.

With the exception of the two Unitil owed DER facilities (one PV facility, one Battery Storage facility) Unitil does not have a proposed timeframe for controlling other DER facilities. It is the Company's intent to deploy DERMS on these two Unitil owned DER facilities and any additional Unitil DER facilities (unknown at this time) on-line at the time of DERMS deployment to confirm DERMS operates as expected. Once complete it is Unitil expectation that DERMS will be available to control non-Unitil owned DER.

Unitil currently plans to start deploying DERMS in 2024 after the initial Corporate ADMS deployment is complete. It is expected to take two years to implement DERMS and integrate with Unitil owned DER facilities.

4.1.1 Distribution State Estimation

Although Unitil does not have plans to implement distribution state estimation, the ABB DERMS module has the ability to perform distribution state estimation that includes look ahead load, generation and DER output forecasting. In the event there is a need to implement distribution state estimation in the future "day before" hourly historical consumption data from all (or nearly all) customers on the Unitil system will be required.

Model Exporting to Other Systems

Unitil plans to contract Siena to develop an export engine to allow for the export of ADMS models, including circuit topology and connectivity and customer load and generation data that can be easily imported in circuit analysis software. This will greatly improve the Company's ability to plan its distribution system at various load levels.

Unitil currently plans to begin this effort in 2023 during the final year of the initial Corporate ADMS deployment. It is expected that this effort will take approximately eighteen months to complete.

Heat Map and Host Capacity Mapping

Unitil believes that it could be possible to utilize ADMS to create heat maps and host capacity maps that display constrained areas of the system as well as areas that could support additional DER penetration. This will

require significant additional review and scoping, but with ADMS containing the most update circuit modelling information it could be the ideal platform to utilize for "real-time" maps generated historical or future load levels. These maps could be published similar to the Company's outage map(s) and be updated at predefined intervals (daily, weekly, etc.)

It is the Company's intent to investigate the feasibility of utilizing ADMS to create these maps and if deemed feasible will scope and evaluate the project in detail for potential implementation in 2024 with a possible completion in 2025.

5 Future Considerations and Challenges

Some of the significant challenges that could impact the Company's ADMS performance in the future are listed below. At this time Unitil does not know if or when modifications will be required to address these challenges or what the scope of the improvements will need to be.

Customer Metering Information

Unitil's current AMI system does not have the capability to provide "real-time" customer metering information. Unitil currently plans to utilize a relationship it is developing between large scale PV with "real-time" SCADA telemetry and small scale PV without "real-time" metering information to establish an assumed "real-time" PV output. As energy storage is deployed at existing sites or new sites "real-time" metering information of the energy storage could be integral to maintaining accurate ADMS models.

Additionally, as DER penetration increases there could be a need to switch from the model based VVO algorithm to a measurement based VVO algorithm. The Company's ADMS has the ability to do this, but will require "real-time", "interval" customer voltage measurements, which the Company's current AMI system is not capable of.

GIS Utility Network Model

It is anticipated that the Company's GIS model will transition to the Utility Network Model within the next several years. Although it is unknown at this time what impact this will have, it is anticipated that ABB will need to make upgrades to the ADMS platform, Siena will need to make changes to the GIS/ADMS import engine and Unitil will need to make changes its GIS model.

6 Additional DOC Deployment

Additional VVO, SCADA and DERMS deployment beyond the locations being utilized to confirm he performance of ADMS functionality described in this document will be include in DOC specific projects and not the Corporate ADMS deployment project(s).

APPENDIX C

Benefit Cost Analysis

		20 Year NPV				15 Year NPV			
Row	Projects	NPV Benefits (000's)	NPV Capital Costs (000's)	NPV O&M Costs (000's)	B/C Ratio	NPV Benefits (000's)	NPV Capital Costs (000's)	NPV O&M Costs (000's)	B/C Ratio
1	Field Area Network	$0	$2,541	$586	-	$0	$2,541	$430	-
2	ADMS and DERMS	$0	$1,855	$543	-	$0	$1,855	$451	-
3	Volt/VAR Optimization	$21,841	$14,985	$0	1.46	$16,500	$14,985	$0	1.10
4	SCADA	$9,040	$4,816	$0	1.88	$6,806	$4,816	$0	1.41
5	Mobile Damage Assessment	$8,412	$385	$281	12.63	$7,221	$385	$237	11.61
6	AMI/OMS Integration	$1,445	$92	$64	9.26	$1,241	$92	$54	8.50
7	Data Sharing Platform	$0	$385	$329	-	$0	$385	$278	-
8									
9	Totals	$ 40,739	$ 25,059	$ 1,804	1.52	$31,768	$25,059	$1,450	1.20
10									
11	Summary	10 Year	15 Year	20 Year					
12	Total Benefits	$31,909	$67,367	$103,002					
13	Total Capital Costs	$34,323	$43,332	$43,332					
14	Total O&M Costs	$1,557	$2,913	$4,320					
15									
16	Discount Rate	8.0%							

	Project Benefits (000's)																				
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Total
Projects	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Benefits
Field Area Network	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
ADMS and DERMS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Volt/VAR Optimization	$ -	$ -	$ 186	$ 875	$ 1,320	$ 1,795	$ 2,207	$ 2,584	$ 3,051	$ 3,501	$ 4,243	$ 4,243	$ 4,243	$ 4,243	$ 4,243	$ 4,243	$ 4,243	$ 4,243	$ 4,243	$ 4,243	$ 57,954
SCADA	$ -	$ -	$ 182	$ 359	$ 536	$ 713	$ 890	$ 1,067	$ 1,244	$ 1,421	$ 1,598	$ 1,775	$ 1,775	$ 1,775	$ 1,775	$ 1,775	$ 1,775	$ 1,775	$ 1,775	$ 1,775	$ 23,987
Mobile Damage Assessment	$ -	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 946	$ 17,973
AMI/OMS Integration	$ -	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 163	$ 3,088
Data Sharing Platform	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Totals	$ -	$ 1,109	$ 1,477	$ 2,342	$ 2,965	$ 3,616	$ 4,205	$ 4,759	$ 5,404	$ 6,031	$ 6,950	$ 7,127	$ 7,127	$ 7,127	$ 7,127	$ 7,127	$ 7,127	$ 7,127	$ 7,127	$ 7,127	$ 103,002

	Project Capital Costs (000's)																				
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Total
Projects	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Costs
Field Area Network	$ -	$ 90	$ 56	$ 127	$ 626	$ 325	$ 463	$ 780	$ 811	$ 640	$ 704	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,622
ADMS and DERMS	$ 350	$ 668	$ 468	$ 378	$ 298	$ 170	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,331
Volt/VAR Optimization	$ -	$ -	$ 383	$ 2,000	$ 2,929	$ 2,731	$ 2,862	$ 2,880	$ 3,416	$ 3,488	$ 4,292	$ 2,783	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 27,764
SCADA	$ -	$ -	$ 1,530	$ 1,740	$ 760	$ 790	$ 250	$ 340	$ 420	$ 550	$ 760	$ 470	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,610
Mobile Damage Assessment	$ -	$ 449	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 449
AMI/OMS Integration	$ -	$ 107	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 107
Data Sharing Platform	$ -	$ 449	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 449
Totals	$ 350	$ 1,763	$ 2,437	$ 4,245	$ 4,612	$ 4,016	$ 3,575	$ 4,000	$ 4,647	$ 4,678	$ 5,756	$ 3,253	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 43,332

	Project O&M Costs (000's)																				
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Total
Projects	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Costs
Field Area Network	$ -	$ -	$ -	$ 4	$ 23	$ 32	$ 47	$ 71	$ 94	$ 106	$ 124	$ 124	$ 124	$ 124	$ 124	$ 124	$ 124	$ 124	$ 124	$ 124	$ 1,617
ADMS and DERMS	$ 44	$ 46	$ 47	$ 48	$ 50	$ 51	$ 53	$ 55	$ 56	$ 58	$ 60	$ 61	$ 63	$ 65	$ 67	$ 69	$ 71	$ 73	$ 75	$ 78	$ 1,191
Volt/VAR Optimization	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
SCADA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mobile Damage Assessment	$ -	$ -	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 35	$ 630
AMI/OMS Integration	$ -	$ -	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 144
Data Sharing Platform	$ -	$ -	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 41	$ 738
Totals	$ 44	$ 46	$ 131	$ 136	$ 157	$ 168	$ 183	$ 209	$ 235	$ 248	$ 268	$ 269	$ 271	$ 273	$ 275	$ 277	$ 279	$ 281	$ 284	$ 286	$ 4,320