

2018 Avoided Energy Supply Cost Study Impacts

New Hampshire EERS Benefit-Cost Working Group

April 11, 2018

New Hampshire Public Utilities Commission



SAVE THE PLANET, SAVE @ HOME.

SAVE ENERGY AT HOME. HELP PROTECT YOUR FAMILY'S FUTURE.



SAVE ENERGY. SAVE @ MUNICIPALITIES.

SAVE ENERGY AND USE THE EXTRA RESOURCES TO IMPROVE YOUR TOWN'S ROADS.

2018 AESC Background

- Prepared every three years. NH participated in the 2015 AESC Interim Update.
 - Developed through the AESC Study Group
 - Six New England States including PAs, Consultants, Regulators, Stakeholders
- Final Report delivered on March 30
 - Provides avoided costs for electricity, natural gas, fossil fuels, and wood.
 - State (or sub-state) results
- Intended to be used for 2019 – 2021.
 - Option for interim update
- Each state decides how to apply the results

Avoided Energy Supply Components in New England: 2018 Report

Prepared for AESC 2018 Study Group

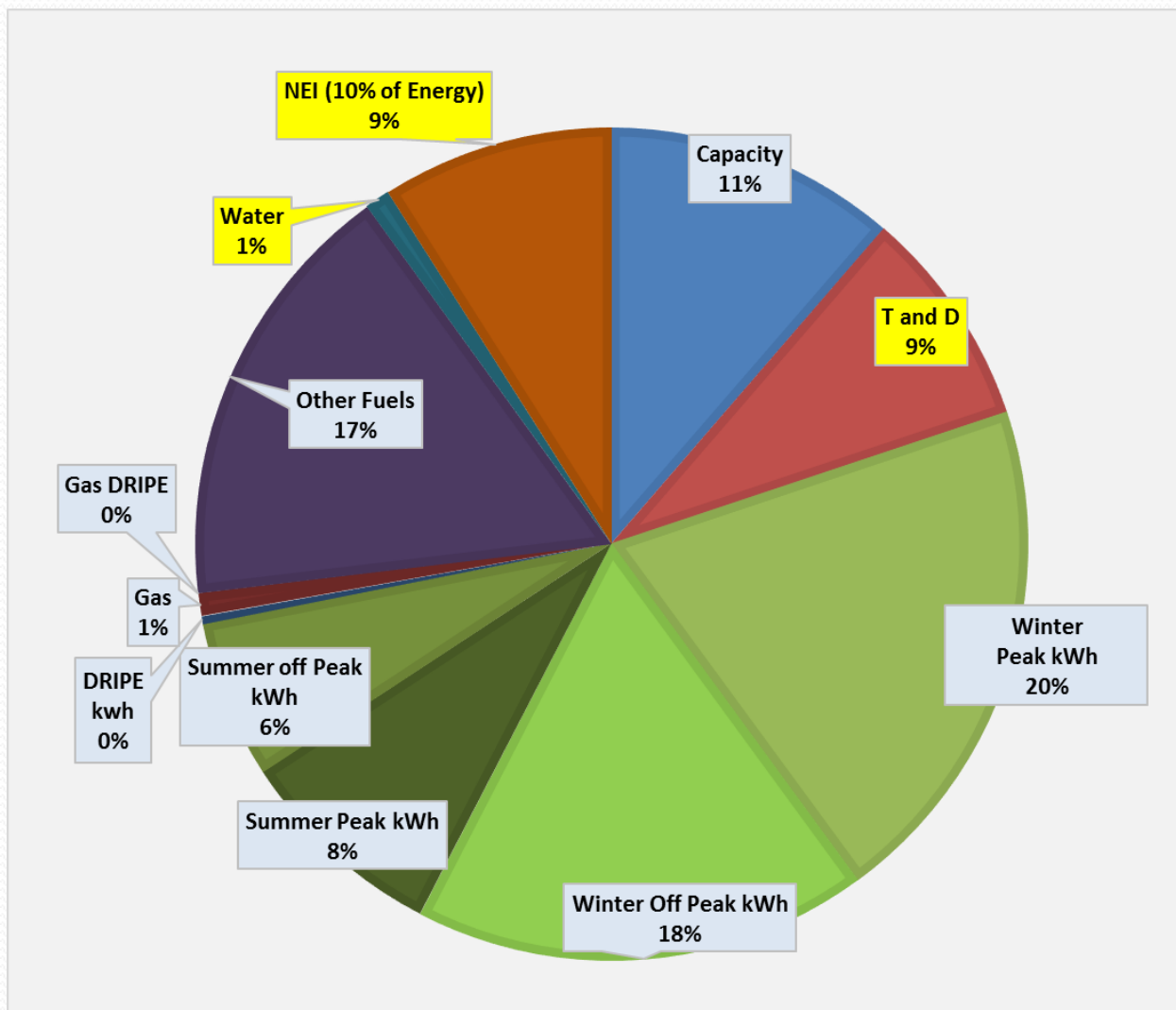
March 30, 2018

Main NH Findings (for 2019)

- **50 Percent Decrease in Electric Capacity Costs.***
- **16 Percent Decrease in Electric Energy Costs.***
- **Small Oil Decrease (5.9%) and Large Propane Increase (61%) = No significant Change for Fossil Fuel overall.**
- **8% (+/-) Decrease in Natural Gas (Northern New England)**
- **Significant Increases in DRIPE (natural gas and electric), but these are relatively small benefits.**
- **New PTF, Reliability, Capacity DRIPE (non-zero), Oil DRIPE.**
- **8760 Hourly Tool (potential to screen DR).**

* These values differ from tables presented in the 2018 AESC Executive Summary which were based on 15 year levelized values for the WCMA reporting zone.

2019 Electric Portfolio based on 2015 AESC Update



Non- AESC (19%)

AESC Value (81%)

Example Based on Eversource 2019 Electric Plan. Percentages may vary based on program, utility, and year.

2018 AESC Results, Electric

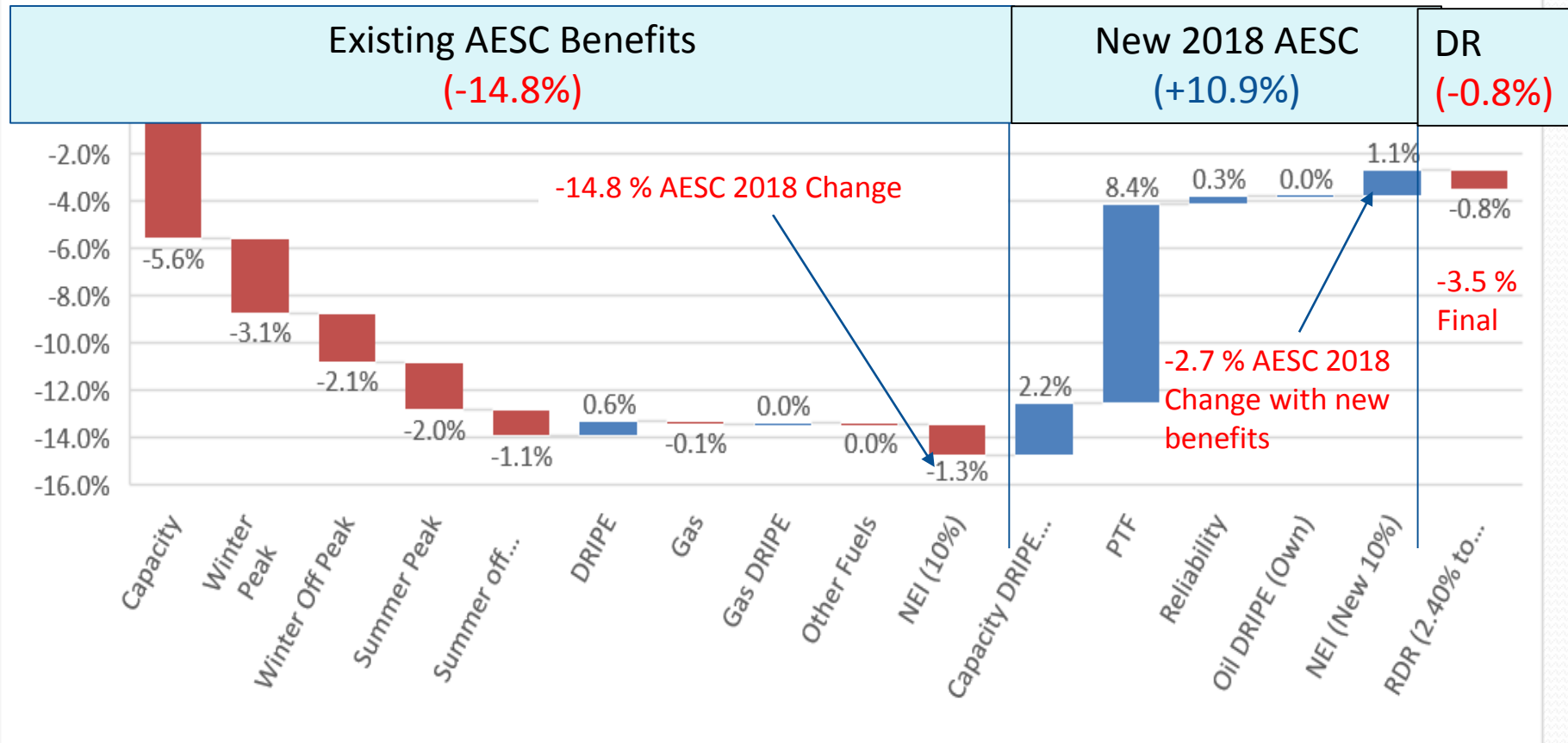
Impact of AESC and Discount Rate Change - Based on the 2019 Eversource Electric Plan

	a	b	c = a - b	d = c / b	e = c / \$126,069	
Benefit	2019 Eversource (2015 AESC Update) (\$000)	2019 Eversource (2018 AESC) (\$000)	Change in Benefit (\$000)	% Change	Overall Percent Change	
Capacity	\$14,290	\$7,210	-\$7,080	-49.5%	-5.6%	
Transmission	\$2,131	\$2,131	na	na	na	
Distribution	\$8,636	\$8,636	na	na	na	
Winter Peak	\$25,280	\$21,321	-\$3,958	-15.7%	-3.1%	
Winter Off Peak	\$22,279	\$19,672	-\$2,606	-11.7%	-2.1%	
Summer Peak	\$10,303	\$7,742	-\$2,561	-24.9%	-2.0%	
Summer off Peak	\$7,768	\$6,362	-\$1,406	-18.1%	-1.1%	
DRIPe	\$378	\$1,176	\$797	210.7%	0.6%	
Gas	\$1,104	\$988	-\$115	-10.4%	-0.1%	
Gas DRIPe	\$6	\$27	\$21	374.7%	0.0%	
Other Fuels	\$21,314	\$21,284	-\$30	-0.1%	0.0%	
Water	\$1,231	\$1,231	na	na	na	
2018 AESC (current)	\$114,720	\$97,781	-\$16,939	-14.8%	-13.4%	
NEI (10% of Energy)	\$11,349	\$9,655	-\$1,694	-14.9%	-1.3%	
TOTAL	\$126,069	\$107,435	-\$18,633	-14.8%	-14.8%	
Capacity DRIPe (Own)	\$0	\$2,765	\$2,765	na	2.2%	
PTF	\$0	\$10,590	\$10,590	na	8.4%	
Reliability	\$0	\$439	\$439	na	0.3%	
Oil DRIPe (Own)	\$0	\$5	\$5	na	0.0%	
New AESC Components	\$0	\$13,798	\$13,798	na	10.9%	
Additional NEI (10% of new 2018)	\$0	\$1,380	\$1,380	na	1.1%	
AESC Total Impact	\$126,069	\$122,614	-\$3,455	-2.7%	-2.7%	
RDR (2.40% to 2.49%)		\$121,627	-\$987	-0.8%	-0.8%	
TOTAL	\$126,069	\$121,627	-\$4,442	-3.5%	-3.5%	

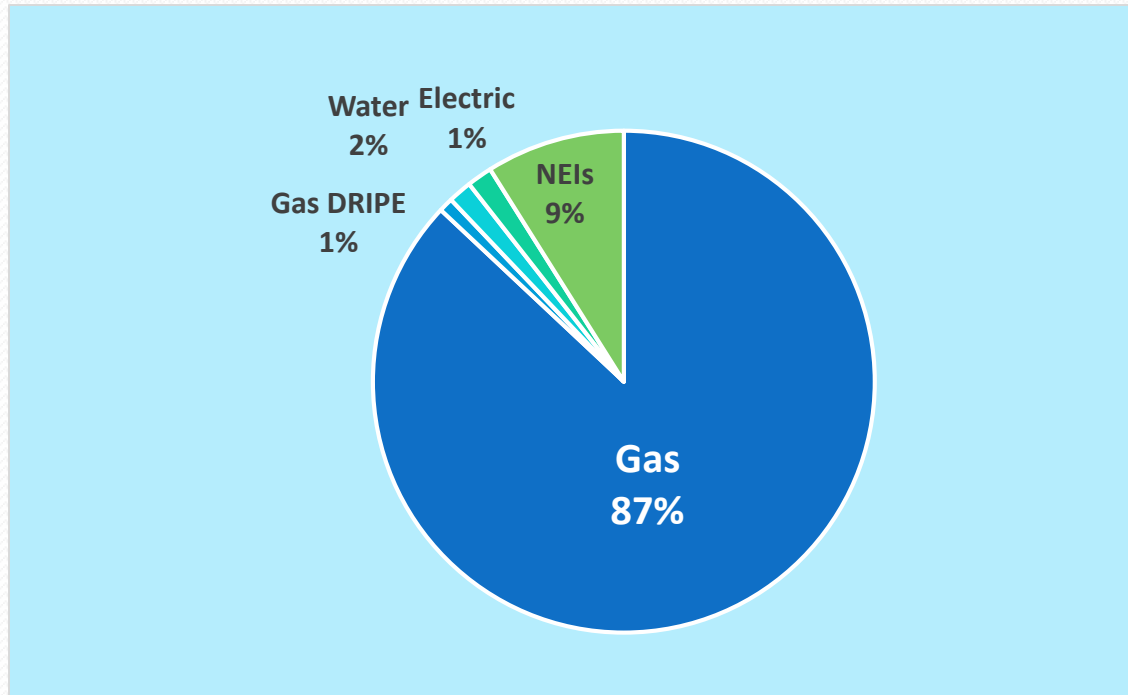
Note: Based on Eversource 2019 Electric Plan for example purposes. Other Utility values may vary and results will vary based on measure mix and life, program, etc. Results subject to final review and application of 2018 AESC results, and changes to the RDR.

2018 AESC Results, Electric

Cumulative Percent Change



2019 Gas Portfolio based on 2015 AESC Update



Based on Liberty 2019 Natural Gas Plan. Percentages will vary based on program, year, utility, etc.

2018 AESC Results, Natural Gas

Type of Benefit	Current (2015 AESC Update) (\$000)	2018 AESC (\$000)	Change (\$000)	Percent Change	Percent Change Overall
Winter Peak kwh	\$127	\$104	(\$23)	-17.9%	-0.1%
Winter Off Peak kWh	\$127	\$106	(\$20)	-16.1%	-0.1%
Summer Peak	\$8	\$6	(\$2)	-21.0%	0.0%
Summer off Peak	\$10	\$8	(\$1)	-13.4%	0.0%
Electric DRIPE	\$1	\$2	\$1	37.3%	0.0%
Gas	\$14,712	\$13,372	(\$1,340)	-9.1%	-7.9%
Gas DRIPE	\$110	\$543	\$432	391.7%	2.6%
Water	\$270	\$270	\$0	0.0%	0.0%
NEI (10%)	\$1,510	\$1,414	(\$95)	-6.3%	-0.6%
TOTAL AESC Change	\$16,875	\$15,827	(\$1,048)	-6.2%	-6.2%
Discount Rate Adjustment		\$15,699	(\$128)	na	-0.8%
TOTAL with Discoun Rate Adjustment	\$16,875	\$15,699	(\$1,176)		-7.0%

Note: Based Liberty 2019 Natural Gas Plan for example purposes. Program percent changes ranged from approximately -3% to -11% (portfolio average change is -6.8%). Other Utility values may vary. Results subject to final review and application of 2018 AESC results, and changes in the RDR.

Questions??

