NH Energy Efficiency Resource Standard

(Rate Structures Discussion)

September 16, 2015

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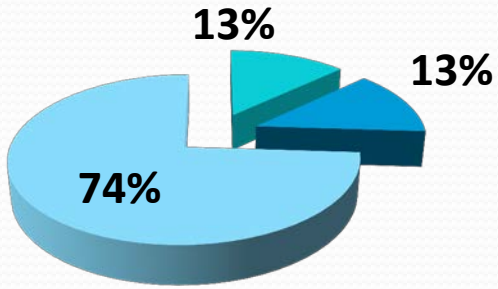
Today's Discussion

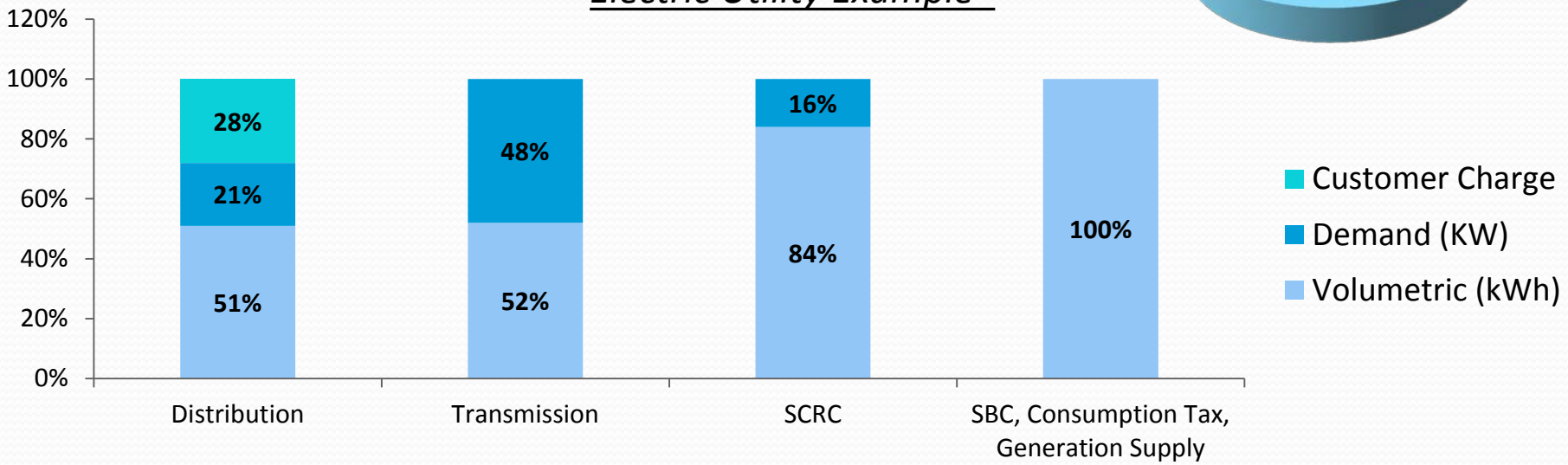
- Provide an overview of NH utilities' rate structures
- Identify relationships between rates and energy efficiency programs
- Discuss options to support increased energy efficiency funding and address associated sales and revenue impacts

NH Utility Rate Structures

- Rates for NH utilities are unbundled into separate service components
- The rate structure of each component typically consists of one or more of the following charge types:
  - Customer Charge ($ per month)
  - Demand Charge (e.g., $ per kW, kVA or Ccf)
  - Volumetric Charge (e.g., ¢ per kWh or Ccf)



*Electric Utility Example**



* Eversource Energy July 2015 Rates

Each Rate Class Has Its Own Structure…

Residential Customer Billing Example *

Delivery Services Detail	**RATE R RESIDENTIAL SVC**	
Customer Chrg		$12.50
KWH Distribution Chrg	700.00KWH x $0.040790	$28.55
Transmission Chrg	700.00KWH x $0.017860	$12.50
Strnded Cst Recovery Chrg	700.00KWH x $0.001220	$0.85
System Benefits Chrg	700.00KWH x $0.003300	$2.31
Subtotal		$56.71
Electricity Supply Detail	**RATE R ENERGY SERVICE**	
Energy Chrg - Rate R	700.00KWH x $0.105600	$73.92
Subtotal		$73.92
Taxes		
Electricity Consumption Tax (calculated by rate $0.00055/kWh)		$0.39
Total Taxes		$0.39

Customer Charge

kWh Charges

* Source: Eversource Energy

General Service Customer Billing Example *

Delivery Services Detail	RATE G GENERAL SERVICE			
Customer Chrg 3-Phase				$29.30
KW Distrib Chrg, Over 5.0	15.00KW	x	$8.590000	$128.85
KW Transmission Chrg, Over 5.0	15.00KW	x	$4.610000	$69.15
KW Strnd Cst Recovery Chrg	15.00KW	x	$0.130000	$1.95
Distribution Chrg	500.00KWH	x	$0.068810	$34.41
	1000.00KWH	x	$0.017040	$17.04
	5500.00KWH	x	$0.006030	$33.17
Transmission Chrg	500.00KWH	x	$0.016630	$8.32
	1000.00KWH	x	$0.006260	$6.26
	5500.00KWH	x	$0.003360	$18.48
Strnded Cst Recovery Chrg	7000.00KWH	x	$0.000780	$5.46
System Benefits Chrg	7000.00KWH	x	$0.003300	$23.10
Subtotal				$375.49
Electricity Supply Detail	**RATE G ENERGY SERVICE**			
Energy Chrg - Rate G	7000.00KWH	x	$0.105600	$739.20
Subtotal				$739.20
Taxes				
Electricity Consumption Tax (calculated by rate $0.00055/kWh)				$3.85
Total Taxes				**$3.85**

Customer Charge

kW Charges

kWh Charges

* Source: Eversource Energy

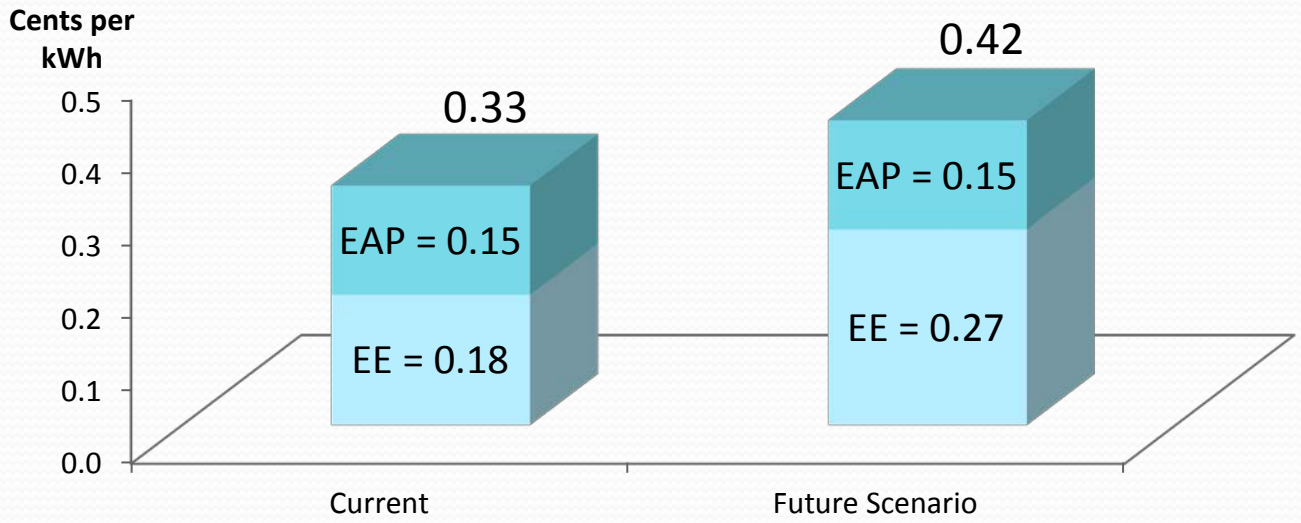
Rate Design and Cost Recovery

- Rates are designed to recover a utility's revenue requirement or expense
- Rates may be set on a "pass through" basis (e.g., energy service) or at levels set by statute or regulation (e.g., consumption tax, SBC)
- Actual consumption determines the level of revenue realized
- Differences between actual and projected revenues and costs may be reconciled through approved mechanisms (e.g., stranded cost recovery, transmission, energy service)
- Distribution rates are established through a rate proceeding conducted by the Commission, and may be partially adjusted by approved, targeted reconciliation mechanisms. Several years can pass between distribution rate proceedings
- When considering increases to energy efficiency savings targets, both the need for funding and the impact of reduced sales on Distribution rates and revenue need to be addressed

Funding EE Expansion

The SBC (electric) and LDAC (gas) provide essential funding for current EE programs and can readily accommodate funding to support EE program expansion

Illustration: 50% Increase in SBC to Fund EE



Residential Customer
- Current bill = $131.02
- Incremental SBC charge = $ 0.63
- ~ 0.5 % increase

General Service Customer
- Current bill = $1,118.54
- Incremental SBC charge = $6.30
- ~ 0.6 % increase

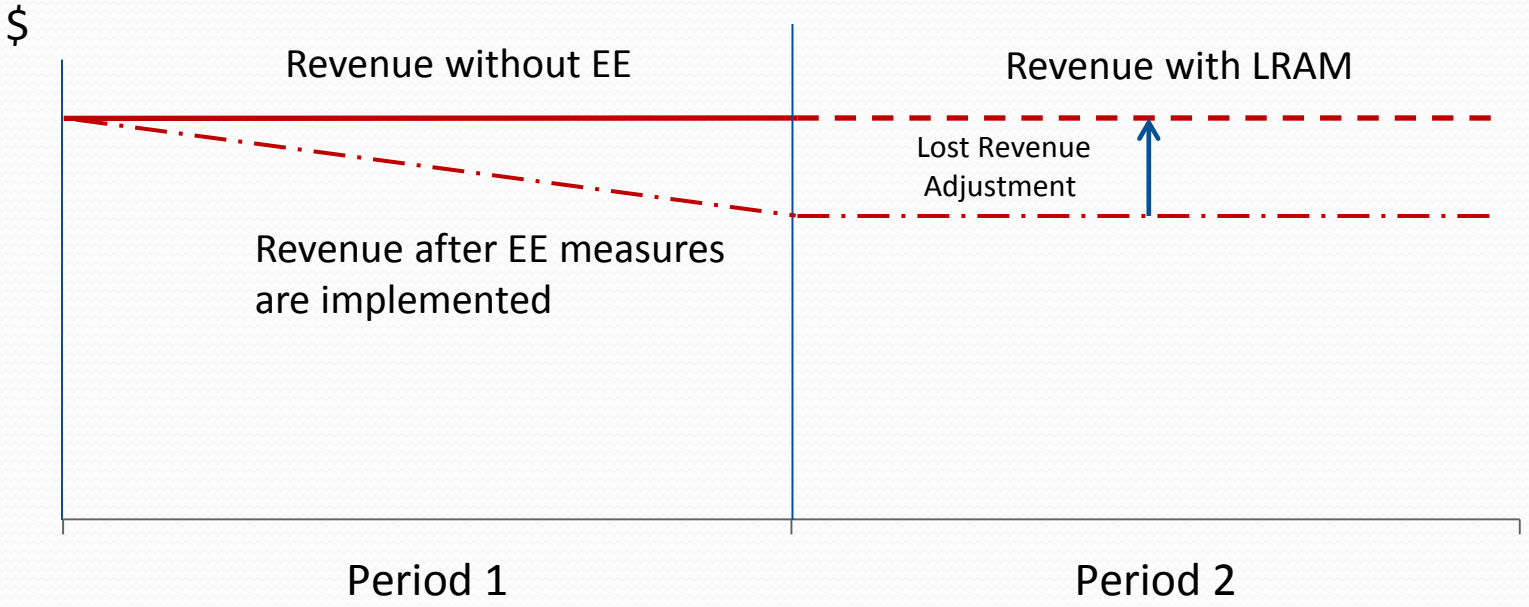
Addressing the Impact of EE Savings on Utility Distribution Rates

- Distribution rates are designed to recover the revenue requirement associated with the operation and maintenance of the distribution system, reliability improvements and upgrades, and other costs of providing distribution service
- While the impacts on rates of increased energy efficiency for most components of service are addressed through existing reconciliation mechanisms, this is not the case for distribution rates
- The impact of EE savings on distribution sales and revenue may be addressed in a number of ways. Techniques to reduce, or "decouple" the reliance of revenue on sales are common, and include:
  - Rate redesign (e.g., increased customer charges)
  - A lost revenue adjustment mechanism (LRAM) to recover lost base revenue (LBR) (e.g., "CAM" or "EERF")
  - A revenue or revenue per customer decoupling mechanism

Lost Revenue Adjustment Mechanism

- An LRAM is a formula rate mechanism that provides a *transparent* way of calculating LBR *directly* associated with *actual* energy efficiency savings achieved
- An LRAM can be applied on a uniform basis to all customers or can be designed to apply to specific groups of customers (e.g., residential vs. non-residential)
- The rate for recovery of LBR under an LRAM can be readily included in the existing mechanism for funding (i.e., as part of the SBC or LDAC)

Lost Revenue Adjustment Mechanism



Illustrated LRAM Rate and Bill Impact

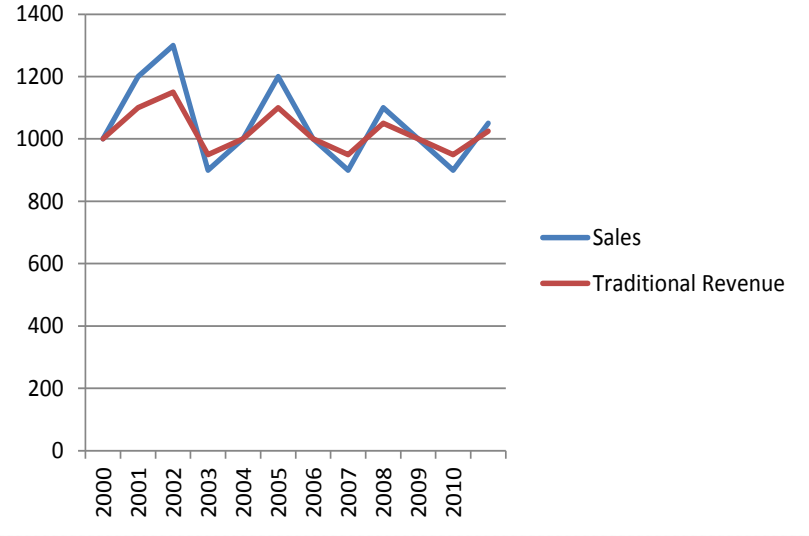
LRAM = **$.00013**/kWh (= $1,000,000 / 8,000,000,000 kWh)

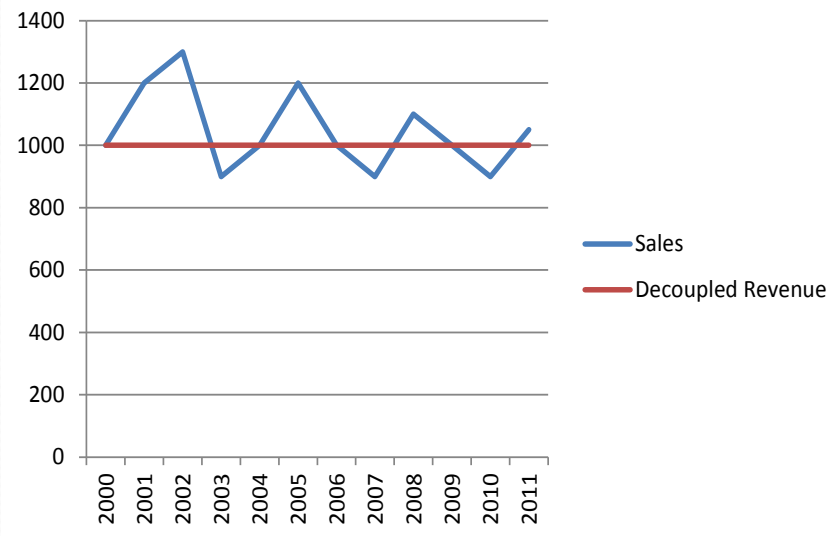
Residential = **$0.09** (700 kWh x $0.00013)
Business = **$0.91 (**7,000 kWh x $0.00013)

Revenue Decoupling Mechanism

A revenue decoupling mechanism provides a rate adjustment to true up actual revenue against a baseline revenue level

- Credit to customers for actual revenue > baseline revenue
- Charge to customers for actual revenue < baseline revenue





Revenue Decoupling Mechanism

- Many variations
- Indirect and less transparent with respect to energy efficiency impacts
- Requires a rate case to establish revenue requirement and other criteria by which revenue baseline and adjustments are determined

Recommended Approach for New Hampshire

Implement a Lost Revenue Recovery Mechanism (LRAM)

- Can readily facilitate increasing EE savings targets at whatever pace and extent determined
  - A rate case is required for other forms of decoupling
- Addresses the loss in Distribution revenue specifically associated with energy efficiency savings
- Provides regulatory efficiency that is beneficial to the Commission's staff, stakeholders and the utilities

Recover Increased Energy Efficiency Program Funding and Lost Revenue Through the LDAC and SBC Rate Components