

NH Energy Efficiency Resource Standard

(Targets Discussion)

August 13, 2015



SAVE MONEY. SAVE @ WORK.

NHSAVES HELPS YOU SAVE AT WORK, SO YOU CAN FOCUS ON YOUR NEXT BIG IDEA.



SAVE THE PLANET. SAVE @ HOME.

SAVE ENERGY AT HOME AND DO MORE WITH THAT EXTRA CASH. PLANT THE GARDEN YOU'VE ALWAYS WANTED.

Guidance From Commission's Order of Notice

- ❖ Establish an EERS – a policy to establish specific targets or goals for energy savings that utilities must meet in New Hampshire
- ❖ Requires electric and/or natural gas utilities to achieve, within short- and long-term time frames, energy-type-specific levels of customer energy savings (efficiency goals)
- ❖ Based on sales volumes for the baseline year of 2014

Long-Term Targets

Set long-term vision/target: *Ultimate objective of attaining all achievable, cost-effective energy efficiency over time*

- ❖ Long-term vision as a guidepost
- ❖ Signal to the marketplace - energy efficiency is part of a sustained, long-term strategy
- ❖ Actual long-term target could be set, if necessary, based on an updated NH Potential Study completed during the 1st Energy Efficiency Plan cycle completed under the EERS (targets based on delivery sales volumes for 2014)
 - Ten-year horizon (2017 – 2027)
 - Statewide electric kWh savings target – electric utilities combined
 - Statewide natural gas MMBtu savings target – natural gas utilities combined
 - Each utility contributes to the statewide target based on the unique characteristics of its customer/member base

Short-Term Targets

Set short-term targets: *Based on demonstrated performance and the level of funding available with the objective of attaining all achievable, cost-effective energy efficiency over time*

- ❖ Specific, measured savings targets within an appropriate planning horizon
- ❖ Statewide electric kWh savings target – electric utilities combined
- ❖ Statewide natural gas MMBtu savings target – natural gas utilities combined
- ❖ Each utility contributes to the statewide target (individual utility targets)
- ❖ Targets based on delivery sales volumes for 2014
- ❖ MMBtu savings from other fuels incorporated in Program Plans and reported in the form of benefits
- ❖ Three-Year Plan (2017 – 2019) – Meets ACEEE guidelines
- ❖ Must strike balance between:
 - All achievable, cost-effective energy efficiency that can be attained during the period
 - Capability of the program delivery channel network to support increased activity
 - Bill impacts resulting from increased energy efficiency

Electric – Illustrative Annual Program Cost*

Actual 2014 Statewide Program Statistics

Annual Cost to Achieve (\$/kWh) = \$0.42

% Savings to Delivery Sales = 0.62%

MWH Delivery Sales = 10,770,751

MWH Savings = 66,646

Total Expenditures = \$28.25 M

Illustrative Program Cost Under Each Requested Savings Scenario

% Savings of 2014 Delivery Sales	Annual Savings (MWH)	Total Annual Program Cost (\$M)		2016 CORE Funding (\$M)	Shortfall in Program Funding (\$M)	
		Low (\$0.39)	High (\$0.45)		Low (\$0.39)	High (\$0.45)
1.0%	107,708	\$42.01	\$48.47	\$25.64	\$16.37	\$22.83
1.6%	172,332	\$67.21	\$77.55	\$25.64	\$41.57	\$51.91
2.0%	215,415	\$84.01	\$96.94	\$25.64	\$58.38	\$71.30
2.6%	280,040	\$109.22	\$126.02	\$25.64	\$83.58	\$100.38

* Illustrative purposes only. Future program costs may be different than those stated above.

Electric – Residential Illustrative Bill Impact*

(625 kWh/month)

Preliminary calculation. For discussion purposes – 8/13/15 technical session

Current Annual Bill Amount (EE SBC): \$13.56

% Savings of 2014 Delivery Sales	Incremental Rate Impact per kWh		Incremental Annual \$ Increase		Total Annual Bill % Increase	
	Low (\$0.39)	High (\$0.45)	Low (\$0.39)	High (\$0.45)	Low (\$0.39)	High (\$0.45)
1.0%	\$0.00152	\$0.00212	\$11.40	\$15.90	0.9%	1.2%
1.6%	\$0.00386	\$0.00482	\$28.95	\$36.15	2.2%	2.7%
2.0%	\$0.00542	\$0.00662	\$40.65	\$49.65	3.1%	3.7%
2.6%	\$0.00776	\$0.00932	\$58.20	\$69.90	4.4%	5.3%

* Illustrative purposes only. Based on Eversource's residential rate effective July 1, 2015.

Electric – Small Business Illustrative Bill Impact*

(40 kW & 10,000 kWh/month)

Preliminary calculation. For discussion purposes – 8/13/15 technical session

Current Annual Bill Amount (EE SBC): \$216.00

% Savings of 2014 Delivery Sales	Incremental Rate Impact per kWh		Incremental Annual \$ Increase		Total Annual Bill % Increase	
	Low (\$0.39)	High (\$0.45)	Low (\$0.39)	High (\$0.45)	Low (\$0.39)	High (\$0.45)
1.0%	\$0.00152	\$0.00212	\$182.40	\$254.40	0.9%	1.3%
1.6%	\$0.00386	\$0.00482	\$463.20	\$578.40	2.4%	3.0%
2.0%	\$0.00542	\$0.00662	\$650.40	\$794.40	3.3%	4.1%
2.6%	\$0.00776	\$0.00932	\$931.20	\$1118.40	4.8%	5.8%

* Illustrative purposes only. Based on Eversource's Rate G effective July 1, 2015.

Electric - Illustrative Large Business Bill Impact*

(1,000 kW & 200,000 kWh/month)

Preliminary calculation. For discussion purposes – 8/13/15 technical session

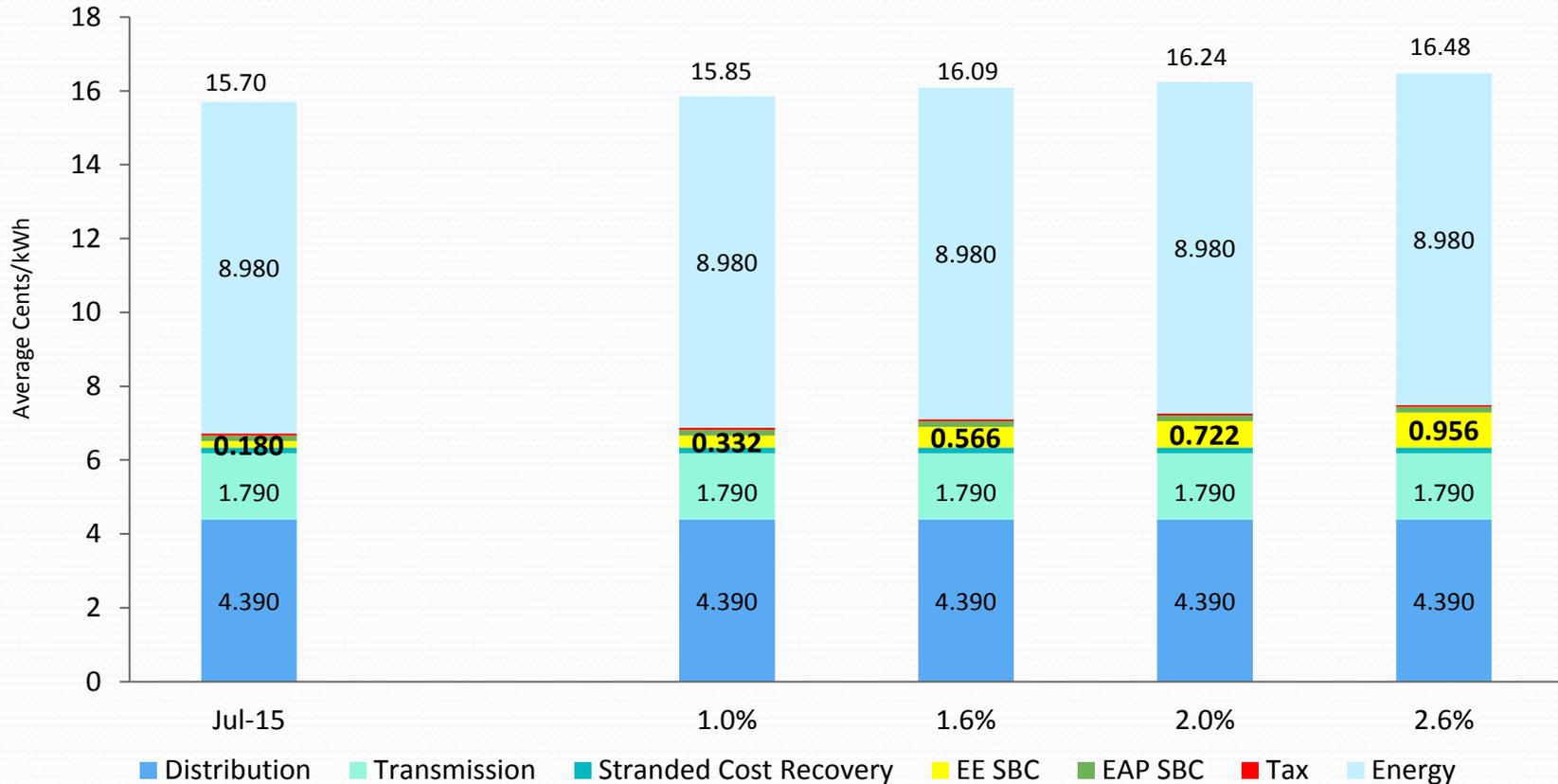
Current Annual Bill Amount (EE SBC): \$2,160

% Savings of 2014 Delivery Sales	Incremental Rate Impact per kWh		Incremental Annual \$ Increase		Total Annual Bill % Increase	
	Low (\$0.39)	High (\$0.45)	Low (\$0.39)	High (\$0.45)	Low (\$0.39)	High (\$0.45)
1.0%	\$0.00152	\$0.00212	\$3,648	\$5,088	0.9%	1.3%
1.6%	\$0.00386	\$0.00482	\$9,264	\$11,568	2.4%	2.9%
2.0%	\$0.00542	\$0.00662	\$13,008	\$15,888	3.3%	4.1%
2.6%	\$0.00776	\$0.00932	\$18,624	\$22,368	4.7%	5.7%

* Illustrative purposes only. Based on Eversource's Rate GV effective July 1, 2015.

Electric – Average Retail Pricing Illustrative Impact* (Based on Low Scenario)

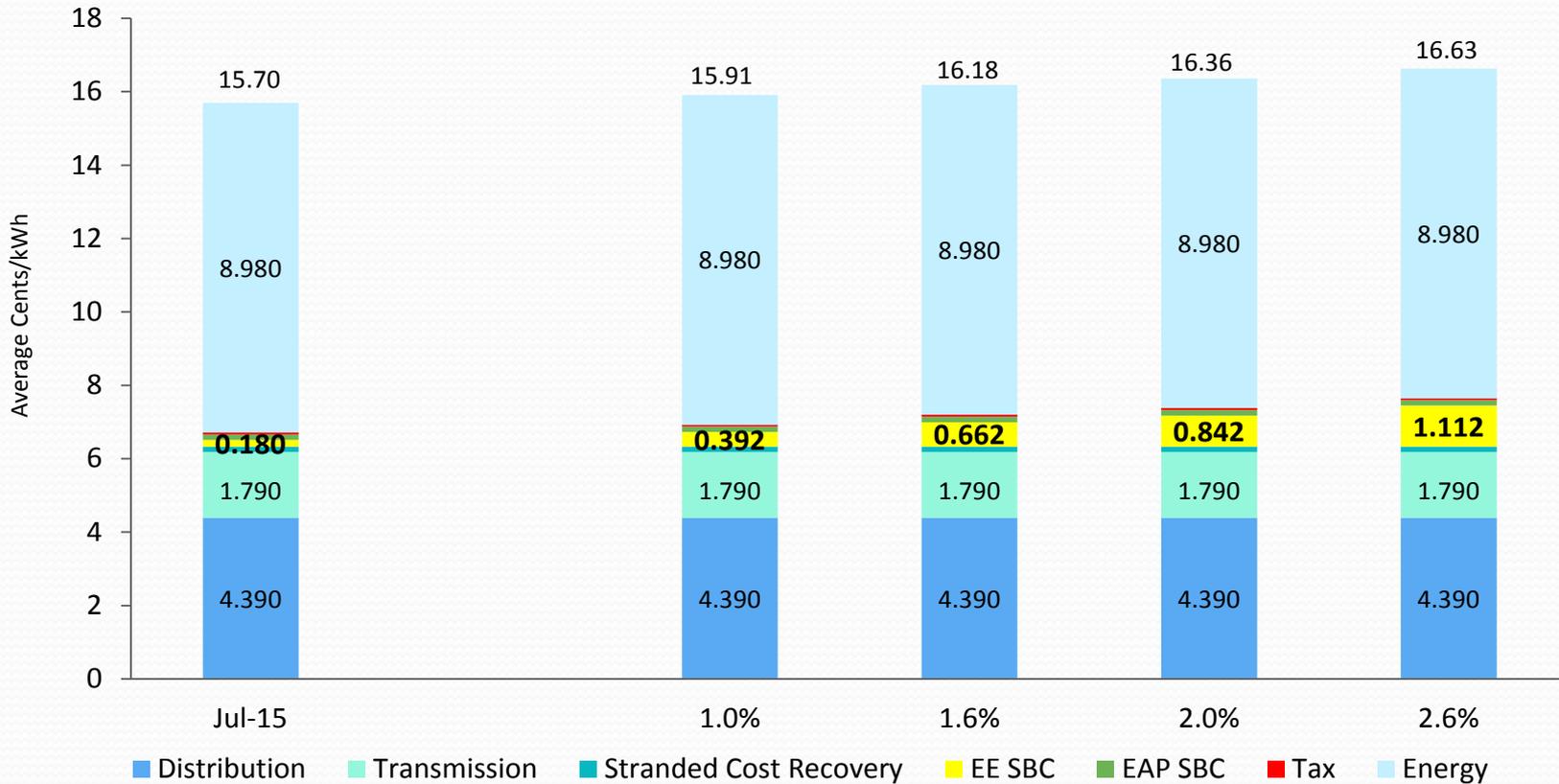
Preliminary calculation. For discussion purposes – 8/13/15 technical session



* Illustrative purposes only. Based on Eversource’s overall average retail pricing effective July 1, 2015.

Electric – Average Retail Pricing Illustrative Impact* (Based on High Scenario)

Preliminary calculation. For discussion purposes – 8/13/15 technical session



* Illustrative purposes only. Based on Eversource’s overall average retail pricing effective July 1, 2015.

Natural Gas – Illustrative Annual Program Cost*

Actual 2014 Statewide Program Statistics

Annual Cost to Achieve (\$/therm) = \$4.76
% Savings to Delivery Sales = 0.62%
Therm Delivery Sales = 239,208,728
Therm Savings = 1,483,582
Total Expenditures = \$7.06 M

Illustrative Program Cost Under Various Savings Scenarios

% Savings of 2014 Delivery Sales	Annual Savings (Therms)	Total Annual Program Cost (\$M)		2016 CORE Funding (\$M)	Shortfall in Program Funding (\$M)	
		Low (\$4.50)	High (\$5.86)		Low (\$4.50)	High (\$5.86)
0.7%	1,674,461	\$7.54	\$9.81	\$7.46	\$0.07	\$2.35
0.8%	1,913,670	\$8.61	\$11.21	\$7.46	\$1.15	\$3.75
0.9%	2,152,879	\$9.69	\$12.62	\$7.46	\$2.22	\$5.15
1.0%	2,392,087	\$10.76	\$14.02	\$7.46	\$3.30	\$6.56

* Illustrative purposes only. Future program costs may be different than those stated above.

Natural Gas – Residential Illustrative Bill Impact* (65 therms/month)

Preliminary calculation. For discussion purposes – 8/13/15 technical session.

Current Annual Bill Amount (EE): \$43.54

% Savings of 2014 Delivery Sales	Incremental Rate Impact per Therm		Incremental Annual \$ Increase		Total Annual Bill % Increase	
	Low (\$4.50)	High (\$5.86)	Low (\$4.50)	High (\$5.86)	Low (\$4.50)	High (\$5.86)
0.7%	\$0.00030	\$0.00982	\$0.24	\$7.66	0.0%	0.7%
0.8%	\$0.00480	\$0.01568	\$3.75	\$12.23	0.3%	1.1%
0.9%	\$0.00930	\$0.02154	\$7.26	\$16.80	0.6%	1.4%
1.0%	\$0.01380	\$0.02740	\$10.77	\$21.37	0.9%	1.8%

* Illustrative purposes only. Based on a weighted average of Liberty Utilities and Unitil's EE LDAC energy efficiency charge effective July 1, 2015.

Natural Gas – Small Business Illustrative Bill Impact* (298 therms/month)

Preliminary calculation. For discussion purposes – 8/13/15 technical session.

Current Annual Bill Amount (EE): \$140.90

% Savings of 2014 Delivery Sales	Incremental Rate Impact per Therm		Incremental Annual \$ Increase		Total Annual Bill % Increase	
	Low (\$4.50)	High (\$5.86)	Low (\$4.50)	High (\$5.86)	Low (\$4.50)	High (\$5.86)
0.7%	\$0.00030	\$0.00982	\$1.09	\$35.13	0.0%	0.8%
0.8%	\$0.00480	\$0.01568	\$17.18	\$56.08	0.4%	1.2%
0.9%	\$0.00930	\$0.02154	\$33.27	\$77.04	0.7%	1.7%
1.0%	\$0.01380	\$0.02740	\$49.36	\$98.00	1.1%	2.1%

* Illustrative purposes only. Based on a weighted average of Liberty Utilities and Unitil's EE LDAC energy efficiency charge effective July 1, 2015.

Natural Gas – Large Business Illustrative Bill Impact* (18,309 therms/month)

Preliminary calculation. For discussion purposes – 8/13/15 technical session.

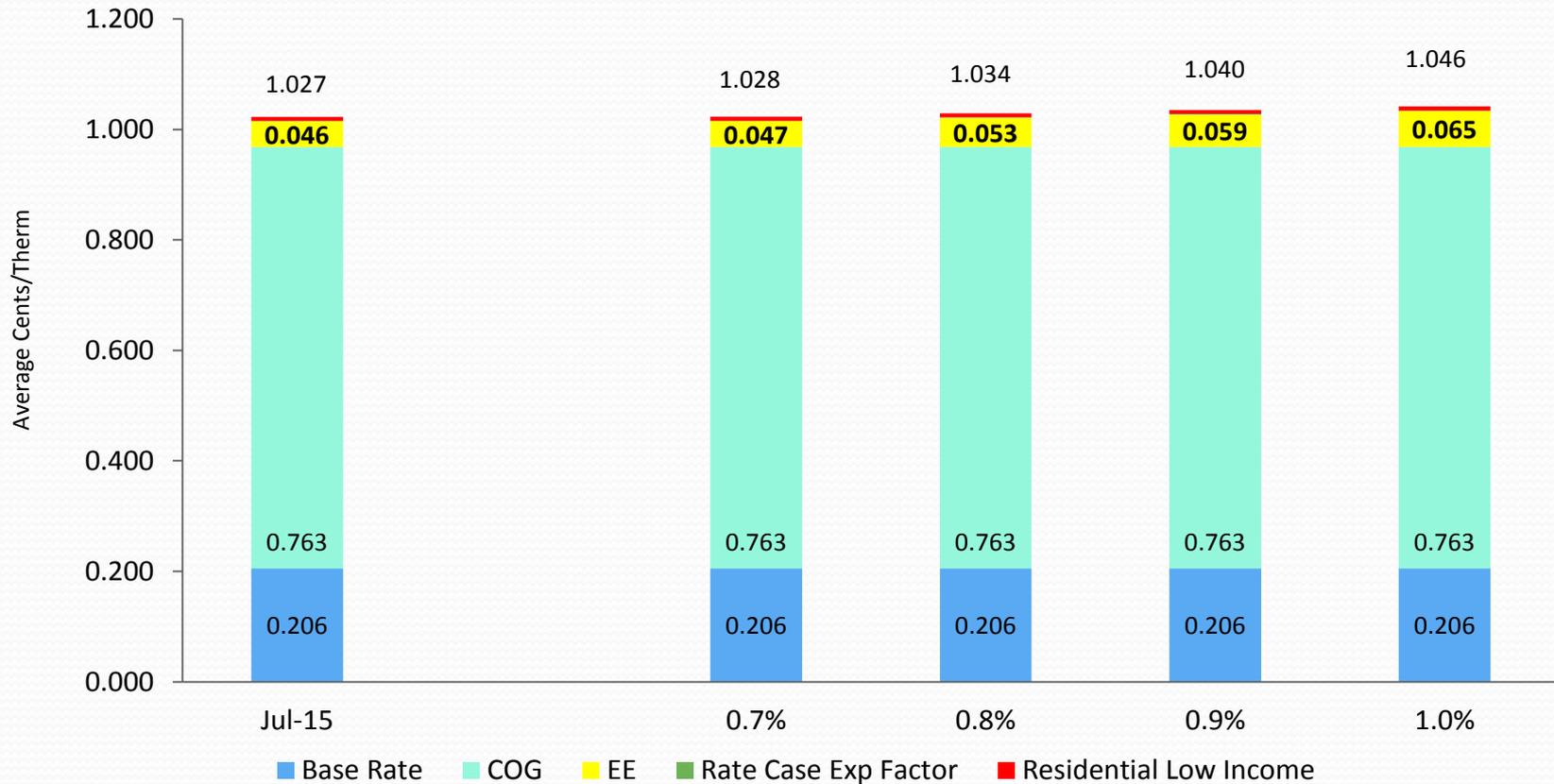
Current Annual Bill Amount (EE): \$8,656.95

% Savings of 2014 Delivery Sales	Incremental Rate Impact per Therm		Incremental Annual \$ Increase		Total Annual Bill % Increase	
	Low (\$4.50)	High (\$5.86)	Low (\$4.50)	High (\$5.86)	Low (\$4.50)	High (\$5.86)
0.7%	\$0.00030	\$0.00982	\$66.71	\$2,158.30	0.0%	1.0%
0.8%	\$0.00480	\$0.01568	\$1,055.39	\$3,445.78	0.5%	1.6%
0.9%	\$0.00930	\$0.02154	\$2,044.06	\$4,733.25	0.9%	2.1%
1.0%	\$0.01380	\$0.02740	\$3,032.73	\$6,020.72	1.4%	2.7%

* Illustrative purposes only. Based on a weighted average of Liberty Utilities and Unitil's EE LDAC energy efficiency charge effective July 1, 2015.

Natural Gas– Average Retail Pricing Illustrative Impact* (Based on Low Scenario)

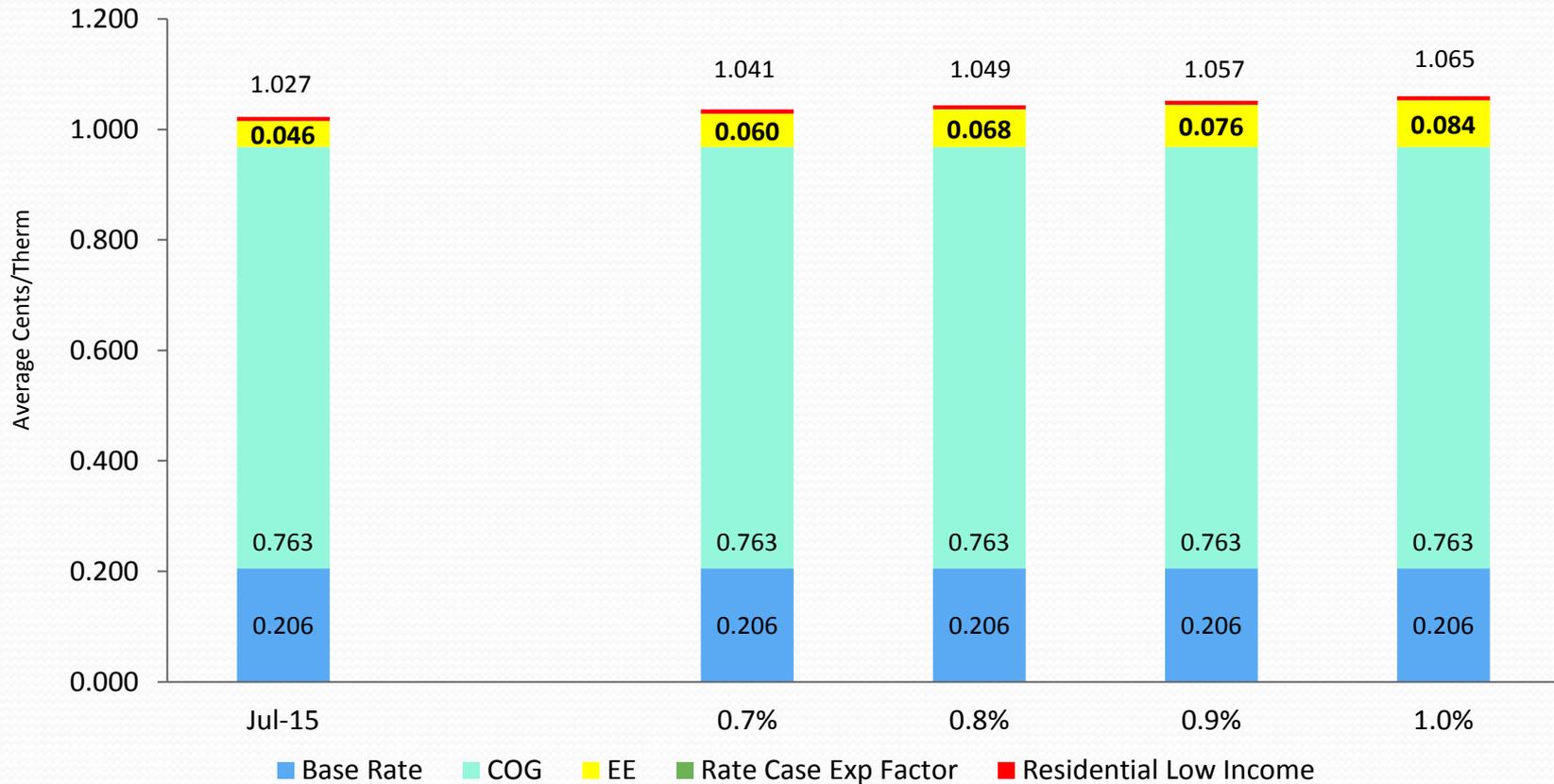
Preliminary calculation. For discussion purposes – 8/13/15 technical session



* Illustrative purposes only. Based on Liberty Utilities overall average retail pricing effective July 1, 2015.

Natural Gas– Average Retail Pricing Illustrative Impact* (Based on High Scenario)

Preliminary calculation. For discussion purposes – 8/13/15 technical session



* Illustrative purposes only. Based on Liberty Utilities overall average retail pricing effective July 1, 2015.