



STATE OF RHODE ISLAND

**ENERGY EFFICIENCY &
RESOURCE MANAGEMENT COUNCIL**

CONSULTANT TEAM

Electric Rate and Bill Impacts Review

Presented By: EERMC Consultant Team

Date: May 21, 2020



Outline

Why rate and bill impacts matter

Findings from methodology review

Review of estimated rate & bill impacts

Translate key takeaways to 3-year planning process

Materials covered in memo as well ([linked here](#))



Rate and Bill Impacts Matter

Bill impacts are critical – money in (or out of) ratepayers' pockets

Rate impacts directly influence bill impacts:

$$\text{Bill (\$)} = \text{Rate (\$/kWh)} * \text{Energy Consumption (kWh)}$$

Efficiency also affects participants' energy consumption

The upshot: *Bills can go down even if rates go up*



Methodological Review

EERMC Consultant Team conducted detailed review of electric rate and bill impact model, with input from OER and National Grid

Utilizes industry standard analysis, captures all commonly considered key impacts

Builds confidence in electric model

Provides a good guide for gas model (in development)



Bill Impact Considerations

EE Programs have bill impacts over numerous years

- EE measures save energy for avg. ~10 years

SBC impact constrained to first year

Other rate impacts + energy savings persist

Important to consider both lifetime bill impacts and payback period (simple payback presented here)



Bill Impact Data

'Average customer' values include program participants and non-participants

Annual = Savings in that year

Cumulative = Savings summed through that year

Participants and non-participants compared to their average, by sector



Average Customer Bill Impacts: PY 2020

Year	Large C&I Annual Savings	Large C&I Cum. Savings	Small C&I Annual Savings	Small C&I Cum. Savings	Residential Annual Savings	Residential Cum. Savings
2020	(\$13,946)	(\$13,946)	(\$207)	(\$207)	(\$38)	(\$38)
2021	\$13,088	(\$858)	\$211	\$4	\$46	\$8
2022	\$11,683	\$10,825	\$188	\$192	\$41	\$49
2023	\$11,035	\$21,860	\$178	\$370	\$40	\$89
2024	\$11,241	\$33,101	\$182	\$552	\$8	\$97
2025	\$11,261	\$44,362	\$182	\$734	\$8	\$105
2026	\$11,735	\$56,097	\$189	\$923	\$9	\$114
2027	\$11,470	\$67,567	\$191	\$1,114	\$7	\$121
2028	\$11,241	\$78,808	\$188	\$1,302	\$6	\$127
2029	\$9,516	\$88,324	\$162	\$1,464		
2030	\$9,238	\$97,562	\$158	\$1,622		

Note: **Bold** cells indicate year simple payback is achieved for that sector. **Red** cells represent negative values.

Sizable lifetime savings for the average customer in all sectors

Simple payback achieved within 1-2 years for the average customer



Participants and Non-Participants: PY2020

Year	Average Customer			Average Participant			Average Non-Participant		
	Large C&I	Small C&I	Res	Large C&I	Small C&I	Res	Large C&I	Small C&I	Res
2020	\$ (13,946)	\$ (207)	\$ (38)	\$ (7,923)	\$ 1,226	\$ (38)	\$ (21,347)	\$ (370)	\$ (76)
2021	\$ 13,088	\$ 211	\$ 46	\$ 18,413	\$ 1,538	\$ 46	\$ 6,616	\$ 61	\$ 11
2022	\$ 11,683	\$ 188	\$ 41	\$ 16,851	\$ 1,489	\$ 42	\$ 5,470	\$ 42	\$ 7
2023	\$ 11,035	\$ 178	\$ 40	\$ 16,313	\$ 1,508	\$ 40	\$ 4,761	\$ 29	\$ 4
2024	\$ 11,241	\$ 182	\$ 8	\$ 16,789	\$ 1,572	\$ 8	\$ 4,717	\$ 27	\$ 8
2025	\$ 11,261	\$ 182	\$ 8	\$ 16,862	\$ 1,593	\$ 8	\$ 4,745	\$ 26	\$ 8
2026	\$ 11,735	\$ 189	\$ 9	\$ 17,531	\$ 1,648	\$ 9	\$ 5,064	\$ 29	\$ 9
2027	\$ 11,470	\$ 191	\$ 7	\$ 17,775	\$ 1,754	\$ 7	\$ 4,291	\$ 20	\$ 7
2028	\$ 11,241	\$ 188	\$ 6	\$ 17,732	\$ 1,798	\$ 6	\$ 3,928	\$ 13	\$ 6
2029	\$ 9,516	\$ 162	\$ -	\$ 16,297	\$ 1,837	\$ -	\$ 1,957	\$ (19)	\$ -
2030	\$ 9,238	\$ 158	\$ -	\$ 15,926	\$ 1,829	\$ -	\$ 1,861	\$ (21)	\$ -
Total	\$ 97,563	\$ 1,621	\$ 127	\$ 162,566	\$ 17,792	\$ 128	\$ 22,064	\$ (163)	\$ (15)

Note: **Bold** cells indicate 10-year totals. **Red** cells represent negative values.

Participants drive bill savings in all sectors

Small C&I and Residential non-participants see small bill increases compared to participants' bill savings

Large C&I non-participants see lifetime bill savings, payback in 5th year



Efficiency Impacts on Rates

EE programs push rates up via:

- System Benefit Charge (SBC)
- Lost Revenue Recovery

Programs put downward pressure on rates via:

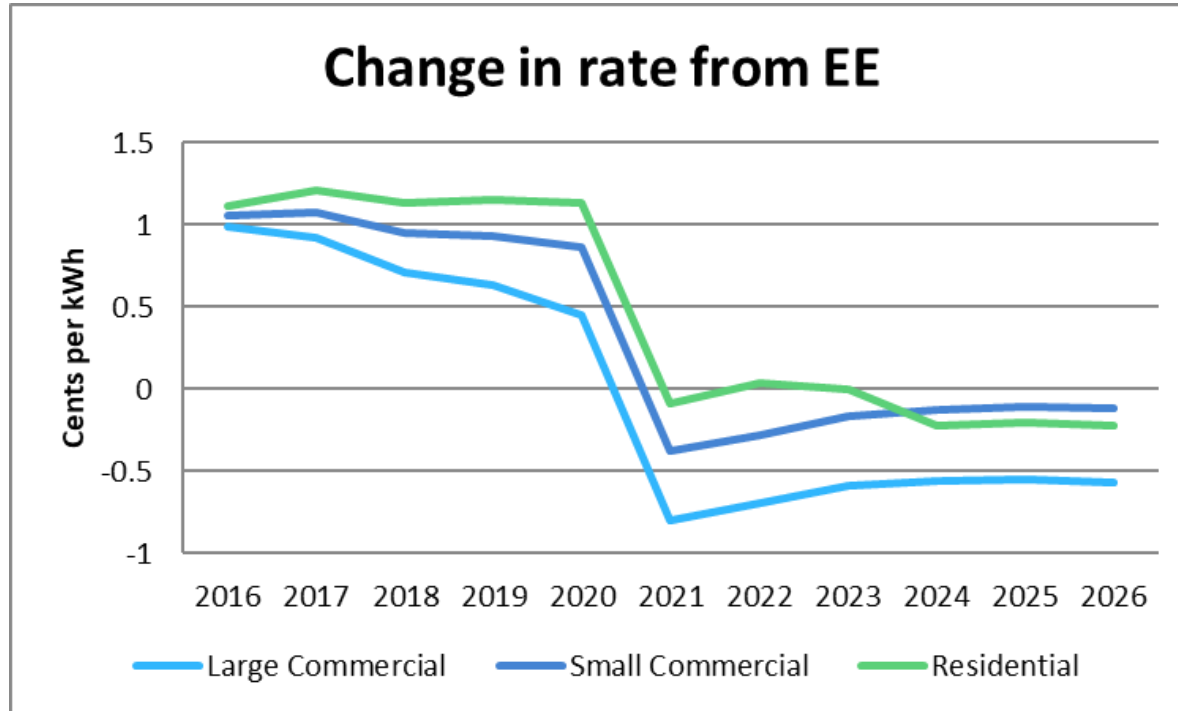
- Impacts on other charges (e.g. distribution)
- Price Suppression (DRIPE)

All impacts but SBC generally last multiple years

Specific rate impact varies by year and by sector



Cumulative Rate Impacts: PY16-PY20



Note that these are not the same rates used for future bill impacts

Bill impacts assume no future EE to isolate impacts from one year



Key Takeaways

Bill impacts are critical – money in ratepayers' pockets

Rate impacts influence bills, but aren't whole story

Efficiency also affects participants' energy consumption

Especially valuable with high baseline rates

Rhode Island programs significantly reduce average bills



Three Year Plan

Key Objective: Increase participants and value to rate-payers

Enhanced Programs: Broaden range of measures/services, referencing Potential Study insights and resulting Max Targets

Equity: Unique approaches for unique customers, spread bill savings around

Environment: Capture deep, longer-lived savings to reduce carbon emissions as focus necessarily moves away from lighting savings

Economy: Develop workforce, keep money in RI economy



QUESTIONS?

