

Brief Overview of the New Jersey Potential Study

May 8, 2019

Legislation

New Jersey's Clean Energy Act of 2018 (the Act) specifies that:

*No later than one year after the date of enactment..., the board shall **conduct and complete a study to determine the energy savings targets** for full economic, cost-effective potential for electricity usage reduction and natural gas usage reduction as well as the potential for peak demand reduction by the customers of each electric public utility and gas public utility and the timeframe for achieving the reductions. [Emphasis added.]*

Legislation

*Each electric public utility shall be required to achieve **annual reductions in the use of electricity of two percent** of the average annual usage in the prior three years within five years of implementation of its electric energy efficiency program. Each natural gas public utility shall be required to achieve **annual reductions in the use of natural gas of 0.75 percent** of the average annual usage in the prior three years within five years of implementation of its gas energy efficiency program. [Emphases added.]*

Legislation

The Act also directed the BPU to:

... adopt quantitative performance indicators...for each electric public utility and gas public utility, which shall establish reasonably achievable targets for energy usage reductions and peak demand reductions...

Legislation

The Act specifies that incentives and penalties shall be established and used:

If an electric public utility or gas public utility achieves the performance targets established in the quantitative performance indicators, the public utility shall receive an incentive as determined by the board.... The incentive shall scale in a linear fashion....

If an electric public utility or gas public utility fails to achieve the reductions in its performance target established in the quantitative performance indicators, the public utility shall be assessed a penalty.... The penalty shall scale in a linear fashion...

Potential Study High-Level Findings

Cumulative Economic & Maximum Achievable Electric Potential by Sector, 2029 Preliminary

Year	Scenario	Residential Savings (MWh)	Residential Savings (% of Sales)	C&I Savings (MWh)	C&I Savings (% of Sales)	Total Savings (MWh)	Total Savings (% of Sales)
Cumulative Energy, 2029	Economic Potential	7,575,463	23%	20,069,796	42%	27,645,258	34%
	Max Achievable Potential	4,110,030	13%	12,749,878	27%	16,859,908	21%
		(MW)	(% of Load)	(MW)	(% of Load)	(MW)	(% of Load)
Cumulative Peak Demand Reduction, 2029	Economic Potential	2,798	Not Available	4,100	Not Available	6,898	33%
	Max Achievable Potential	1,650	Not Available	2,512	Not Available	4,162	20%

Maximum Achievable Potential, Energy Efficiency + Demand Response + Combined Heat and Power, Cumulative, 2029 *Preliminary*

Potential Component	Electric Energy 2029 (MWh)	Savings (% of 2029 Sales)	Electric Demand 2029 (MW) ^a	Savings (% of 2029 Demand) ^a
Energy Efficiency	16,859,908	21%	4,162	20%
Demand Response ^b	-	0%	1,361	7%
Combined Heat and Power	4,168,388	5%	476	2%
Total	21,028,296	26%	5,999	29%

^a The energy efficiency and demand response analyses were performed in isolation, so while the peak demand impacts are totaled in this summary table, in reality, they are not purely additive as potential interactions between the two were not considered.

^b The demand response impacts presented in this table are quantified at generation.

Implications for Efficiency Programming

Legal Requirements

- ▶ BPU to establish “reasonably achievable targets”
- ▶ For annual energy use and peak demand reductions (electric and gas)
- ▶ Savings can include all efficiency initiatives, including, but not limited to:
 - Utility administration of energy efficiency programs
 - Non-utility efficiency efforts (e.g., code changes, appliance efficiency standards, other State-sponsored initiatives, etc.)

Electric Net Annual Statewide Energy Savings Targets *Preliminary*

Year	Net savings targets (% of load)	Net annual incremental savings targets (GWh)
2020	0.75%	568
2021	1.10%	833
2022	1.45%	1,100
2023	1.80%	1,369
2024	2.15%	1,645

Recommended Performance Incentives and Penalties

Guiding Principles for PI Mechanisms

- ▶ Performance-based
- ▶ Multivariate
- ▶ Scalable
- ▶ Measurable and objective
- ▶ Include countervailing-influence metrics to address secondary policy objectives and encourage a balanced portfolio

Questions / Discussion

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