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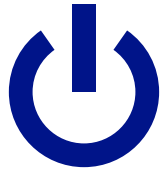
Docket 5000: Storage

Prepared for PUC Storage Stakeholder Briefing 1/26/2023

Full Team

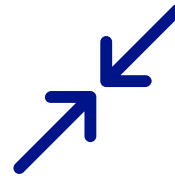


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System Reliability Procurement Lead

Carrie A. Gill, Ph.D.
Electric Regulatory
Strategy
Rhode Island Energy



Demand Response Lead

Brett Feldman
Energy Efficiency
Strategy, Policy, and
EM&V Reporting
Rhode Island Energy



Engineering Expert at the table

Ryan Constable
Distribution Planning
and Asset
Management
Rhode Island Energy



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System Reliability Procurement (SRP)

Summary



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- Background
 - SRP is a program for RIE to solicit third-party solutions for grid needs; technology agnostic; storage can bid
- Supply (of opportunities)
 - Depends on grid needs
- Demand (bids received)
 - Depends on market and technology conditions
- Compensation
 - Up to the deferral value for the utility-owned solution
- Eligibility
 - Must meet minimum criteria
- Barriers to participation
 - Awareness
 - Compensation
 - Clarity of RFP and Process



Statutory and Regulatory Background



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“Least-cost procurement shall comprise system reliability and energy efficiency and conservation procurement, as provided for in this section, and supply procurement, as provided for in § 39-1-27.8, as complementary but distinct activities that have as common purpose meeting electrical and natural gas energy needs in Rhode Island, in a manner that is optimally cost-effective, reliable, prudent, and environmentally responsible.” [RIGL 39-1-27.7(a)]



RIGL 39-1-27.7(b) and RIGL 39-1-27.7(d)2 directs the Public Utilities Commission to establish and periodically revise standards with regard to plans for SRP. The *Least-Cost Procurement Standards* were last revised in 2020. These standards outline the procedure and standard of review for each *Three-Year System Reliability Procurement Plan* and *System Reliability Procurement Investment Proposal*. These Standards apply to any proposed SRP investment for which the Company seeks cost recovery, including proposals outside of the *Three-Year System Reliability Procurement Plan* and *System Reliability Procurement Investment Proposal*.



Key Definitions from *LCP Standards*

System Reliability Procurement

Procurement to meet or mitigate a gas or electric distribution system need or optimization from a party other than the gas or electric utility¹ that provides the need or optimization by employing diverse energy resources, distributed generation, or demand response.²

Utility Reliability Procurement

Procurement to meet or mitigate a gas or electric distribution system need or optimization that is not System Reliability Procurement and thus represents a utility-only investment or expenditure.³

¹A utility proposal to own and operate non-traditional investment or new operations and maintenance services, such as new voltage-regulation equipment, battery storage, or vegetation management, and any vendor services associated with such investment or service, shall not be considered System Reliability Procurement per this definition. Such investments and services are, however, still subject to the Guidance Document issued in Docket No. 4600A.

²Including, but not limited to, the resources named in R.I. Gen. Laws § 39-1-27.7(a)(1)(i)-(iii).

³For example, many such Utility Reliability Procurement investments and operations are proposed in annual Infrastructure, Safety, and Reliability Plans filed pursuant to R.I. Gen. Laws § 39-1-27.7.1(c)(2).



Key Definitions from *LCP Standards*

Distribution System Needs

- i. Electric Distribution System Needs: Needs to serve both customer load and customer generation, including, but not limited to, system capacity (normal and emergency), voltage performance, reliability performance, protection coordination, fault current management, reactive power compensation, asset condition assessment, distributed generation constraints, operational considerations, and customer requests.
- ii. Gas Distribution System Needs: Needs to serve customers, including, but not limited to, system capacity (normal and emergency), pressure management, asset condition assessment, gas service that supports electric distributed generation, and operational considerations.

Optimization of Distribution System Performance

Improvement of the performance and efficiency⁴ of the gas or electric distribution system that includes enhanced reliability, peak load reduction, improved utilization of both utility and non-utility assets, optimization of operations, and reduced system losses.

⁴Efficiency includes both long- and short-term cost efficiency.



SRP Process



RIE planners identify an opportunity and issue a Request for Proposals



Third party vendors can learn more and check open RFPs:

<https://www.nationalgridus.com/Business-Partners/Non-Wires-Alternatives/>



Interested vendors can submit a proposal



RIE evaluates proposals for cost-effectiveness and cost relative to next best solution





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Demand Response (*ConnectedSolutions*)

Summary



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- Background
 - ConnectedSolutions is a technology-agnostic pay-for-performance demand response program to reduce system peak load; storage can participate in Daily Dispatch
- Supply (of opportunities)
 - Depends on program budget (informed by targets)
- Demand (participants enrolled)
 - Participation allowed up to budget limit; both residential and commercial/industrial customers are eligible
- Compensation
 - \$300 per kW per summer for C&I
 - \$400 per kW per summer for Residential
- Eligibility
 - Pre-approved vendor; assumes successful interconnection
- Barriers to participation
 - Financing challenges (unable to access HEAT loan; HEAT loan application process)
 - Interconnection costs and timing (particularly for larger projects)
 - Program awareness
 - Not having a pre-approved vendor
 - Inherent uncertainty in annual budgeting and approval



2023 Benefits for Connected Solutions

Sector	Total Benefits	Total Benefits	Capacity					Electric Energy					Non-Electric Benefits	Societal	
	Excluding Econ	Excluding Econ	Summer Generation	Capacity DRIPE	Transmission	Distribution	Reliability	Winter		Summer		Electric Energy DRIPE		Carbon Benefits	NOx Benefits
	For RI Test	For TRC Test						Peak	Off Peak	Peak	Off Peak				
Residential	\$ 3,148,073	\$ 3,144,955	\$ 231,715	\$ 939,164	\$ 854,389	\$ 970,682	\$ 144,844	\$ 210	\$ 121	\$ 1,504	\$ 1,342	\$ 984	-	\$ 3,118	-
Commercial & Industrial	\$ 12,784,513	\$ 12,784,513	\$ 748,574	\$ 3,034,043	\$ 3,904,293	\$ 4,435,712	\$ 661,892	-	-	-	-	-	-	-	-
Grand Total	\$ 15,932,586	\$ 15,929,469	\$ 980,289	\$ 3,973,208	\$ 4,758,682	\$ 5,406,393	\$ 806,736	\$ 210	\$ 121	\$ 1,504	\$ 1,342	\$ 984	-	\$ 3,118	-



Statutory and Regulatory Background



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ConnectedSolutions Process



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Annual budget and program design developed and approved through stakeholder discussions and regulatory oversight



Interested customers and installers can learn more and sign up here:

<https://www.rienergy.com/RI-Home/ConnectedSolutions/>



RIE sends out peak reduction calls and tracks performance (participants can choose to opt out during any peak event)



Participants receive their compensation at the end of the summer peak season

