PSEG LONG ISLAND

Utility 2.0 Plan and EEDR Plan Update

OVERSIGHT AND CLEAN ENERGY COMMITTEE BRIEFING

July 22, 2020

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AGENDA: UPDATE ON PSEG LONG ISLAND UTILITY 2.0 PLAN AND 2021 ENERGY EFFICIENCY AND DEMAND RESPONSE (EEDR) PLAN

- 2019 marked the first full year implementation for AMI and other initiatives approved in the 2018 Utility 2.0 Plan
- Implementation began earlier this year for initiatives approved in the 2019 Utility 2.0 Plan
- The 2020 Utility 2.0 Plan, which includes funding request for initiatives starting in 2021, was filed on June 30th, 2020
- Annual EEDR Plan update filed as part of the 2020 Utility 2.0 Plan

PSEG LONG ISLAND IS DELIVERING ON THE UTILITY 2.0 VISION ACROSS THREE STRATEGIC PATHWAYS

PSEG Long Island's customers want to be a part of the energy industry transformation and desire improved reliability, resiliency, and cost-effectiveness of the energy system and customer programs.

3 EVOLVE INTO A CUSTOMER-CENTRIC DSP

Evolve the utility to become the DSP through the customer engagement and grid planning and operations functions of the utility, and by enabling foundational capabilities and technology platforms.

2 EXPLORE NEW INNOVATIVE OFFERINGS

Explore new EE/DER projects to demonstrate value to both the customers and the utility, inform future rate design and business models, and aid customer adoption of advanced technologies in support of its mission and state policies.

1 EMPOWER CUSTOMERS THROUGH AMI AND DATA ANALYTICS

Empower customers with safe, reliable, and increasingly digital and automated investments that enable the evolution to the DSP and offer customers choice and solutions.

IN 2018 THROUGH 2020, PSEG LONG ISLAND HAS PROPOSED AND BEGAN IMPLEMENTING INITIATIVES ACROSS THEIR ORGANIZATION

Empower Customers Solutions that empower customers by improving the way they interact with their energy provider and offer tools and choice for DER solutions and payment options	Explore New Offerings Pilots that test how new system capabilities and customer resources can monitor and interact between them to improve system efficiency and reduce greenhouse gas emissions	Evolve into the DSP Studies, pilots, and foundational capabilities to enable the DSP, with efficient management of grid assets and quicker and more cost-effective DER interconnection
AMI Technology and Systems	EV Program	Utility of the Future Team / CVR / JU
AMI-Enabled Capabilities	Behind-the-Meter (BTM) Storage with Solar	Locational Value Study
Data Analytics	Super Savers: NWS with Targeted Energy Efficiency	Non-Wires Solution Planning Tool
Customer Engagement	Electric School Bus Vehicle-to-Grid Pilot	Utility-Scale Storage Program – Miller PI
Rate Modernization	Heat Pump Controls Pilot	Interconnection Online Application Portal
Program Implementation Support		Hosting Capacity Maps
Next Generation Insights Pilot		
Energy Concierge Pilot		
2020 Proposed		
C&I Demand Alert Pilot	Enhanced Marketplace	Hosting Capacity Maps, Stage 3
FlexPay Pilot	EV Make-Ready Program	DER Visibility Platform
On-Bill Financing Pilot	NWS Process Development	CVR Program

2019 MARKED THE FIRST FULL YEAR OF IMPLEMENTATION WITH MEANINGFUL SUCCESS AND IMPACT

EVOLVE INTO A CUSTOMER-CENTRIC DSP

- **Locational Value Study** complete
- **Power quality improvements** from VVO study
- **2.5 MW** of planned utility-scale battery energy storage
- Commenced **implementation** of Interconnection Online Application Portal

EXPLORE NEW INNOVATIVE OFFERINGS

- **903** Residential EV Smart Charger Rebates participants
- **45** DCFC port incentives applications received
- **250** interconnection applications for BTM storage or solar+storage
- **1.65 MW** of peak load reduction in North Bellmore achieved

EMPOWER CUSTOMERS THROUGH AMI AND DATA ANALYTICS

- **496,000** total smart meters installed
  (42%) of total meter installations
- nearly **30,000** truck rolls saved, and associated CO_2 emissions reduced, due to the remote connect switch AMI-enabled capability
- More than **8,000** visitors to My Smart Energy Lab
  Over **1.3 million** individual pieces of educational material sent to customers
- Over **4 terabytes** *and growing* of meter data to inform analytics, including initial use cases for theft protection, restoration times, and COVID-19-related initiatives

AS OF END OF Q1 2020

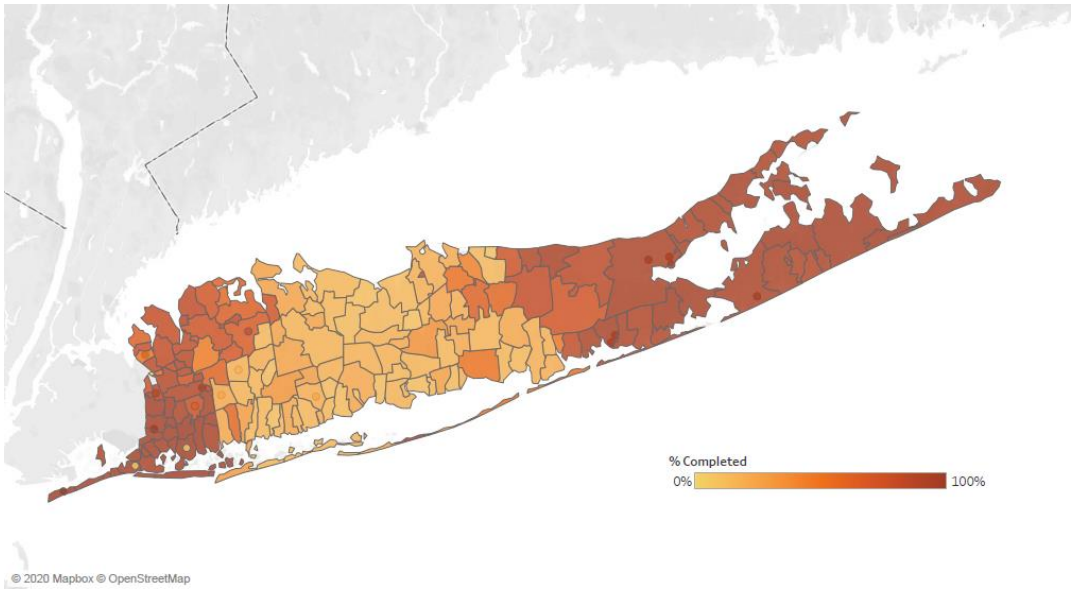
SUCCESS SNAPSHOT: PSEG LONG ISLAND ACHIEVED 128% OF ITS 2019 AMI METER INSTALLATION GOAL

- **Through Q2 2020, PSEG Long Island has installed 597,500 AMI smart meters**
  - 54% of planned deployment of 1.1 million meters
  - 51% of PSEG Long Island customers
  - 62% of the total load
  - The dark red areas represent ZIP codes that have completed or nearly completed meter installations

- **In 2019, PSEG Long Island over-performed against meter deployment targets**
  - 128% of projected benefits in the BCA
  - 0.57% opt-out rate (below 0.59% target)
  - Residential installation costs ~15% below target
  - 188% and 138% of target FTE and vehicle reduction, respectively

- **Overall, PSEG Long Island achieved ~90% of the benefits that were forecasted for 2019 in the 2018 BCA for AMI and AMI-enabled capabilities**
  - Efforts continue to operationalize AMI-enabled outage management, which will help to more fully realize future benefits.

Smart Meter Installations by ZIP Code



**Annual and quarterly totals also include core meters—funded outside of Utility 2.0.*

2021 ENERGY EFFICIENCY AND DEMAND RESPONSE PLAN OVERVIEW

- Budget remains flat with a 5% higher energy efficiency savings
- Primary program metrics:
  - MMBtus from net savings of beneficial electrification (fuel switching)
  - Heat Pumps
  - Secondary metric: kWh savings (gross at site)
- Increased emphasis on air source heat pumps
  - $7.6M budget in 2021 (increase of $1M from 2020)
  - 4,300 heat pumps (1,600 whole-house)
  - Incremental (50%) incentives for Income Qualified Customers
- Rebates for A19 LED bulbs to align with New York IOUs
- 21% of residential rebate/incentive budget for Income Qualified Customers
- Residential Performance Pilot with NYSERDA
- Introduction of new measures from potential study refresh
- Greater amount of uncertainty than normal due to COVID-19 impacts

UTILITY 2.0 AND EEDR INITIATIVES CONTRIBUTE TO ACHIEVING NEW YORK STATE'S 2025 CLEAN ENERGY TARGETS

Category	Energy Efficiency	Heat Pumps	Energy Storage	Electric Vehicles	Solar PV
Statewide Goal for 2025	185 TBtu	5 TBtu	1,500 MW	850,000	6,000 MW
Long Island Portion for 2025	7.85 TBtu	1.15 TBtu (~30,000 installations)	188 MW	178,500	750 MW
Current Level on Long Island	~1 TBtu	~950 installations	~12 MW	~14,000	~625 MW
Ongoing Initiatives	• Energy Efficiency Programs (EEDR Plan) • Super Savers NWS	• Energy Efficiency Programs (EEDR Plan) • Heat Pump Controls Pilot	• BTM Storage with Solar • Utility Storage – Miller Place • Energy Storage RFI	• EVs Program • Electric School Bus V2G Pilot	• BTM Storage with Solar • Hosting Capacity Maps Stages 1-2 • IOAP Phase I
Proposed Initiatives (2021 Start)	• Energy Efficiency Programs (EEDR Plan) • On-Bill Financing Pilot • Enhanced Marketplace	• Energy Efficiency Programs (EEDR Plan) • On-Bill Financing Pilot • Enhanced Marketplace	• Enhanced Marketplace • On-Bill Financing Pilot • Energy Storage Bulk Solicitation	• Enhanced Marketplace • EV Make-Ready Program	• Hosting Capacity Maps Stage 3 • DER Visibility Platform

APPENDIX

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IN THE 2020 UTILITY 2.0 PLAN, PSEG LONG ISLAND IS REQUESTING FUNDING FOR THE IMPLEMENTATION OF NINE NEW INITIATIVES TO START IN 2021

PATHWAY	INITIATIVE	DESCRIPTION	2021-2025 CAPITAL [$M]	2021-2025 O&M [$M]
Empower Customers through AMI and Data Analytics	**C&I Demand Alert Pilot**	Real-time alert-based solution that helps C&I customers avoid demand charges, or manage demand within a certain threshold.	1.97	0.20
	FlexPay Pilot	Billing program that would allow participating customers to pay in advance for electric service.	8.13	6.10
	On-Bill Financing Pilot	Provides residential customers the option of paying for clean energy investments in EE and DER through on-bill charge.	1.12	1.82
Explore New Innovative Offerings	**Enhanced Marketplace**	Includes products (e.g., EV chargers), services (e.g., home auditing services), point-of-sale instant rebates, product advisor.	4.65	4.51
	EV Make-Ready Program	The study supports the program design for a new EV Make-Ready program, which is envisioned to kick off at scale in 2021.	3.20	1.83
	NWS Process Development	Piloting a new market solicitation process based on approaches from other NY utilities, including the development of a mechanism to address funding shift from CAPEX to OPEX.	-	0.50
Evolve into the Customer-Centric DSP	**Hosting Capacity Maps Stage 3**	Develop Stage 3 hosting capacity maps to provide visibility to the developers and to further support the integration of DER.	1.70	1.84
	DER Visibility Platform	Measurement of DER output through sensors, meters, or customer Wi-Fi connections. Deployment of a DERMS pilot.	7.92	0.29
	CVR Program	Extension of CVR to more substations with voltage optimization.	0.94	0.09
TOTAL			**29.61**	**17.17**