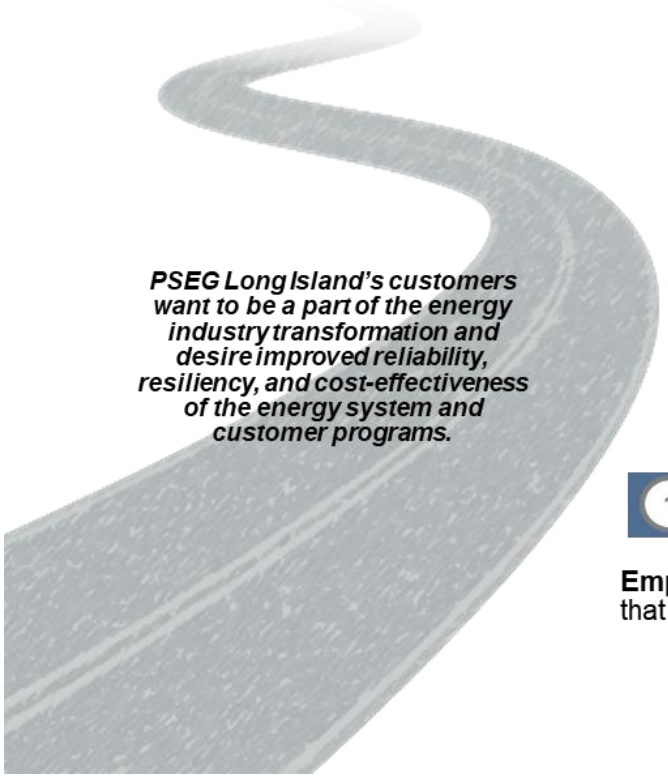
2021 Utility 2.0 and Energy Efficiency Plan

MIKE VOLTZ – DIRECTOR OF ENERGY EFFICIENCY

PSEG LONG ISLAND
We make things work for you.

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

PSEG Long Island's Utility 2.0 vision is to be a customer-centric, innovative, and forward-looking utility that is dedicated to a clean, reliable, and resilient energy system. PSEG Long Island will achieve this vision by empowering its customers through advanced metering infrastructure (AMI), exploring new offerings, and evolving to become the utility of the future, including performing functions of the Distributed System Platform (DSP), for Long Island and the Rockaways.



3 EVOLVE INTO A CUSTOMER-CENTRIC DSP

Evolve the utility to become the Distributed System Platform (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 energy efficiency (EE) and distributed energy resources (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.

BETWEEN 2018 AND 2020, PSEG LONG ISLAND BEGAN IMPLEMENTING 28 INITIATIVES ACROSS THE THREE PATHWAYS

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

- AMI Technology and Systems
- AMI-Enabled Capabilities
- Customer Engagement
- C&I Demand Alert Pilot
- Data Analytics
- Energy Concierge Pilot
- Next Generation Insights Pilot
- On-Bill Financing Pilot
- Program Implementation Support
- Rate Modernization

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

- BTM Storage with Solar
- Electric School Bus V2G Pilot
- Electric Vehicle (EV) Program
- Enhanced Marketplace
- EV Make-Ready Program
- NWS Planning Tool
- NWS Process Development
- Super Savers: NWS with Targeted EE

Evolve into a DSP

Studies, pilots, and foundational capabilities to enable the DSP, with efficient management of grid assets and quicker and more cost-effective DER interconnection

- CVR Program
- DER Visibility Platform
- Hosting Capacity Maps
- Interconnection Online Application Portal
- Locational Value Study
- Utility of the Future
- Utility-Scale Storage – Miller Place

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

	ELECTRIC VEHICLES	ENERGY STORAGE	ENERGY EFFICIENCY	HEAT PUMPS	SOLAR PV
Statewide goal (2025)	850,000	1,500 MW	185 TBtu	5 TBtu	6,000 MW
LI portion of goal (2025)	178,500	188 MW	7.85 TBtu	30,000 installations (1.15 TBtu)	750 MW
LI actuals (through 2020)	18,852	~14 MW (~3.78 MW queued)	2.29 TBtu	5,955 installations (0.218 TBtu)	~650 MW
Approved initiatives	• Electric Vehicles Program • Electric School Bus V2G Pilot • Enhanced Marketplace • EV Make-Ready Program • Rate Modernization	• BTM Storage with Solar • Utility Storage – Miller Place • Enhanced Marketplace • On-Bill Financing Pilot • Energy Storage Bulk Solicitation • Rate Modernization	• Energy Efficiency Programs (EEDR Plan) • Super Savers NWS • On-Bill Financing Pilot • Enhanced Marketplace	• Energy Efficiency Programs (EEDR Plan) • Heat Pump Controls Pilot • On-Bill Financing Pilot • Enhanced Marketplace	• BTM Storage with Solar • Hosting Capacity Maps Stages 1-2 • Interconnection Online Application Portal (IOAP) Phase I • Hosting Capacity Maps Stage 3 • DER Visibility Platform
Proposed initiatives (2022 start)	• *EV Make-Ready Program – (expansion)* • *Suffolk County Make-Ready Pilot* • *Bucket Truck Electrification Plan*	• *Connected Buildings Pilot*	• *Energy Efficiency Programs (EEDR Plan)*	• *Energy Efficiency Programs (EEDR Plan)*	• *Increasing Hosting Capacity Study* • *Rate Modernization – Green Rate*
Potential Future Initiatives (2023-2025 start)	• Fleet Electrification • Light-Duty V2G	• Utility Storage (Further Locations) • Microgrid	• Energy Efficiency Programs (EEDR Plan) • Next Best Action • Multifamily/Low-to-Moderate Income (LMI) Financing	• Energy Efficiency Programs (EEDR Plan) • Next Best Action • Multifamily/Low-to-Moderate Income (LMI) Financing	• Enhanced Distribution Modeling

PROPOSED INVESTMENTS FOR 2022 (TO BE INCLUDED IN THE 2021 UTILITY 2.0 PLAN)

- **Four new proposed initiatives:** small-scale pilots and studies supporting state clean energy goals
- **EV Make Ready Program:** expanded through 2025, with budget increase of ~$88 million, B/C ratio of 1.19
- **Rate Modernization:** addition of Green Rate IT and customer engagement costs, with budget increase of ~$2.5 million

Type	Name	Type	Capital 2022-25 ($M)	O&M 2022-25 ($M)
Proposed Initiatives	**Connected Buildings Pilot**	Pilot	-	1.19
	Suffolk County Bus Make-Ready Pilot	Pilot	0.60	0.45
	Bucket Truck Electrification Plan	Study	-	0.10
	Increasing Hosting Capacity Study	Study	0	0.06
Expanded Initiatives	**Rate Modernization**	Program	1.19	1.32
	EV Make-Ready Program	Program	62.39	25.72
	Total		**64.18**	**28.4**

Summary of 2022 Energy Efficiency and Demand Response Plan

Program	Savings (MMBtu)	Savings (MWh)	Program Budget ($M)
Energy Efficient Products	612,027	206,010	24.4
Home Comfort	129,673	2,776	11.5
REAP (Low-Income)	5,953	2,361	1.35
Home Performance	31,917	2,633	4.56
Multifamily	2,423	437	0.25
All-Electric Homes	560	17	0.05
Commercial Efficiency	262,559	82,757	32.4
HEM (Behavioral)	101,952	29,881	2.70
Pay for Performance	606	178	0.20
Total, Budget Components with Programmatic Savings	**1,147,670**	**327,049**	**77.43**
DLM Program	N/A	N/A	1.38
Community Solar	N/A	N/A	0.40
Religious buildings	N/A	N/A	0.40
PSEG Long Island Labor, Outside Services, Advertising	N/A	N/A	9.28
Total, Budget Components not Associated with Savings	**-**	**-**	**11.47**
Total	**1,147,670**	**327,049**	**88.90**




EV Program Summary

MARK WARNER, GABEL ASSOCIATES

AUGUST 2021

PSEG LONG ISLAND
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OVERVIEW

Five New PSEG Long Island Electric Vehicle (EV) Proposals.

- Make Ready Incentive Program
- NYSERDA Prize funding
- Fleet Advisory Services
- Suffolk Transit Make Ready Program
- Bucket Truck Electrification Study

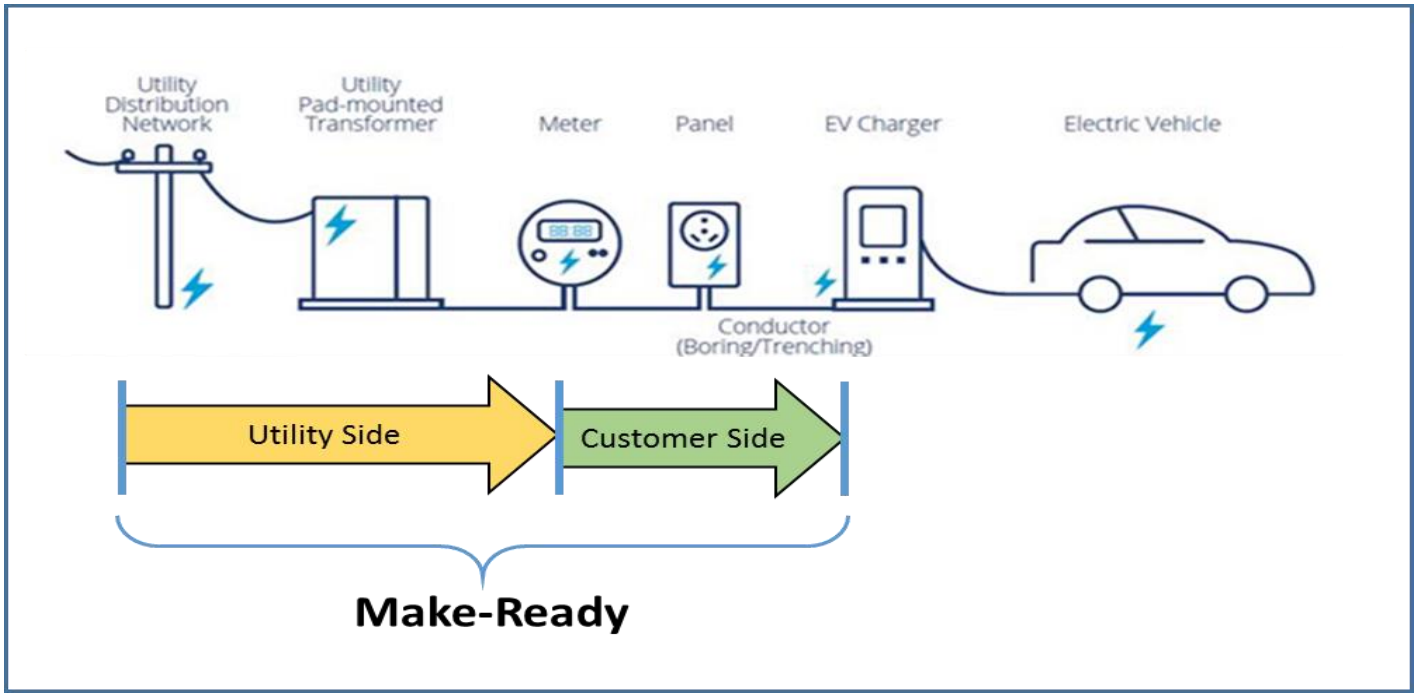
Focus For Today

Part Of PSEG Long Island's 2021 Utility 2.0 filing

- http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=45709
- (DPS Comment Period open to 8/23/2021)

www.psegliny.com/goelectric

What is Make Ready?



A “Make-Ready” Incentive Program Provides Encourages Construction Of New EV Charging Infrastructure Through A Significant Offset (via incentive) Of Eligible Make-Ready Costs, On Both The Utility And Customer Side Of The Meter.

Gabel Make-Ready Study

Five Main Focus Areas:

1. Identify the number of ports **and locations** needed to meet State EV penetration goals for 2025 on Long Island.

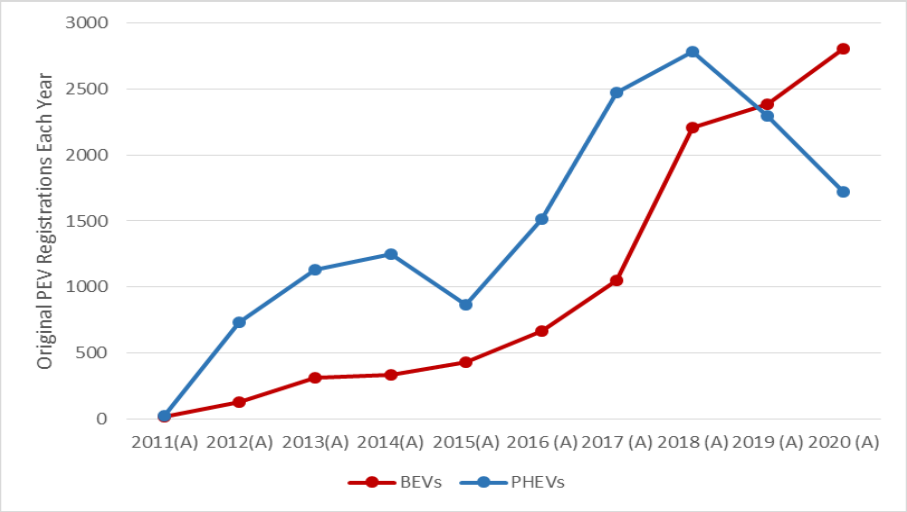
2. Recommend a framework for prioritizing incentive allocations (i.e. ensure utility investment achieves policy goals).

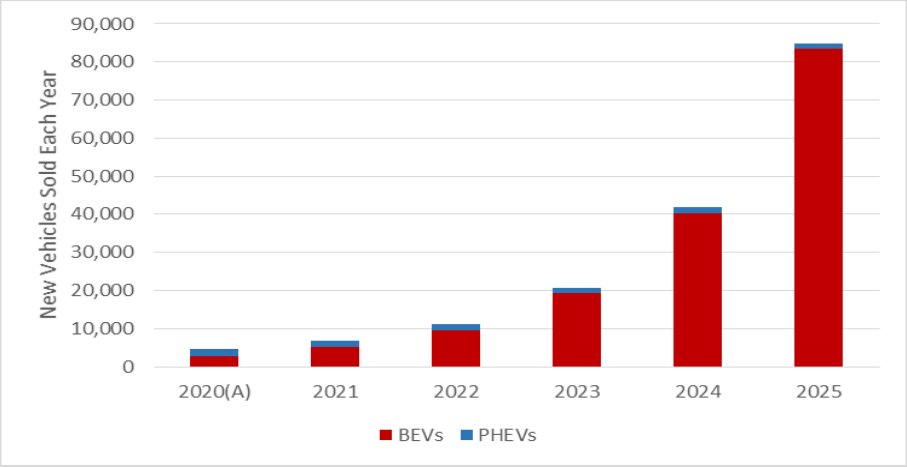
3. Program design recommendations.

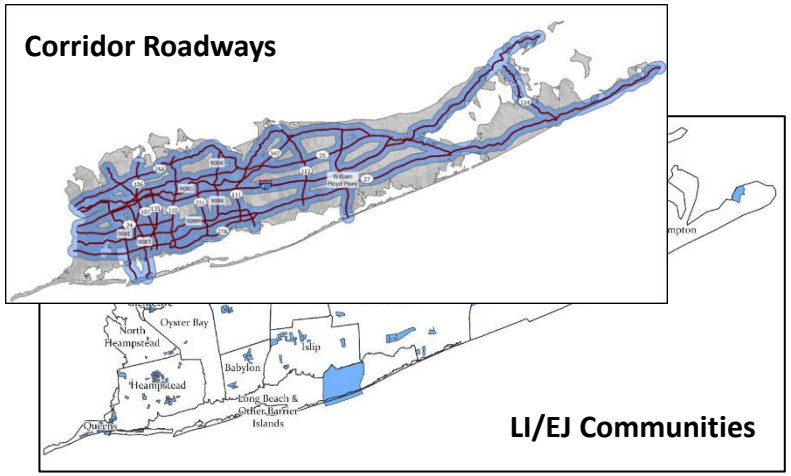
4. Optimum business model to deliver proposed program.

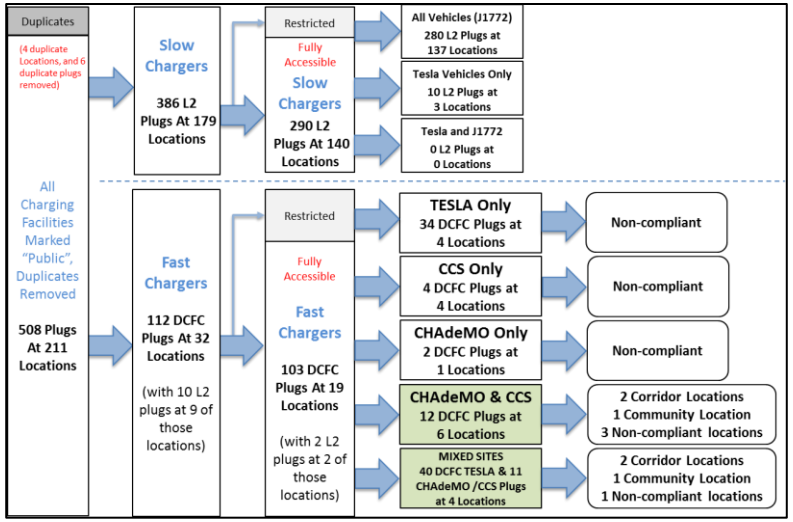
5. Estimated budget necessary to deliver proposed program.

Detailed Analysis Based On Long Island Data









Projected Net New Requirements (ports & locations)

These Projections Reflect The **NET NEW Development Needed**, After Accounting For Existing Charging Infrastructure.

- DCFC: Recognizes CORRIDOR, and COMMUNITY Locations

	Total	Corridor	Com - Gen. Use	Com - LI/EJ	Com - Dest.
Total New DCFC Locations:	**130**	54	59	14	3
Total New DCFC Ports:	**498**	270	177	42	9

- L2: Recognizes Workplace, Public, and LI/EJ Locations

	Total	Workplace L2	Public-L2	LI/EJ - L2
Total New L2 Locations:	**708**	467	209	32
Total New L2 Ports:	**4,247**	2,803	1,254	190

- Make-Ready funding awarded competitively, percentage of costs covered vary depending on merit.

Business Model Investigated

Cash Rebate: Incentives are paid to customers in a single lump-sum. (Rest of State).

Lease: Make-ready is constructed and owned by the utility, and the customer leases that make-ready for a fixed term at a rate that is net of incentives due, at the end of which ownership is transferred to the customer.

Purchase: Make-ready is constructed and owned by the utility, and the customer make a single lump-sum payment equivalent to a lease payment (net of incentives due), and after a fixed term ownership is transferred to the customer.

Hybrid: A combination program in which simple cash rebates are paid for smaller (L2) projects, and the lease program is used for large (DCFC) projects.

Make Ready Budget Request

Port Type	Total Budget	2021	2022	2023	2024	2025
Corridor DCFC	$28,582,281	$2,286,582	$4,287,342	$7,145,570	$7,145,570	$7,717,216
Community DCFC	$15,627,333	$1,250,187	$2,344,100	$3,906,833	$3,906,833	$4,219,380
L2 (workplace, public, LI/EJ)	$21,489,195	$1,074,460	$3,223,379	$5,372,299	$5,372,299	$6,446,759
	$65,698,809	$4,611,229	$9,854,821	$16,424,702	$16,424,702	$18,383,354

Next Steps

- Public Comments
- DPS Interrogatories and Feedback
- Development of full implementation Plan and documents
  - Development of Easement Process
  - Development of Lease origination and service capabilities
  - Development of Solicitation Process and Schedule
  - Development of proposal scoring matrix.

NYSERDA EV Prizes

- Three prize areas totaling up to $95 million statewide
  - Environmental Justice Community Clean Vehicles Transformation Prize
  - Clean Personal Mobility Prize
  - Clean and Medium- and Heavy-Duty Vehicle Innovation Prize.

  - LIPA/PSEGLI funding may only be awarded to projects available in Long Island

  - LIPA/PSEGLI proposed funding: $.3 million in 2022 and $7-$10 million in 2023-2025
    - Amount depends on prize category of final project selected
    - Timing and payment contingent on project milestones being met

Fleet Advisory Services

- Study conducted by Gabel Associates
- Identified different levels of service over time.
- Focused on Light Duty Fleets initially
- Services to advise customers on site feasibility, rate analysis, cost savings and bill impacts, and optimized charging strategies.
- Plan is retain third party expert who will provide these services to potential customers.
- Estimate $260,000 for 2022 and increase thereafter to support more complex services.
- Initial budget request $1 Million. To be evaluated and reconciled based on the uptake and success of these services in the initial years of the program.

Suffolk County Transit System Make Ready

- Identified in DPS Order
- Protera 1.MW Charging System
  - 1 in Ronkonkoma
  - 1 in West Babylon
  - Each can support 20 buses.
- ~ $500,000 budgeted per site.
- Actual Make Ready Costs still being determined.
- Bus delivery planned for late 2022.

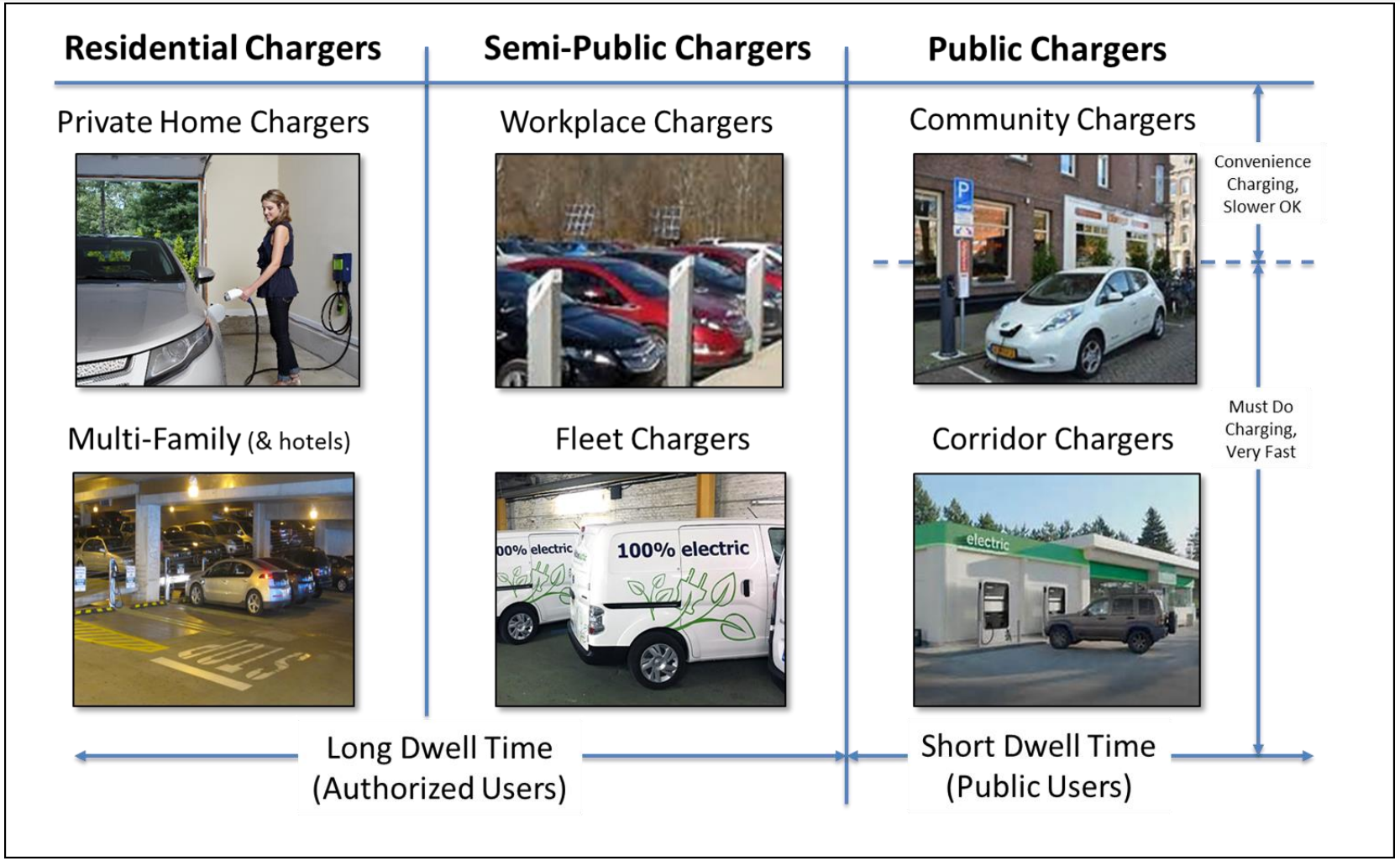
Electric Bucket Truck Study

- $100,000 budget request to fund third party study on state of offerings, costs and schedule for electrifying PSEG Long Island heavy-duty fleet.

Questions?

Appendix

Types of Chargers Needed



Appendix – EV Study Assumptions

- Utilized NREL's EVI-Pro Lite tool for findings
  - 2 Other models investigated- Pro Lite outputs reflected mid point results between other models.
  - Same tool which was used for DPS Make Ready Order.
- Most model assumption consistent with DPS Order.
- Model based upon schedule of EV Adoption necessary to meet State Goal of 850,000 vehicles which equates to 178,500 registered EV's on Long Island by end of 2025
- Consideration of trends in EV ownership occurring during time frame.
  - 91%BEV/9%PHEV split in 2025
  - 77% of owners assumed to be able to charge at home.
  - Full PHEV Coverage assumed.
- Existing Chargers netted from overall results.

Appendix – Location Caps

All
- No more than 10 Plugs incentivized.

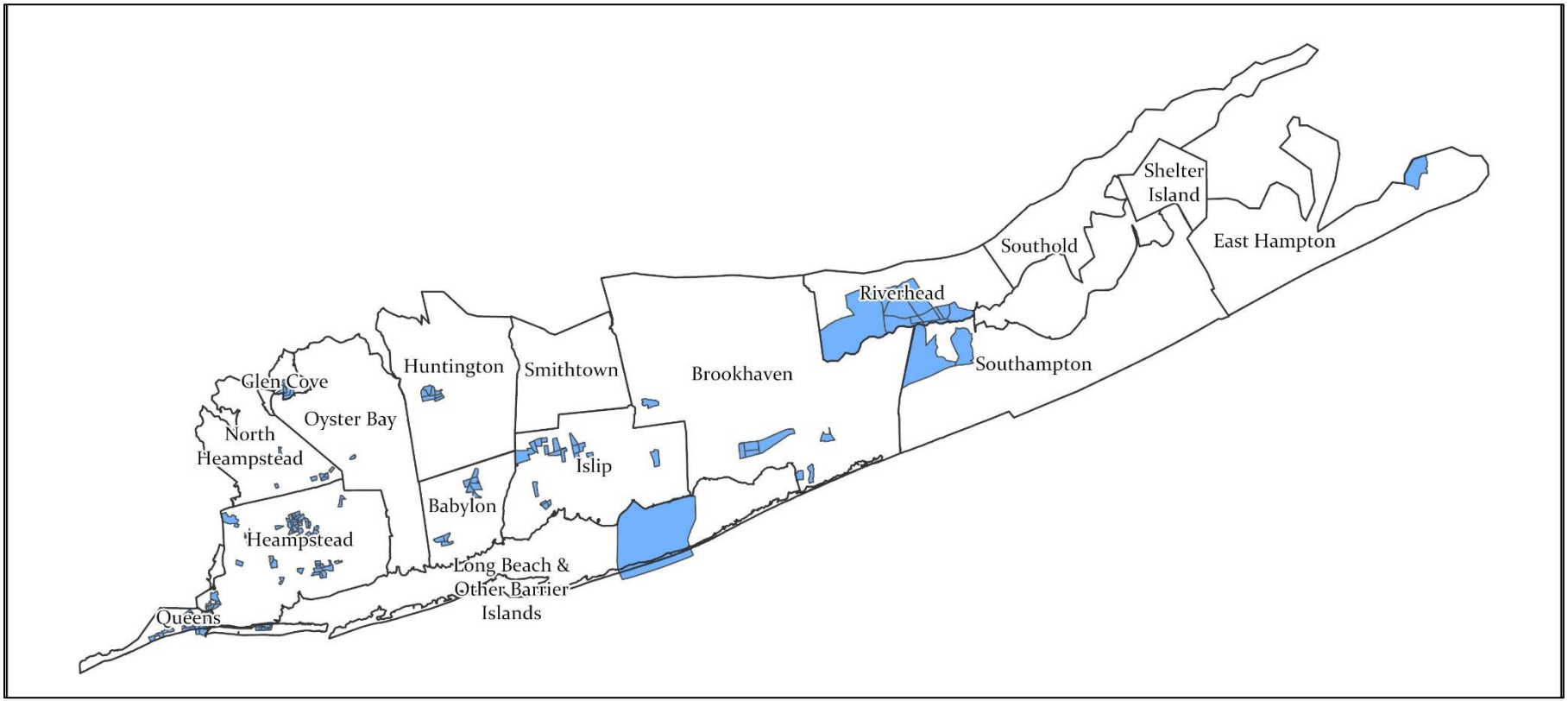
Corridor
- No more than $529,302
- No more than 2MW size.

Community
- No more than $205,623

L2
- No more than $30,666
- No more than 100KW size

Appendix – Interim Disadvantaged Communities

Subject to change based on final definition of Disadvantaged Communities, to be developed by the Climate Justice Working Group for approval by the Climate Action Council



Source: NYSERDA