

NY Solar Summit

Interconnection and NYC Grid Ready Solar

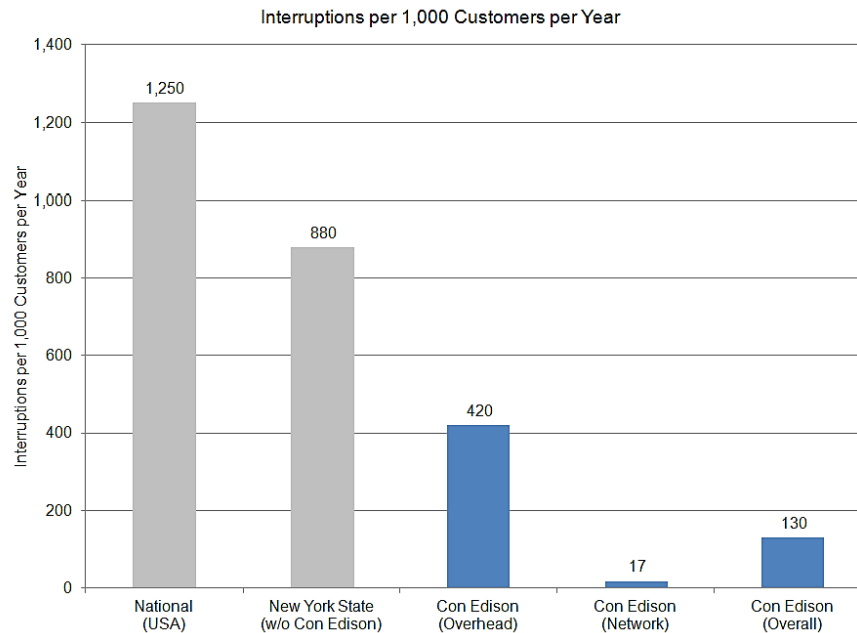
June 20, 2016

Con Edison


Jim Skillman
Customer Project Manager
Distributed Generation Group

Con Edison

	Customers	Infrastructure	Service Territory
Electric	3.3 million (2.4 Network)	90,000 miles of UG cable in network grid	All 5 boroughs and Westchester County
Gas	1.1 million	6,600 miles of gas mains and services	3 out of the 5 boroughs and Westchester County
Steam	1,760	World's largest district steam system	Manhattan below 96 th Street



Con Edison's Role in PV Interconnections



e-filing Through the Project Center

[Launch Project Center](#)
Make sure you turn off your popup blockers!

- Submit service requests and forms
- Update plans
- Contact your case representative
- Check your project status

[User Guide](#)



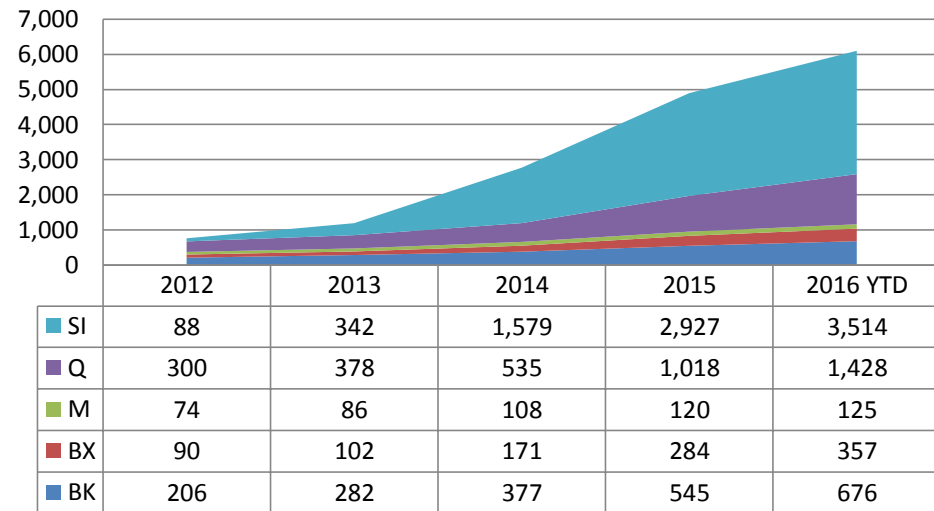
- Review to maintain grid safety and reliability for all customers
- Installation of net meter and subsequent billing
- Integration of DERs into area planning and forecasts

Solar in Con Edison Service Territory (NYC only)

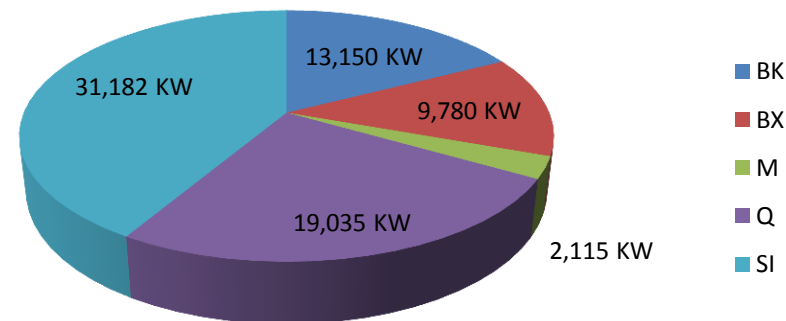
Drivers

- PV System Cost
- NY-Sun funding
- Third-party financing
- Pre-ITC rush
- ITC Extension
- Balance of System Cost Reductions

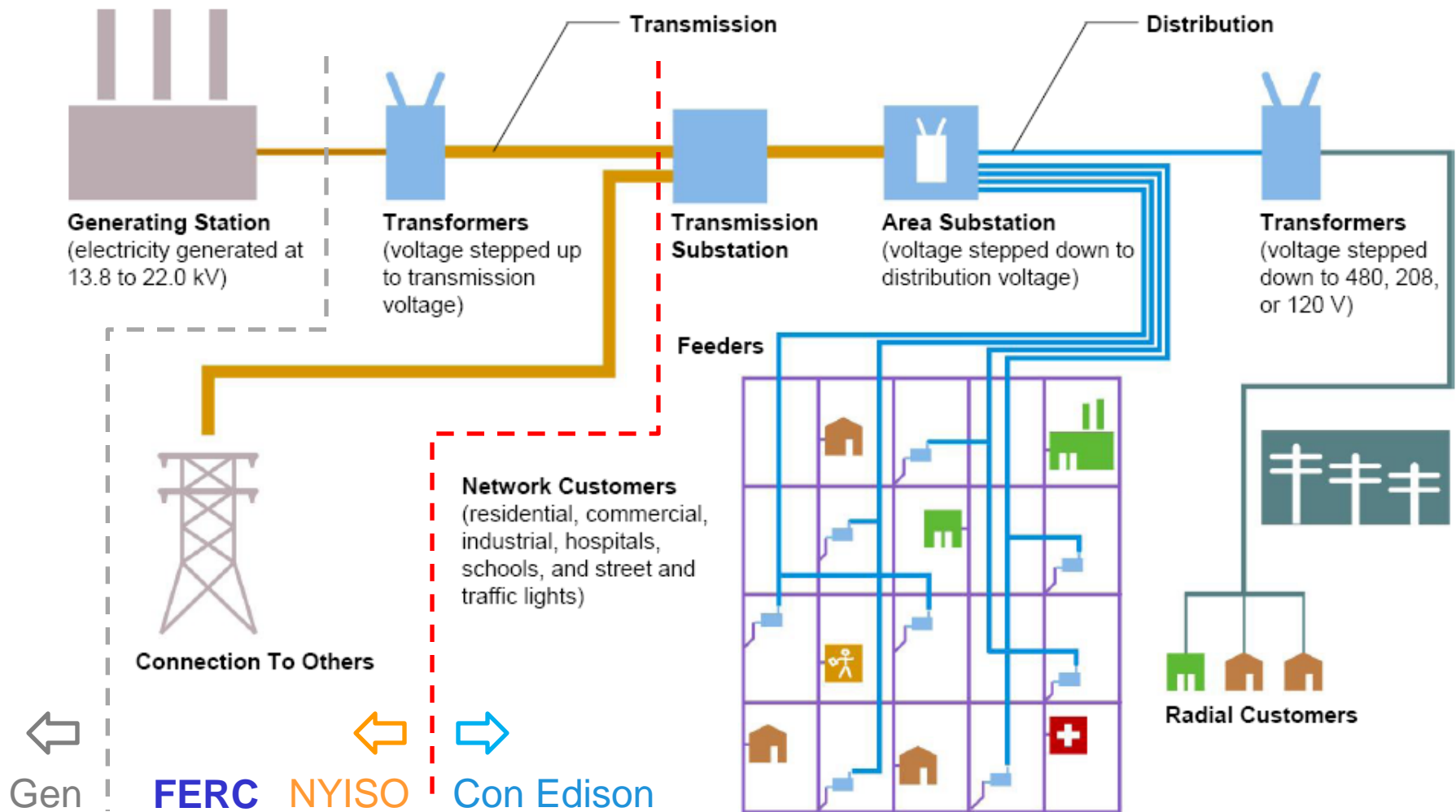
NYC Solar Customers YTD = 6,100



2016 YTD - NYC Only
Total Solar Capacity = 75MW

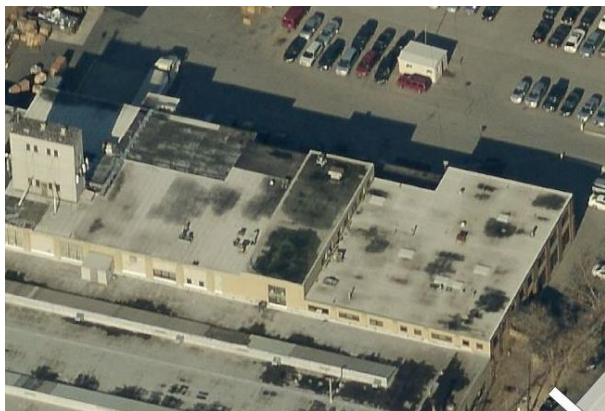


Con Edison Electric Distribution System



Implications for PV Installations: *A Tale of 3 Warehouses*

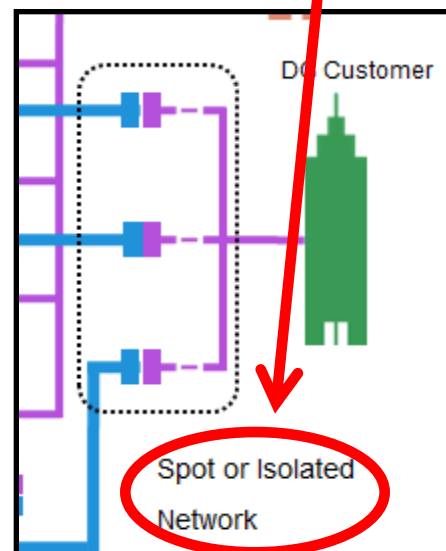
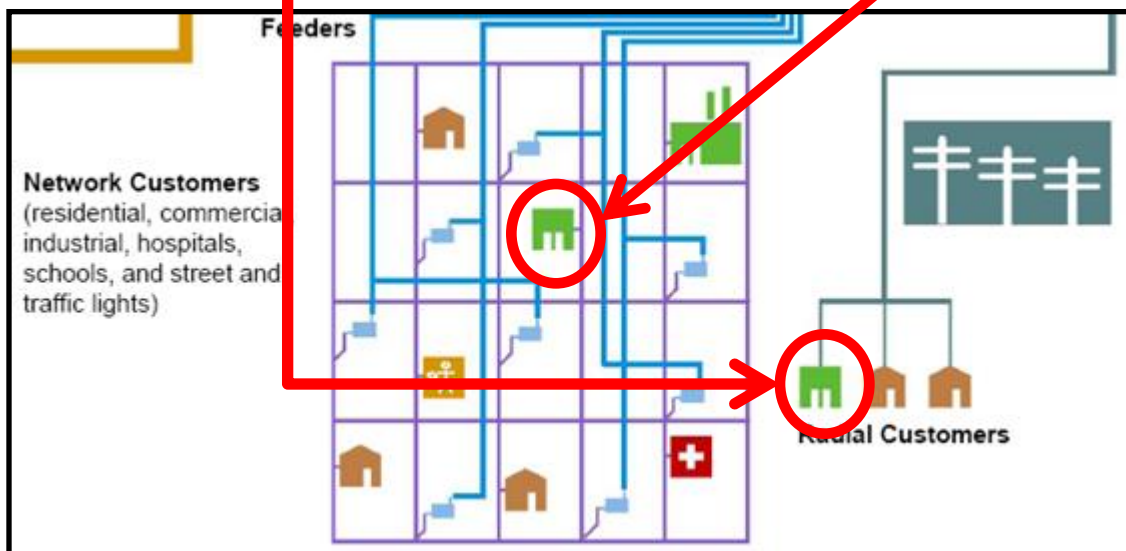
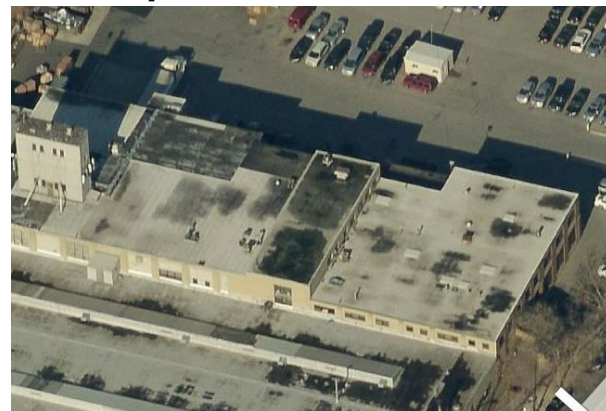
Radial



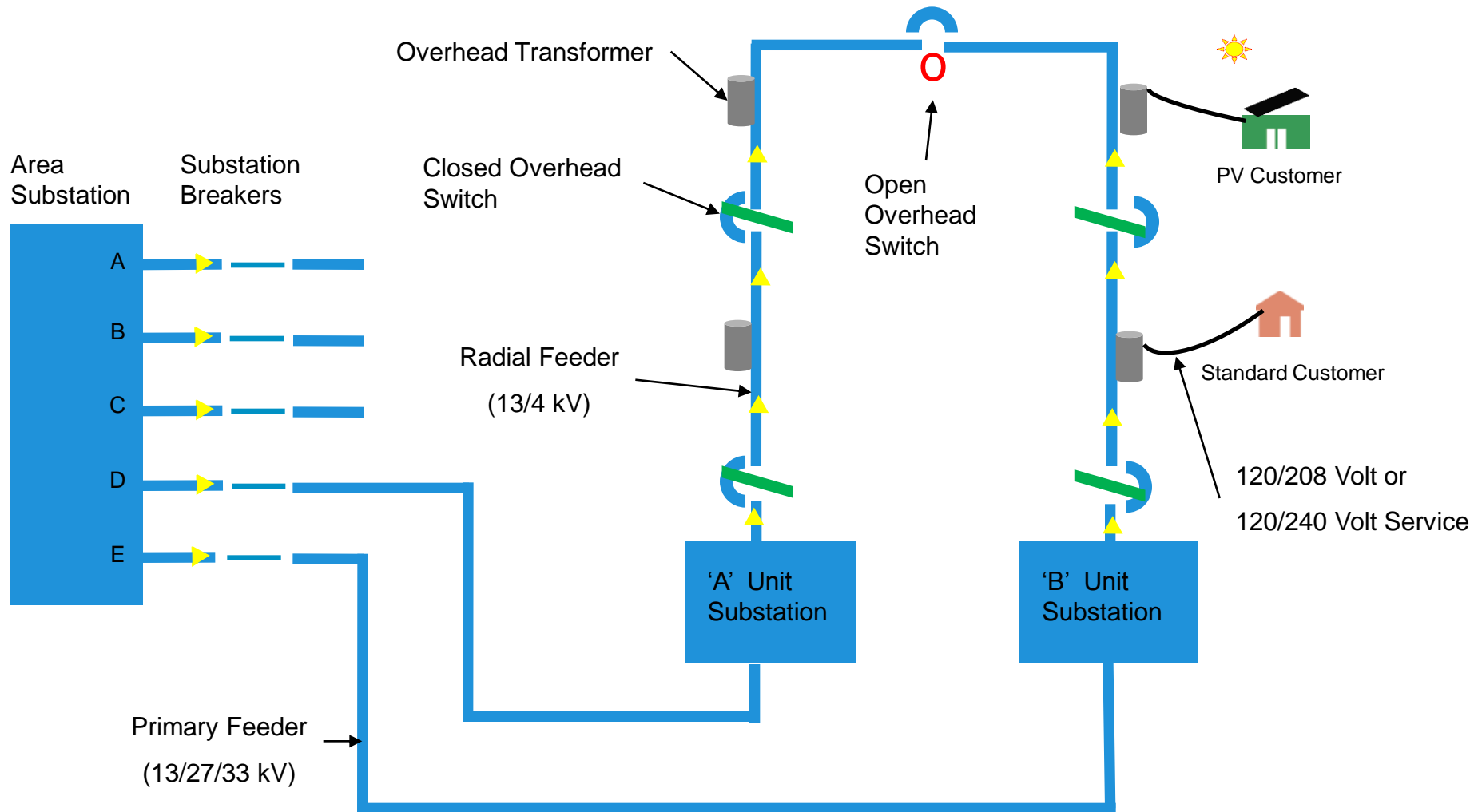
Network



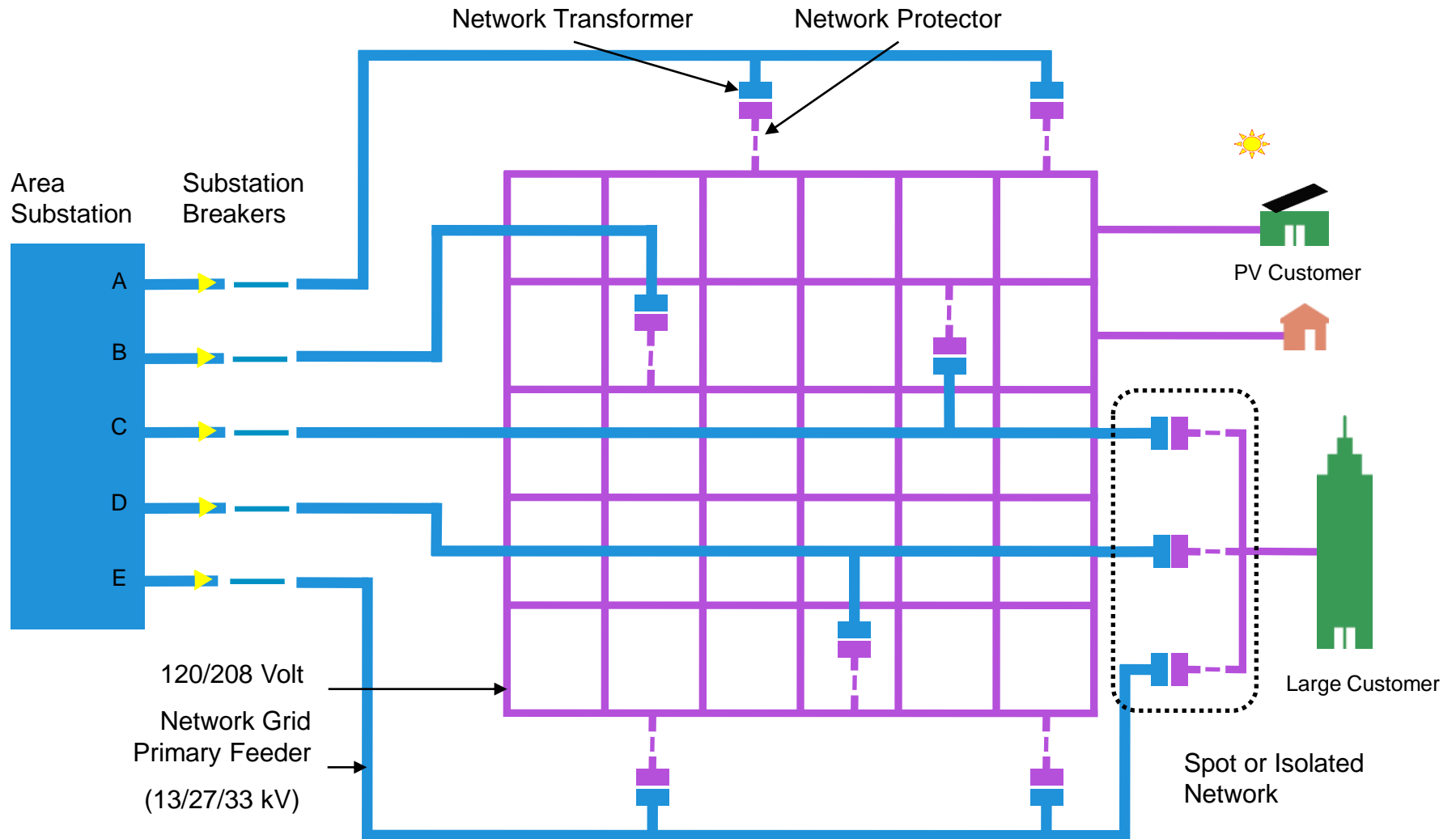
Spot/Isolated



Typical Con Edison Radial Network

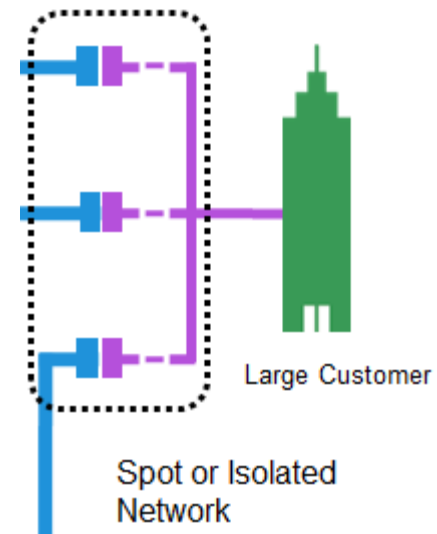
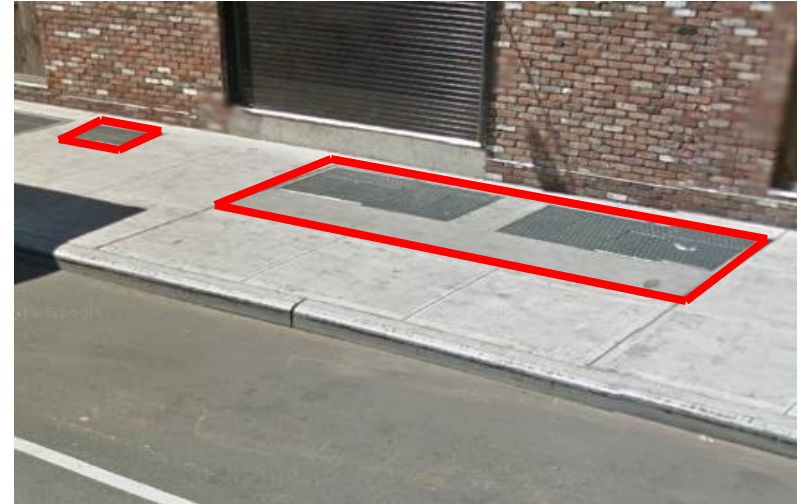


Typical Network Grid



Typical Isolated/Spot Network

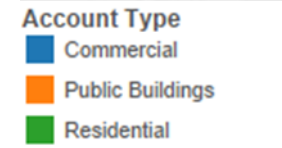
- Serve Larger Load Buildings with a Dedicated Service
- Cannot Accept Export without Major Upgrades
 - PV Pilot Program
 - Second Service (EDF)
- Highest Interconnection Costs to Accept Export
- Process often includes 60-day CESIR Review



Con Edison and Grid Ready

Goals

- Provide a Better Experience to Customers who Choose Solar
- Manage Installer Expectations
- Transparency into the Con Edison Technical Reviews
- Insight into the Complexity of the Con Edison Electric System



2016 PV YTD

Residential – 89%

Commercial – 10%

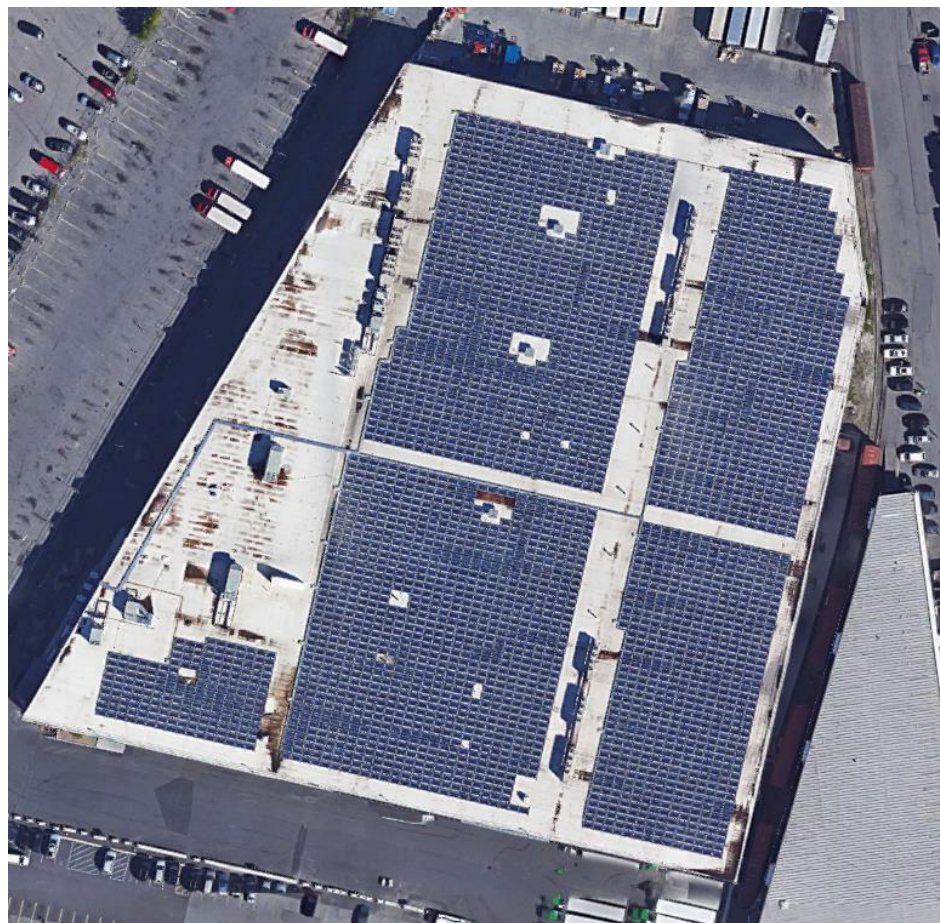
Public Bldg. – 1%

111MW Total

Grid Ready Evaluation Concept

200 kW to 2 MW

- Step 1
 - Identify Service Type
- Step 2
 - Evaluate existing Service Capacity for PV Export
- Step 3
 - Identify Local Area Network's Minimum Load Condition



Street View

Enter your address

49 5th Avenue, New York NY 10003

or jump to

New York City

Which best describes you?

- ☒ Residential
 ☐ Commercial
 ☐ Installer
 ☐ Municipal / Non-profit

GO



Calculator



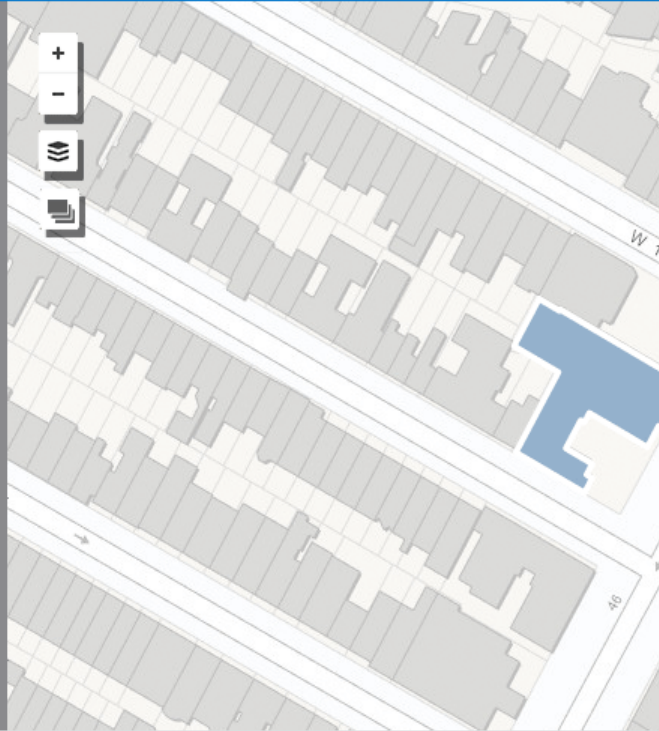
In Your Area



Solar Statistics



Advanced Tools



Summary

This building is on a spot or isolated network. In order to install the PV system size analyzed in Grid Ready, grid upgrades may be required to accommodate potential solar export.

Please review the [NYC Grid Ready Fact Sheet](#) for more information on spot networks and average costs incurred by the customer/developer to install a PV system.

Grid Ready Information

Building

Interconnection Technical Screen

Opportunity Factor Designation

Interconnection Preliminary Review

49 5th
Avenue,
Manhattan,
NY 10003

**Solar
Potential
Analyzed**

275 kW

Is the building on a Spot or Isolated Network?



Is the building's service capacity too small to accommodate potential PV export?



Is the minimum load in the surrounding area too small to accommodate potential PV export?

Additional Features to NYC Solar Map

- Customers
 - Understand relative ease/challenge to install a potential PV project.
- Installers
 - Upfront indication of potential interconnection issues.
- All users
 - Better understanding of Con Edison's complex electric system.



Ongoing Efforts for our Customers

- Innovative solutions for PV export at network transformers.
- Annual NYC Installer training at our Learning Center.
- 2015 Award-winning net metering video for customers.
- 2015 “Investor-Owned Utility of the Year”
- Fast Track Solar
 - Same-day approvals for most residential PV.
- Solar Progress Partnership
 - Joint filing between New York State utilities and three major solar companies proposing net metering successor tariffs.
- Clean Virtual Power Plant REV Demo Project



Thank you!

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