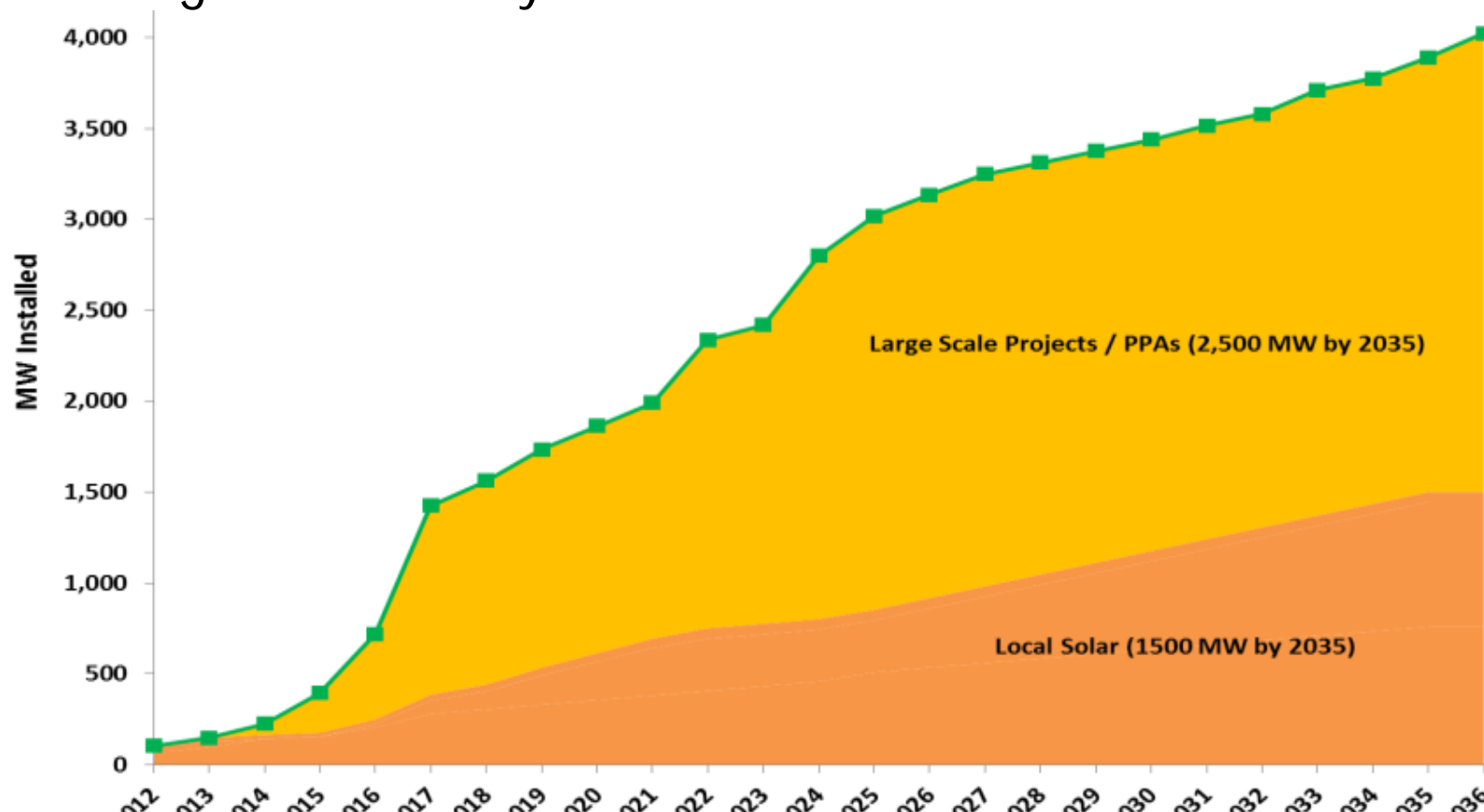


LADWP's Solar Programs

Martin Adams, LADWP Chief Operating Officer
APPA Public Power Forward Summit
December 11, 2017

LADWP's Projected Solar Mix

Combining large-scale solar plants and local solar programs benefits large populations and individual customers; spurs jobs and local green economy.



Solar Incentive Program (SIP)

In 1999, LADWP was among the first utilities in nation to launch an incentive program to spur customers to go solar.

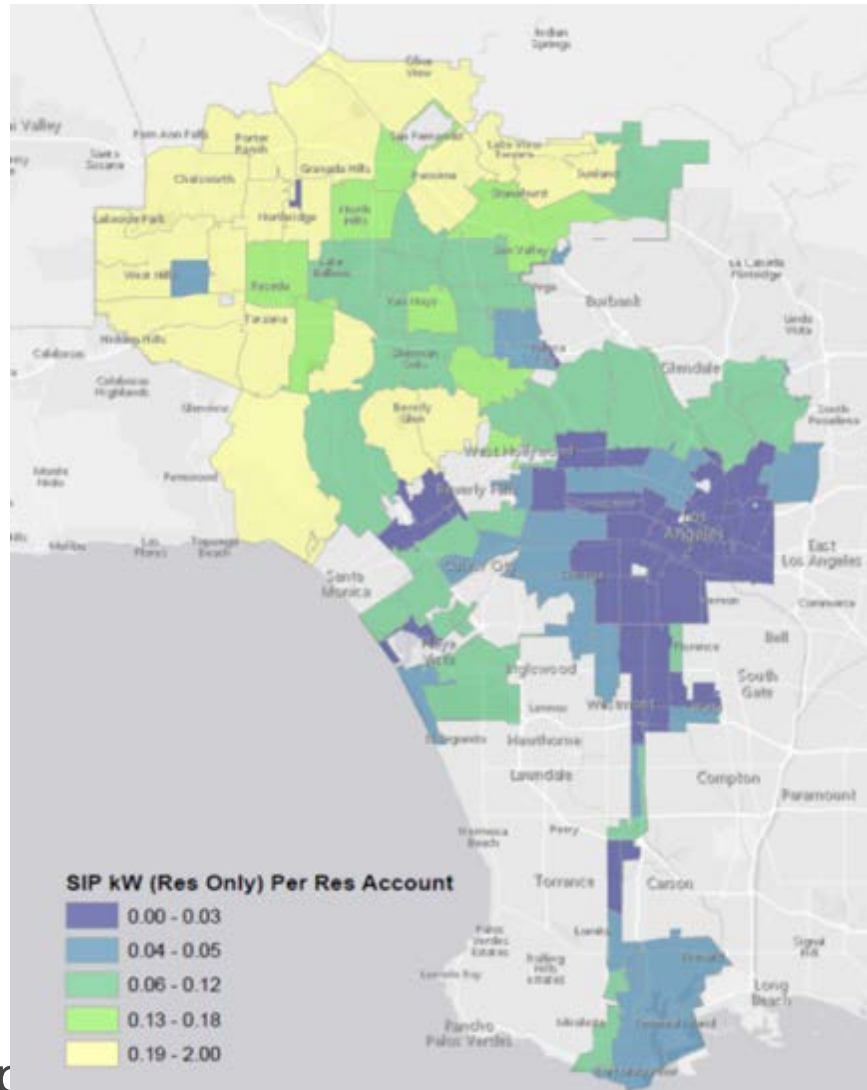
- Revised program in 2007 for SB 1
- Committed to provide \$313M for local solar incentives
- SB1 goal to achieve 280 MW
- In 2017, LADWP chose to extend incentives beyond 10-year mandate

Status:

- \$311M paid to date
- Over 32,500 LADWP customers participated
- 240 MW of net-metered solar installed



Solar Equity Programs



Added \$0.15 incentive to boost participation in LADWP's residential solar programs in communities which were not early solar adopters.

Areas with 0 - .05 kW of solar

Areas with .06-2.0 kW of solar

Feed-in Tariff (FiT) Solar

- FiT allows third-parties to build solar and sell back to LADWP
- Calif. legislation requires 75 MW FiT in LADWP service area
- In 2013, LADWP adopted goal of 150 MW, launching nation's largest municipal FiT program

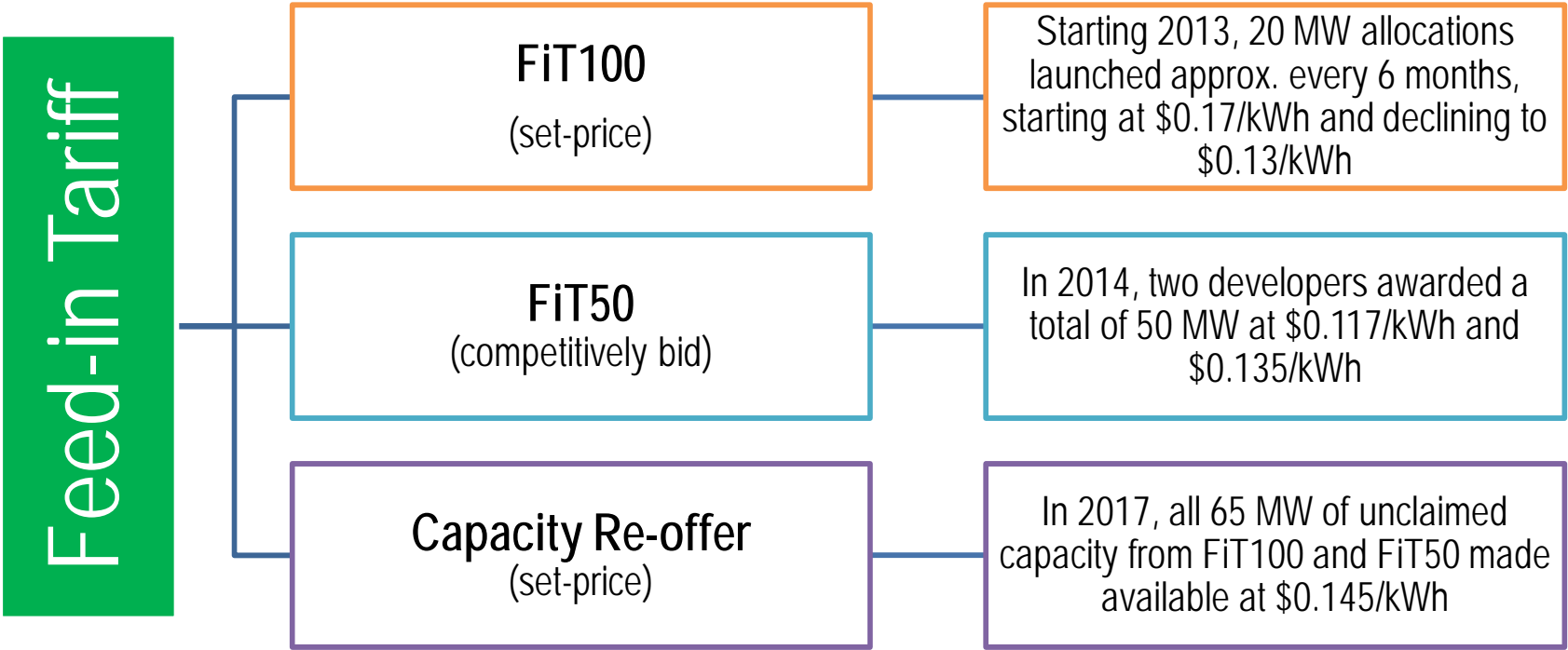


US Postal Service Solar, 10 MW



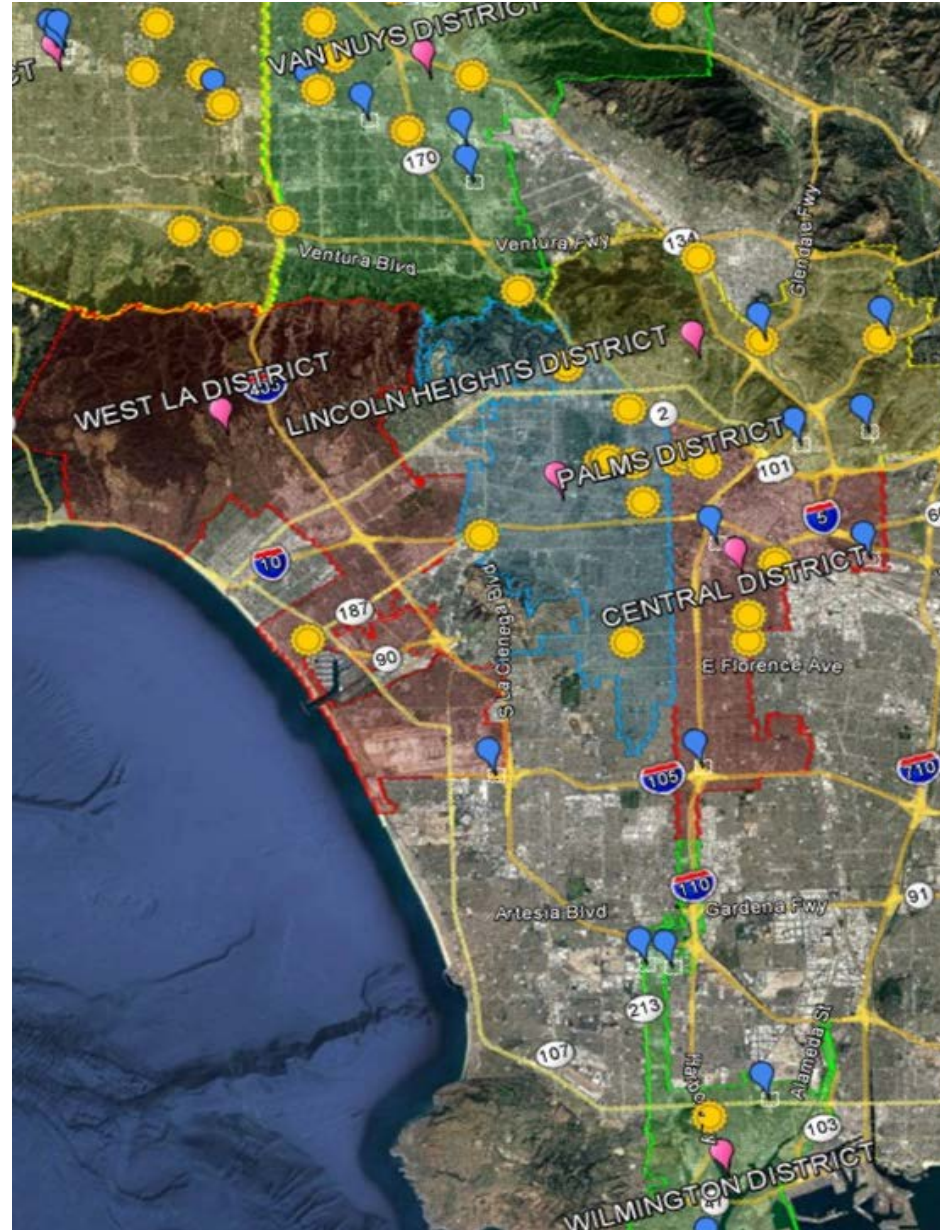
Westmont Solar, 15 MW

FiT Programs and Price Structures



FiT Status

- 40 projects in-service totaling 46 MW
- 65 MW under development
- 39 MW available at \$0.145 / kWh as of November 2017



Utility Built Solar

- LADWP builds, owns and operates solar projects on LA City/LADWP facilities
- Provides opportunities to gain technical experience in solar development for LADWP workforce
- Provides training opportunities through LADWP's Utility Pre-craft Trainee program
- Sets example to spur citywide solar adoption

Status: 42 projects installed, 26.1 MW capacity

Utility Built Solar

Adelanto Solar, 10 MW



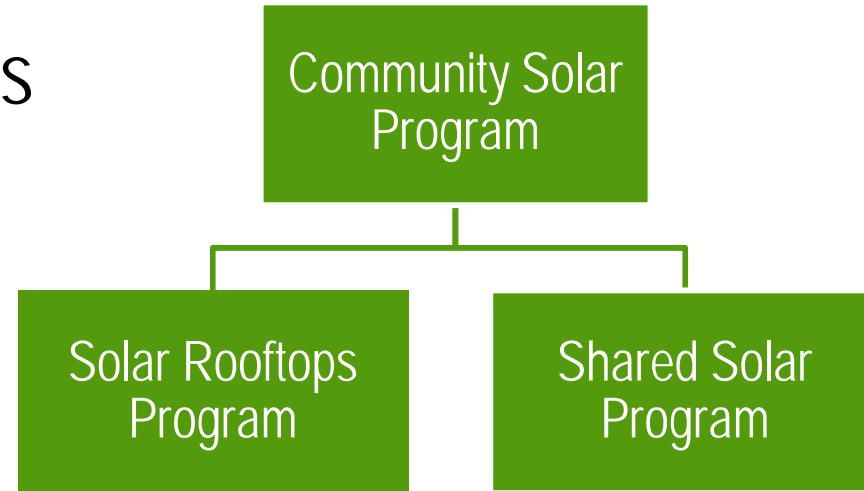
Utility Built Solar

Pine Tree Solar, 8.5 MW



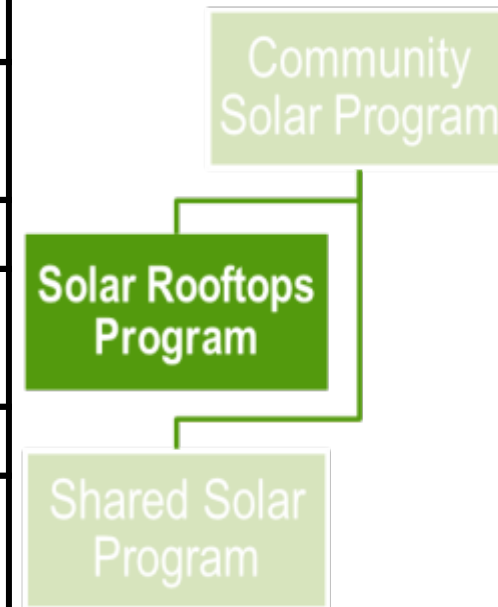
Community Solar Program

- Helps meet renewable targets
- Helps expand solar equity by creating more options
- Creates local jobs and job training opportunities
- Strengthens community relationships
- Supports the Sustainable City *pLAN*
- Allows us to better understand customer barriers



Solar Rooftops Program

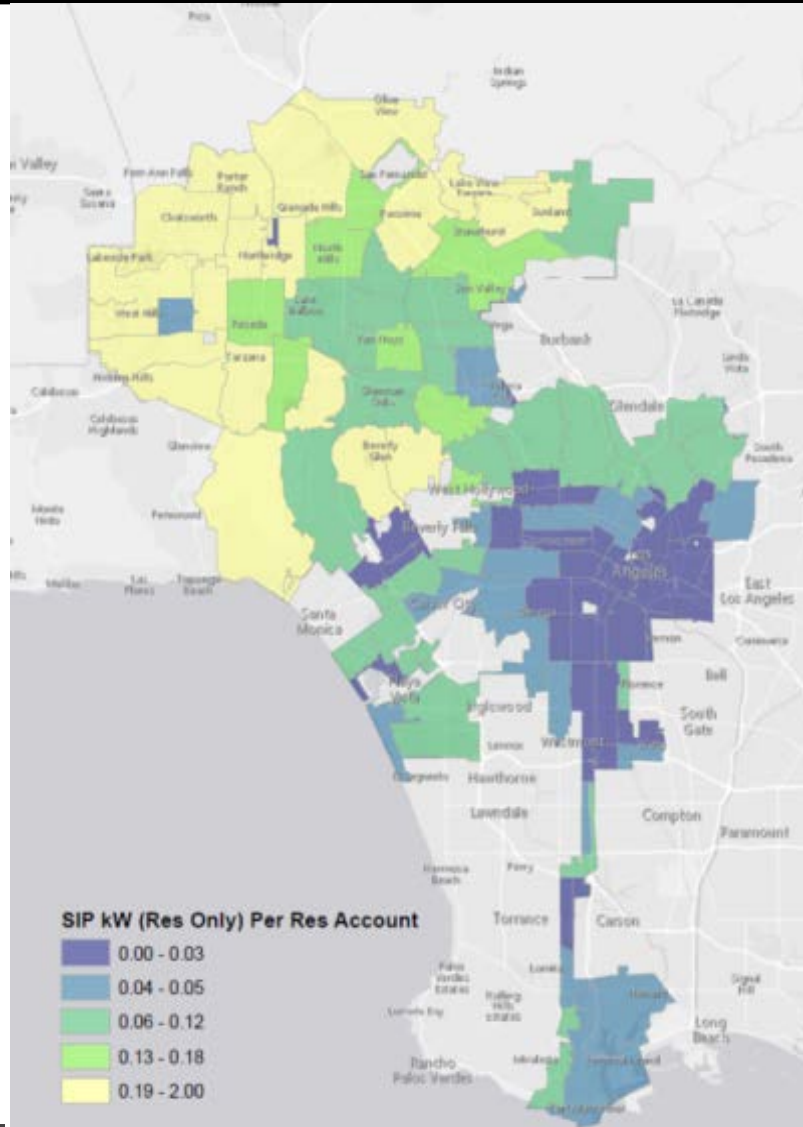
Launch Date	February 2017
Timeframe (# of years)	Up to 20 years
Program Capacity	Up to 1 MW
Estimated No. of Customers	300-400
System size	2-4 kW per system
Target customer	Residential Property Owners Priority given to customers in under-participation areas Applicants must pass home inspection(s)
Economic Compensation	Customers receive check or bill credit for use of their rooftop. Customer pays \$360 per year (\$30/month) for all PV system sizes.
O&M	LADWP's responsibility



Solar Rooftops Program



Participants in Areas of Low Solar Penetration Will Have Priority



Solar Penetration =

Total Installed Residential Solar
Incentive Program Capacity

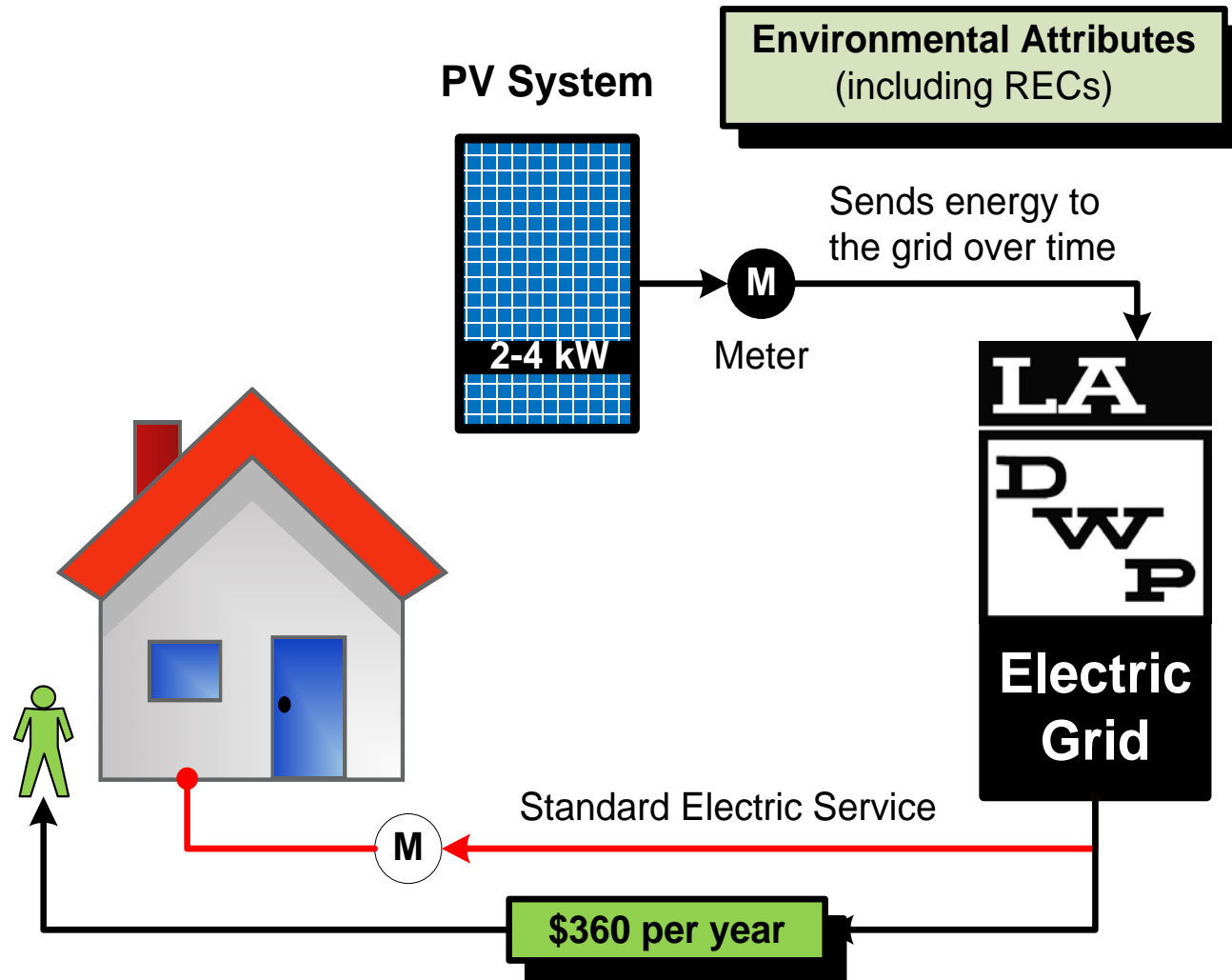
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Total Number of Residential Accounts

=

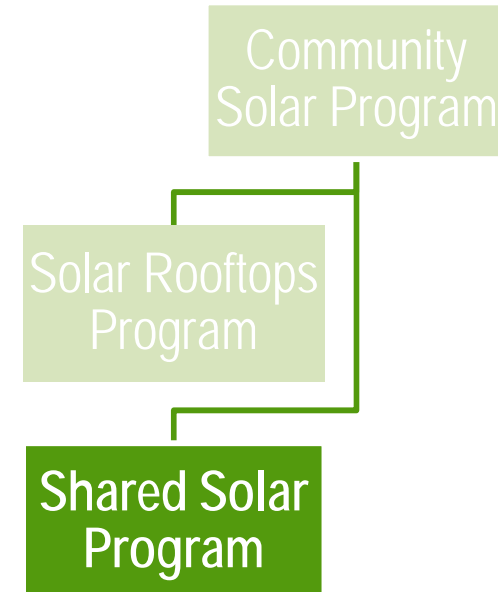
Kilowatts / Residential Account

Solar Rooftops Interconnection



Proposed Shared Solar Program

Launch Date	Expected launch in 2018
Program Capacity	Up to 2 MW
Estimated No. of Customers	~1,000
Fixed solar rate (\$/kWh)	TBD
Customer Type	Residential Property Owners, Condo and Apartment Owners and Renters Lifeline, Low-Income, Standard Residential
Economic Compensation	Customers will be able to offset energy costs at the SSP rate: \$0.16 per kWh (estimated)
O&M Costs	LADWP
Can customer take to a new address?	Yes, if a customer moves within LADWP's service territory



Benefits of Shared Solar

- Proposed program to allow customers unable to participate in other solar programs to subscribe and benefit from a “shared” solar installation
 - No maintenance requirements
 - No credit checks
 - Flexible participation
 - Available to renters
 - Customers can take subscription anywhere in LADWP service territory
- Program will provide a kind of “hedge” or bill certainty for participants

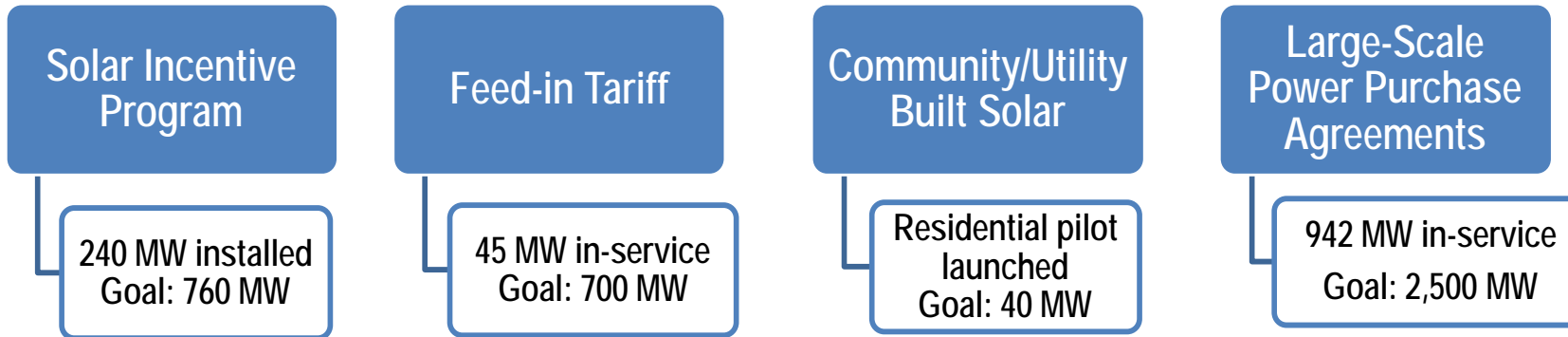


Challenges of Local Solar

Cost	More expensive than large solar
Integration	More fluctuations, harder to predict and integrate into grid
Accessibility and Equity	Economic and other barriers create equity challenges
Compliance	Not all local solar counts toward RPS targets

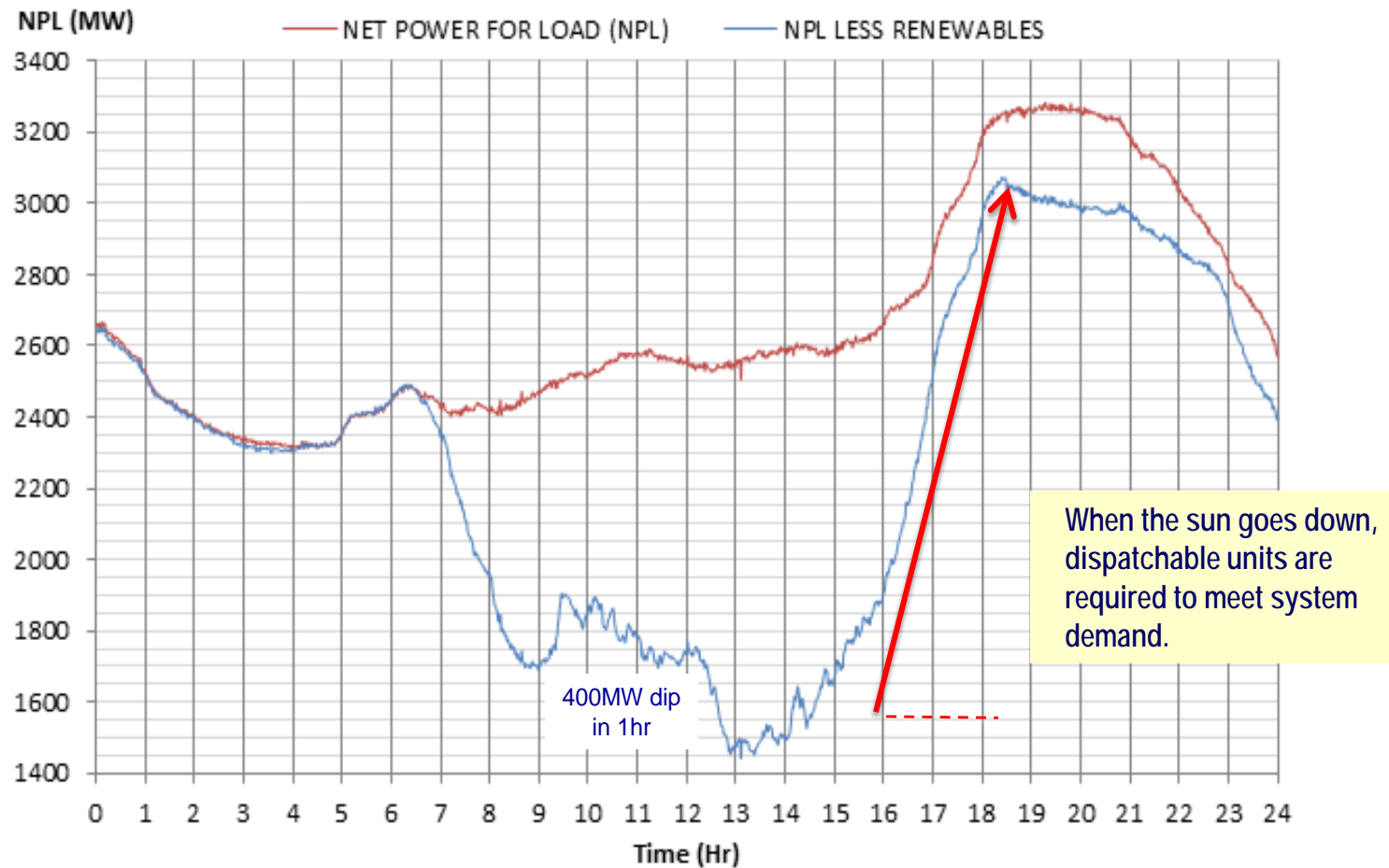


Solar Programs Summary



"Duck Curve" Challenge

Net Power for Load (NPL) for 02/26/2017



Questions?

