SUNVERGE

Renewable Made Reliable

Technical Conference on Energy Storage

May 26,2016

Company Background

FOUNDED
2009

HEADQUARTERED IN
SAN FRANSISCO

SEED (2009)
1st DEVICE INSTALLED (2010)
SERIES A (2011)
SERIES B (2014)
SERIES C (2016)

54
EMPLOYEES

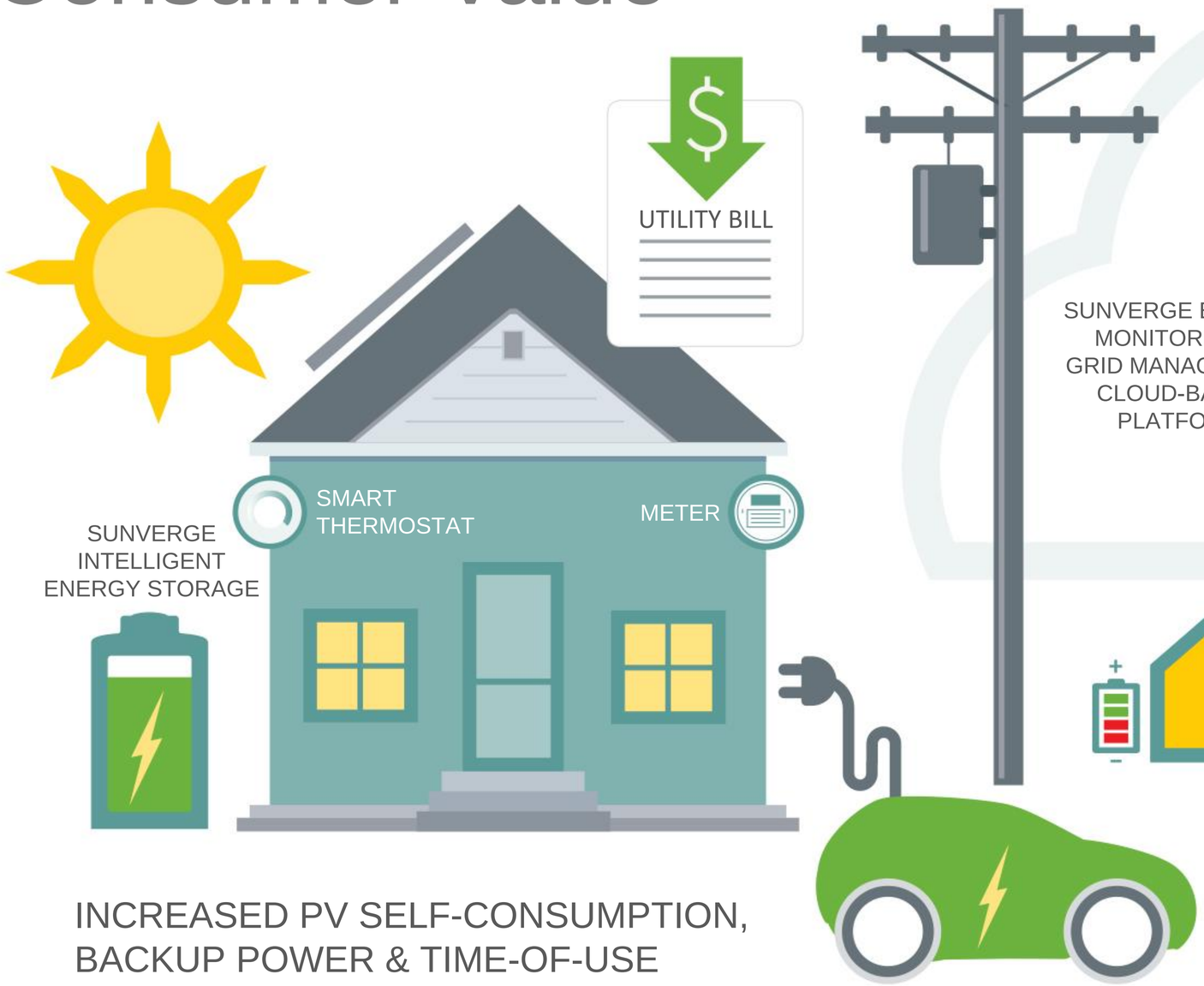
CUSTOMERS

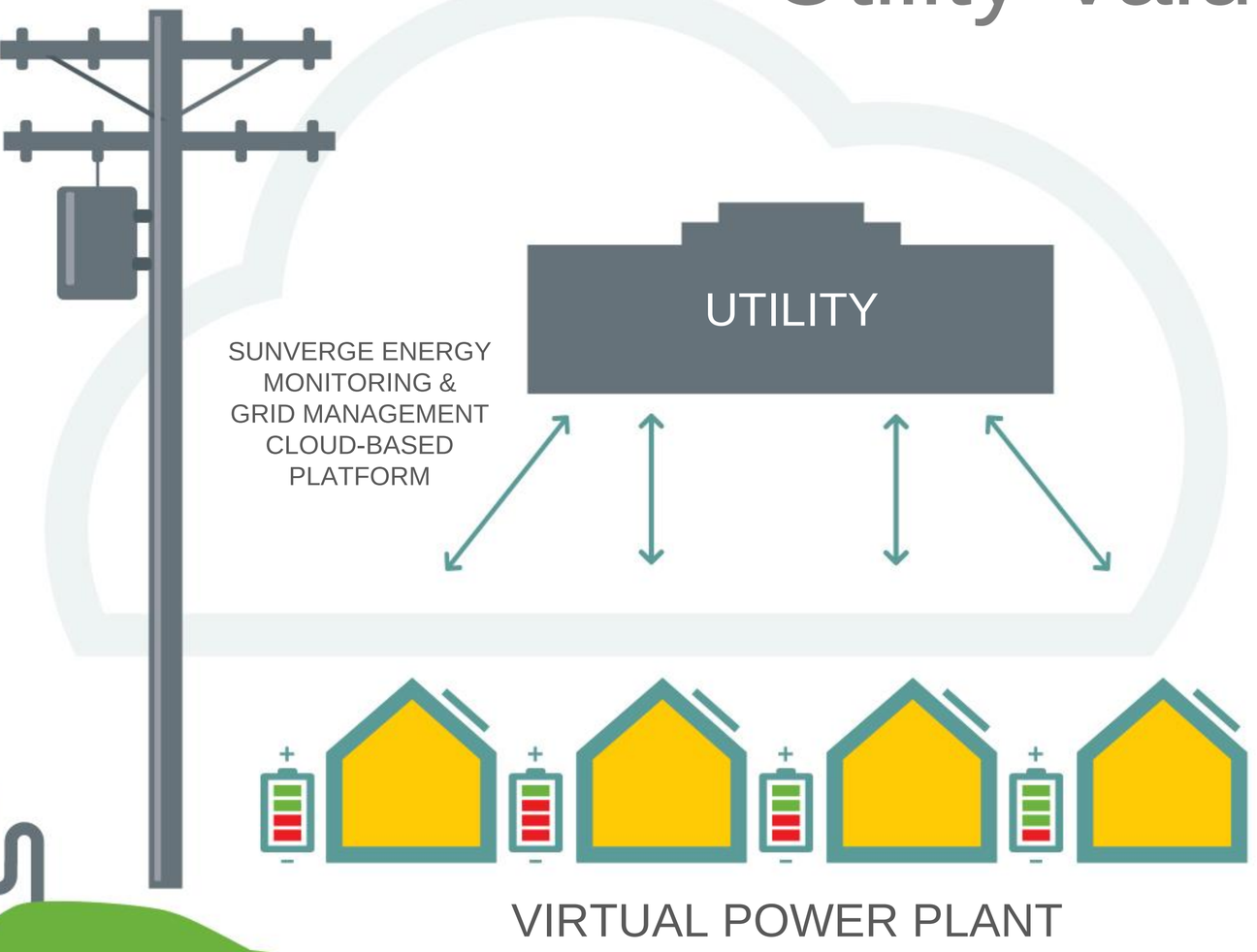
North America
(AZ, CA, HI, KY,
NY, NV & Canada)
New Zealand
Australia
South Korea
Germany

Powering the next energy revolution

Consumer Value

Utility Value





INCREASED PV SELF-CONSUMPTION, BACKUP POWER & TIME-OF-USE BILL MANAGEMENT

AGGREGATE & ORCHESTRATE FLEET OF DISTRIBUTED ENERGY RESOURCES

Fleet Performance

6.0

MWh

MWh of distributed storage under management

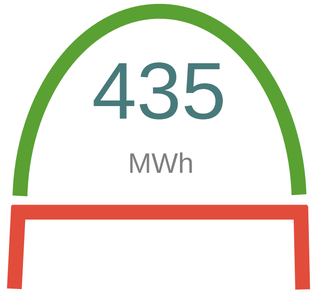
2.5

MW

MW of distributed solar under management

13,000

Hours of backup power delivered



MWh of peak load reduction (5pm–8pm)

Average production uptime (last 30 days)

Sunverge Consumer & Grid Services

Analytics: Each SIS serves as a “SCADA-sensing node” for its location. Discrete and aggregated data delivered to utilities and grid operators assist with optimizing the operation of the grid to minimize power losses and maximize efficiency across such areas as outage management, system modeling, ADMS and other real-time applications.

Demand Response: Dispatch power to the grid and reduce demand through signals to the home energy management systems & other distributed energy resources.

Demand Management & Peak Load Reduction: Time-shift energy generated from PV or drawn from the grid to maximize peak load reduction at individual customer sites.

Fast Frequency Regulation: Through integration with ISO or utility energy management systems, SIS units respond to regulation signals on a per-second basis.

Local Backup Power Supply: In the event of power loss, the SIS unit automatically isolates from the grid and delivers its own power to the site without any interruption in service or loss in power quality.

Solar Management: By supplementing the intermittent nature of solar with battery-stored energy, or by limiting solar exports to the grid through intelligent control, each SIS unit makes solar generation more reliable, predictable and stable.

Voltage Optimization: Each SIS unit respond to needs for voltage control by injecting or absorbing real or reactive power at the place its needed most: nearest to the load.

Clean Virtual Power Plant:
SunPower, Sunverge & Con Edison

PROJECT DESCRIPTION

Upon deployment, VPP Pilot to consist of 1.8MW of VPP capacity (4 MWh) to test resilience, tariff design, market mechanisms and network value and rate design.

PROJECT GOAL

- REV demonstration project is designed to demonstrate how aggregated fleets of solar + storage assets in hundreds of homes can collectively provide network benefits to the grid, resiliency services to customers, monetization value to Consolidated Edison .
- Provide utility customers with new, high-value service offering and enhanced benefits.

CLEAN VIRTUAL POWER PLANT

conEdison

1.8 MW SOLAR AND STORAGE VIRTUAL POWER PLANT

Clean Energy Leverage

- **Value?** Storage is critical component of renewables value stack
- **Multiplier?** Increased renewable capacity (not only production)
- **“REC”?** Storage is a preferred resource in the “new” New York
- **REV Track 2 Order:**
  “Utilities should have earning opportunities tied to reducing the overall cost of achieving the CES goal.”

What are pragmatic ways to incorporate storage into New York’s REC regime?

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