



Community Solar

The Role of Photovoltaics
In A Community's Renewable Generation Portfolio

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About SunEdison

Experience

- 450+ employees in North America
- HQ in Maryland, offices in New Jersey, California, Colorado, Hawaii, Canada, and Spain

Service

- Non-residential
- Largest turn-key service provider in North America
- No capital outlays
- No ongoing maintenance costs
- Predictable electricity prices over a 20 year term

SunEdison Noteworthy Activities

- Developing Canada's largest solar farm (9.1 MW) in Ontario.
- 8.2 MW solar plant in Alamosa, the largest solar substation in the US
- 22 MW solar plant to be built for Duke Energy in North Carolina



Photovoltaics (PV) Have Arrived—Power for 1,500 Homes



The PV Myth - Too small and Too expensive

Distributed Generation Deployment: The California Solar Initiative (CSI)

- Over 300 MW Grid-connected PV
 - » CSI and Previous Programs
- Of the 11,653 CSI Applications received:
 - » 90% Residential (50 MW)
 - » 7% Commercial (153 MW)
 - » 3% Gov't or Non-profit (48 MW)



U.S. Utility Scale PV Deployment

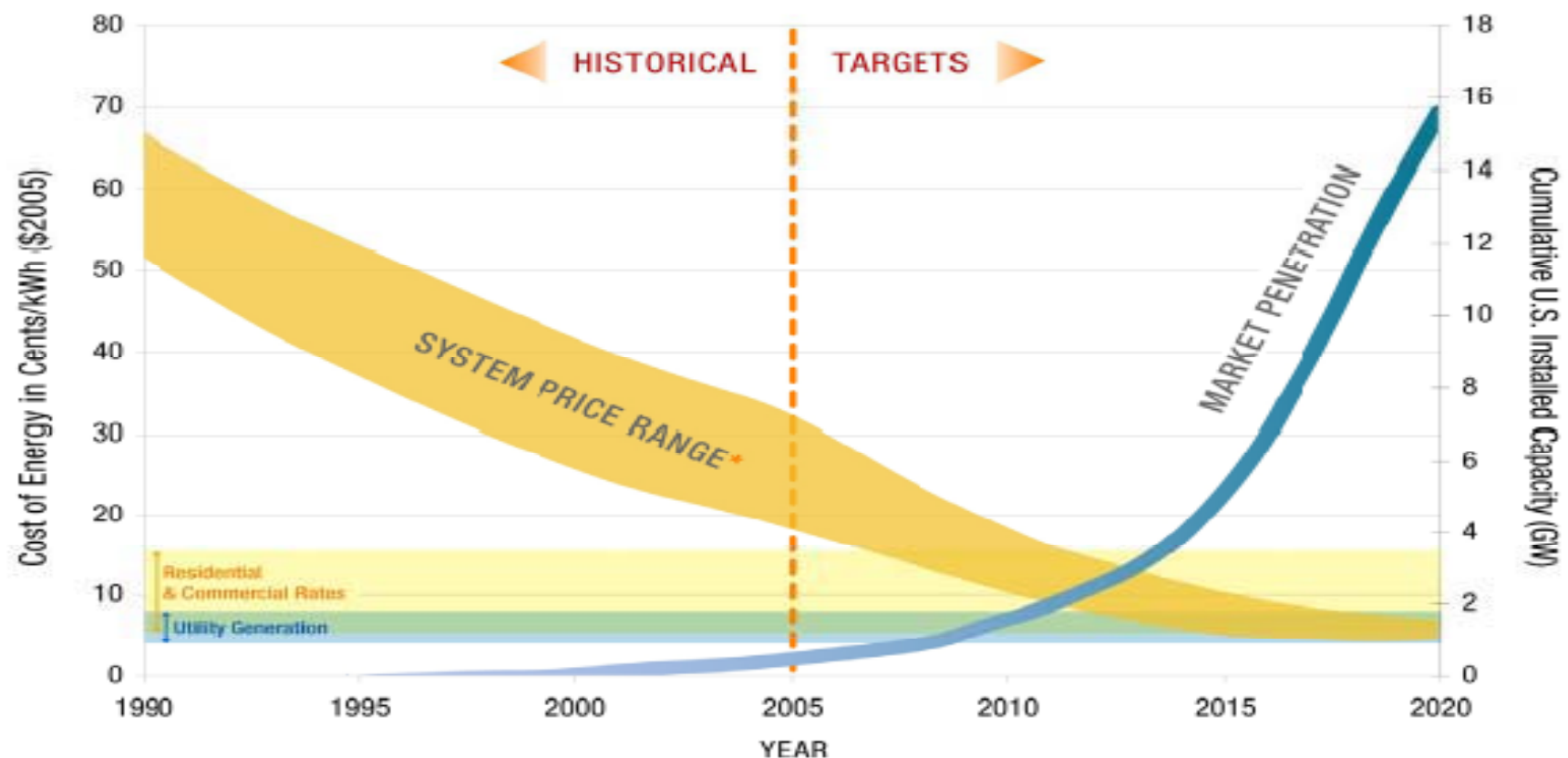
- Xcel Energy (CO) 8.2 MWs
- Nevada Power (NV) 14 MWs

Announced:

- SCE (CA) 21 MWs
- Duke Energy (NC) 22 MWs
- FP&L (FL) 35 MWs



PV System Costs are Declining

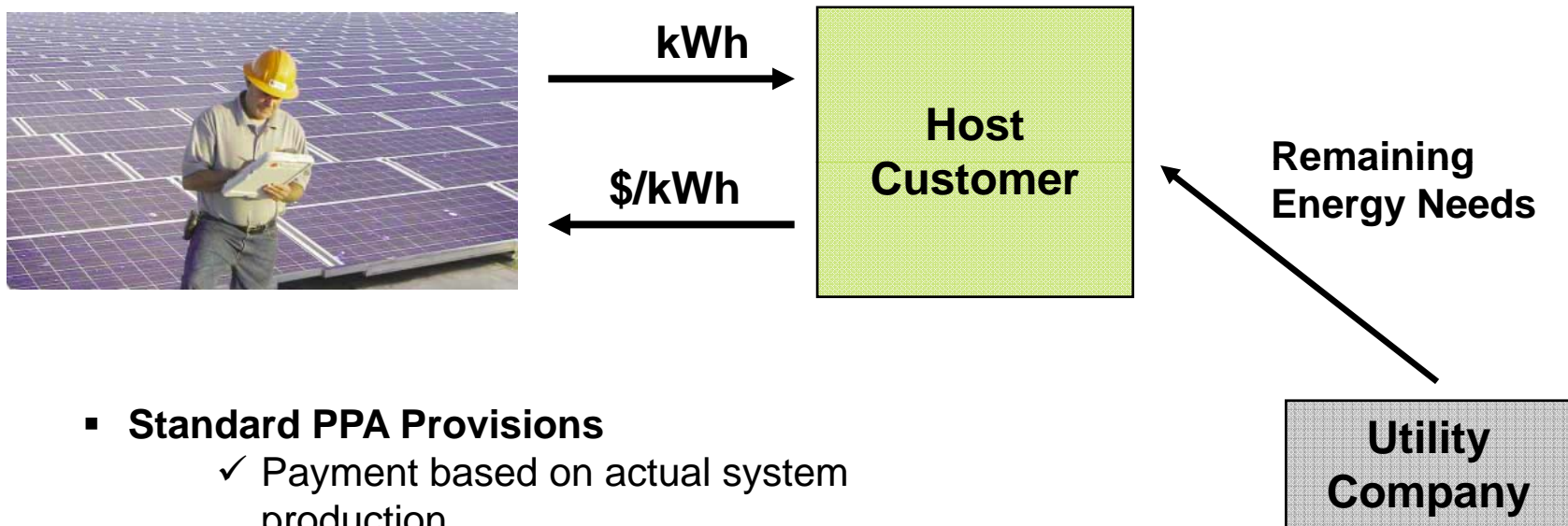


Market Sector	Current U.S. Market Price Range (¢/kWh)	Cost (¢/kWh) Benchmark 2005	Cost (¢/kWh) Target 2010	Cost (¢/kWh) Target 2015
Residential	5.8-16.7	23-32	13-18	8-10
Commercial	5.4-15.0	16-22	9-12	3-8
Utility	4.0-7.6	13-22	10-15	5-7

From: Solar Energy Industry Forecast: Perspectives on U.S. Solar Market Trajectory; US DOE 5/27/08

New Financing Tool: Power Purchase Agreements

▪ Many Kinds of Power Purchase Agreements (PPA)



▪ Standard PPA Provisions

- ✓ Payment based on actual system production
- ✓ 20 Year term and early termination provisions
- ✓ Removal of system at contract termination
- ✓ Malfunctions and emergencies
- ✓ Disposition of RECs / Green Claims
- ✓ Financing provisions, assignment

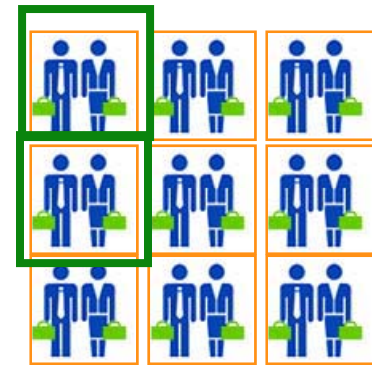
Community Solar: A New Deployment Model



Bundled Energy
& Environmental
Attributes

**Your
Local
Utility**

Fixed Energy
Costs



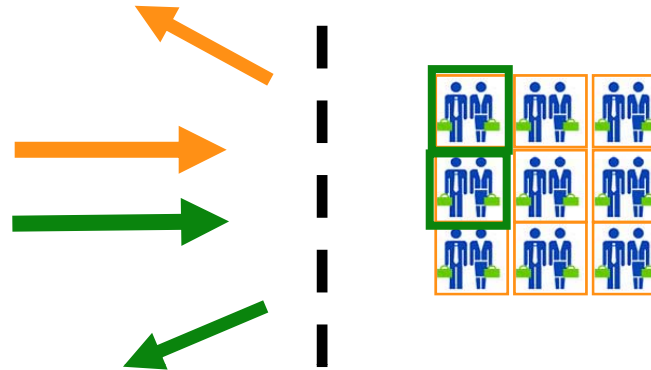
California's
Renewable
Energy Goals

Community Solar Installations: A New Utility Service?

- **Establish Community Solar Parks on open areas in targeted neighborhoods or brownfield sites (e.g., land fill, military base, etc.).**
- **Utilities purchase power directly from Solar Park at a fixed rate via special purpose tariff or bilateral agreements.**
- **Utilities pass the benefits through to participating customers via Solar Tariff.**
 - Significant community interest among customers who rent, live in multi-tenant housing or can't site solar on their house.
 - Effective tool for reaching low income customers.
- **There are different billing/crediting options:**
 1. Fix the entire electric bill for 20 years.
 2. Fix the rate paid for the energy portion of the bill .

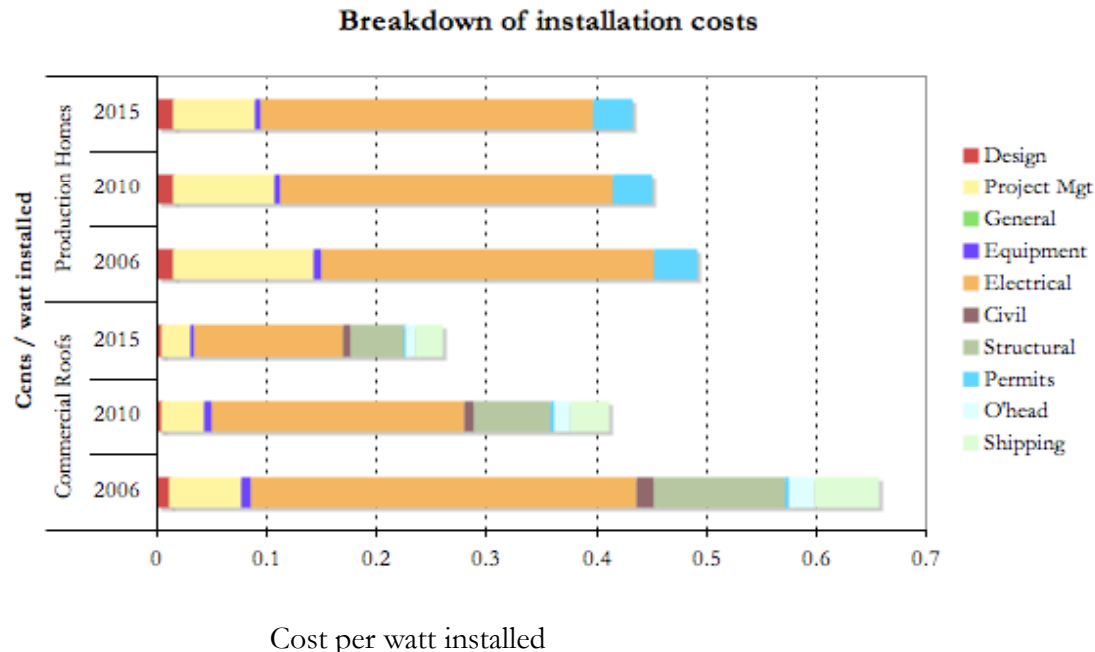


Community Solar: What's in the Way?



- Community choice aggregation (CCA) was supposed to provide Communities with renewable generation options. Other options haven't been developed.
- Electricity sales to retail customers by anyone other than the Utility Distribution Company are considered Direct Access transactions.
- “Wheeling” power from a community-based renewable generator to individual customer accounts would require new tariffs and investment in utility billing systems.

What Else Can Communities Do?



- State/local governments and utilities can have major impacts on the local price of solar electricity by reducing installation costs
- Solar production is global but every installation is local

State/local governments and utilities can promote solar by:

- streamlining solar permitting
- facilitating interconnection to the grid
- establishing solar-friendly net metering regulations
- banning homeowner association restrictions against solar
- establishing installer and code official training centers at community colleges
- offering tax incentives (sales, income, property) to solar purchasers
- creating public outreach and information campaigns

Alamosa, CO – 8.2 MW Photovoltaic



Thank you!

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