California Energy Commission

Segmenting the Governor's Localized Energy Goal

Governor's Local Renewable Power Working Conference

UCLA's Grand Horizon Ballroom

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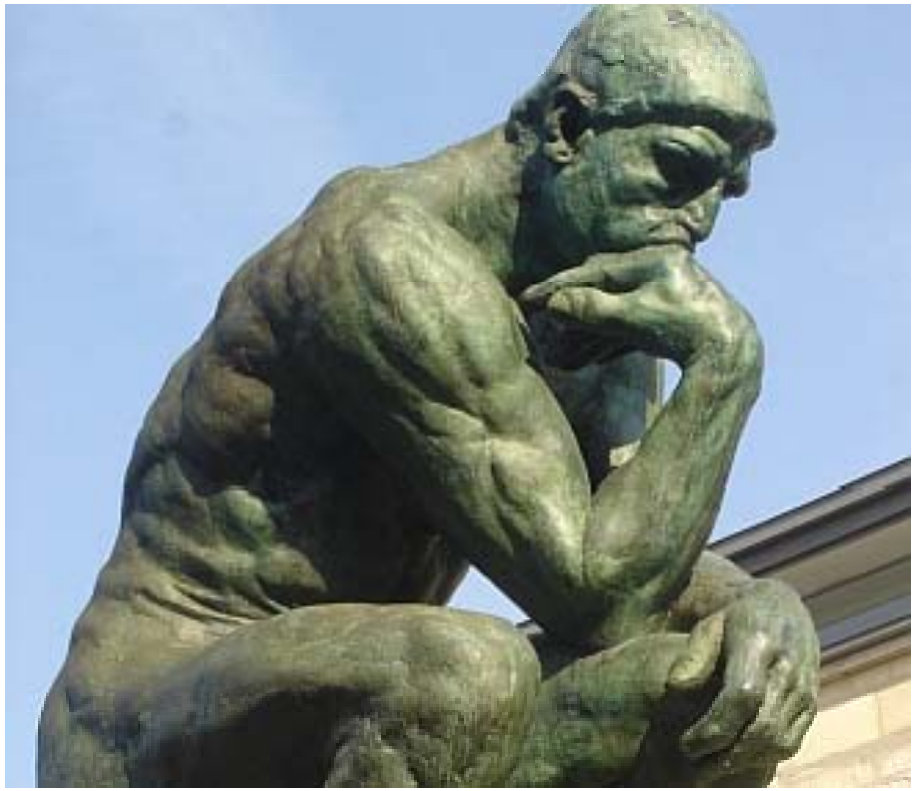
Why Make Regional Targets?



Choices for Designing Regional Targets

- Resource Potential
- Market Trends and Local Policy
- Cost
- Economic Development
- Reliability
- Capacity Retirements
- Age of Distribution Grid
- Local Permitting
- Job creation in Low-income Communities

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Wholesale vs. Behind the Meter
Rural vs. Urban
Solar vs. Other Technologies

What do we mean by Localized Electricity Generation?

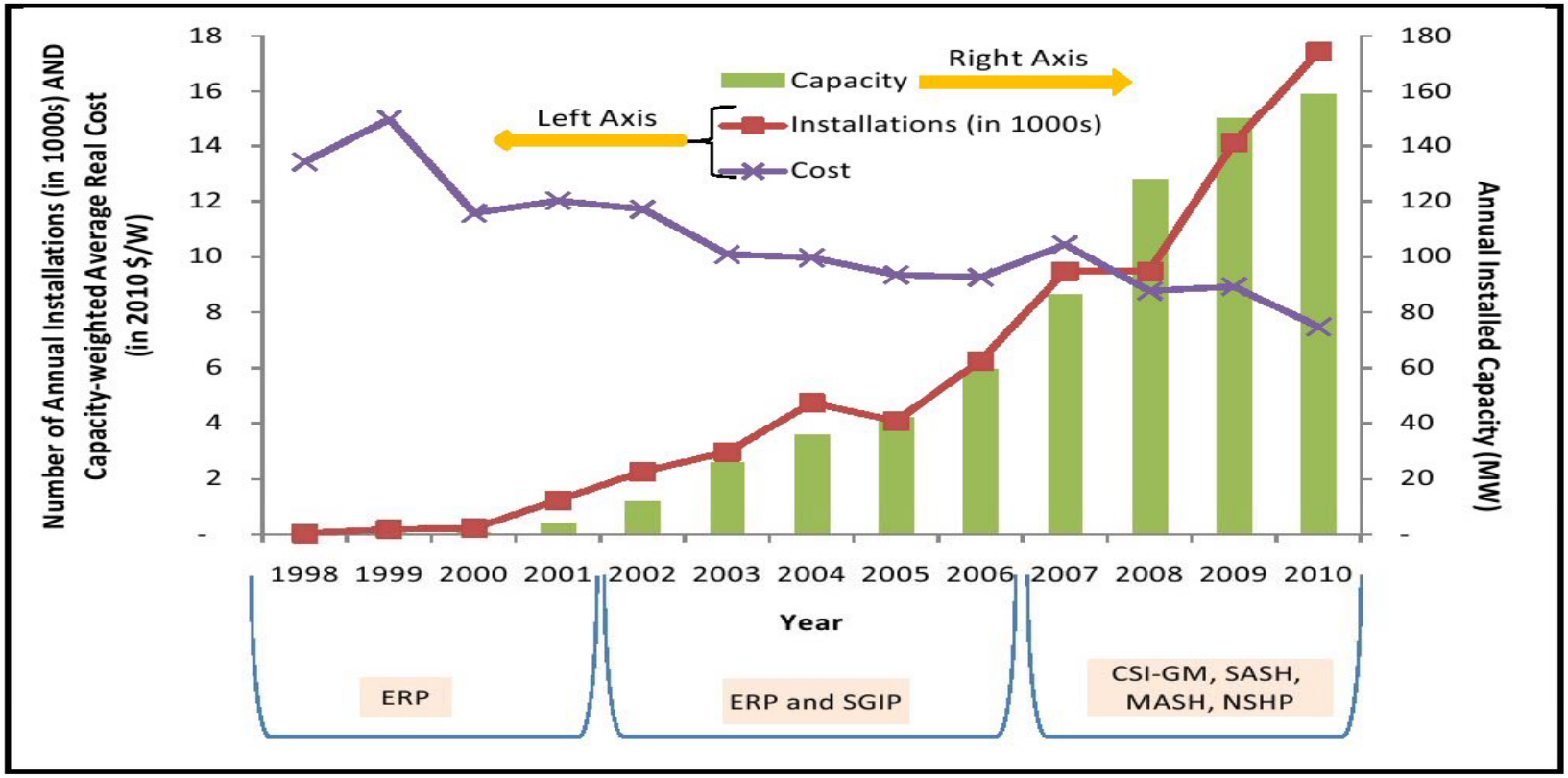
- Electricity generation from an in-state renewable electrical generation facility that is 20 MW or smaller. The facility is located close to where electricity is consumed and may generate electricity for use on-site or generate wholesale electricity.

Allocations

- Behind the Meter
- Wholesale Localized Electricity Generation
- Undefined Mix

Solar Market Trends

Figure ES-2: California IOU Public Purpose Program PV Systems—Trend in Annual Installed Capacity, Number of Installations, and Costs



Source: CPUC California Solar Initiative 2010 Impact Evaluation Final Report http://www.cpuc.ca.gov/NR/rdonlyres/E2E189A8-5494-45A1-ACF2-5F48D36A9CA7/0/CSI_2010_Impact_Eval_RevisedFinal.pdf

Behind the Meter - Solar

- Used installation trends from California Solar Initiative and extended until 2020 for existing residential and commercial solar PV potential
- Assumed 50% of new residential homes install 2 kW system by 2020
- Assumed POUs meet 700 MW from SB 1 in 2020
- Multi-family low income – assumed build-out at the same pace as MASH incented (240 MW)
- Single-family low income – used Navigant study on eligible SASH homes in Enterprize Zones (320 MW)

Behind the Meter – Other Technologies

- Used actual Self-Generation Incentive Program and Emerging Renewables Program data for installations 2007 through present
- Biogas: estimated for dairies with greater than 6,000 cows, or about 1 MW
- Wind: based on data from Foundation Windpower

Wholesale Generators

- Included projects with contracts from 2007 and later and began commercial operation after January 1, 2007
- Used Energy Commission's IOU[1] and POU[2] contract databases
- Used Renewable Energy Action Team's database tracking renewable projects going through local permitting

1 http://www.energy.ca.gov/portfolio/contracts_database.html
2 http://www.energy.ca.gov/2008publications/CEC-300-2008-005/index.html

Undefined Mix

- Technology neutral as well as for onsite load or wholesale
- Used LLNL resource potential maps from the California Renewable Resource Portal
- Limited the capacity in each region to 15% of peak for each circuit using IOU data for RAM
- Targeted at urban areas

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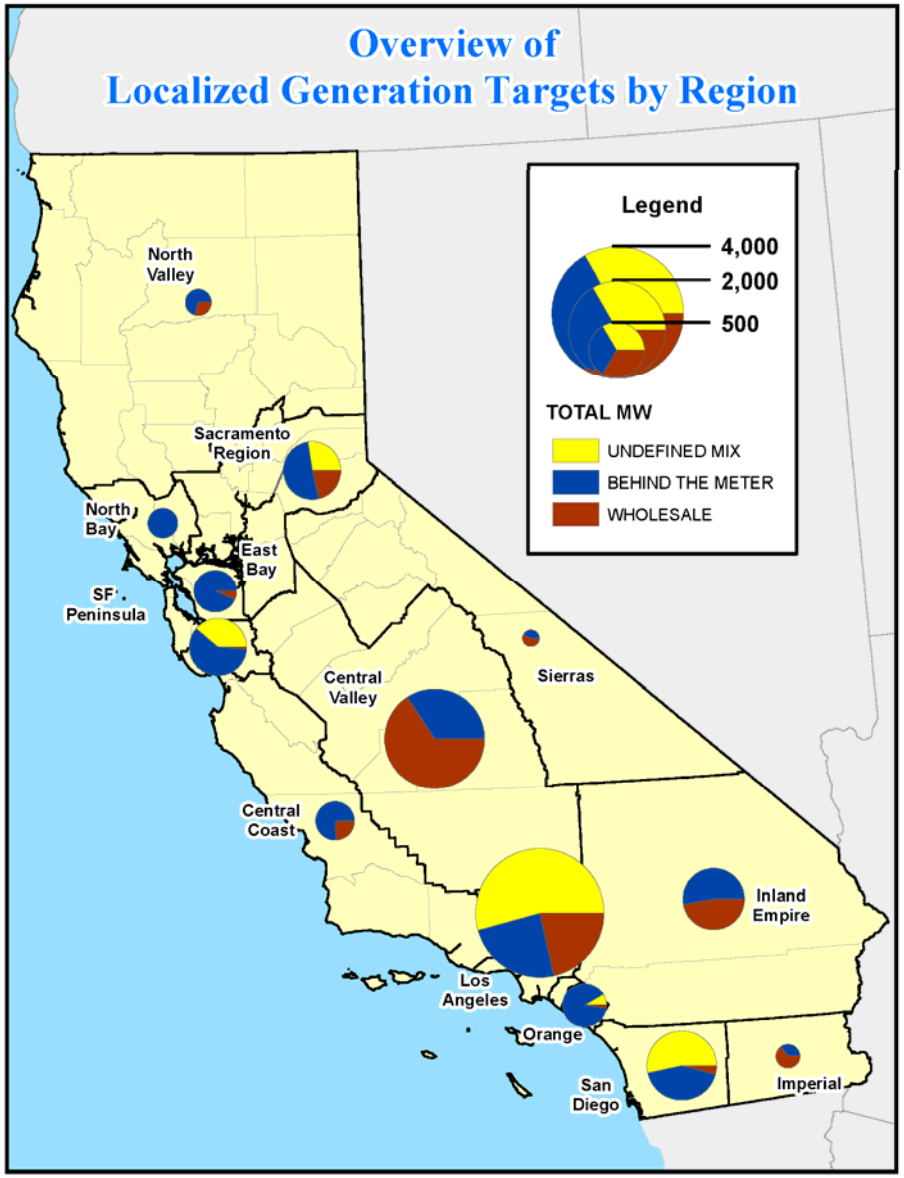
Summary of Proposed Region Targets by 2020

Region	Behind the Meter	Wholesale	Undefined Mix	Total
Central Coast	280	90	0	370
Central Valley	830	1,590	0	2,420
East Bay	420	30	0	450
Imperial	50	90	0	140
Inland Empire	480	430	0	910
Los Angeles	970	860	2,170	4,000
North Bay	220	0	0	220
North Valley	120	50	0	170
Sacramento Region	410	170	220	800
San Diego	500	50	630	1,180
SF Peninsula	480	10	310	800
Sierras	30	40	0	70
Orange	420	10	40	470
Total	**5,210**	**3,420**	**3,370**	**12,000**

Localized Electricity Generation Allocated by Region and Type:

- Wholesale
- Behind the Meter
- Undefined Mix