

California's Public Goods Charge



The Renewable Resource Trust Fund



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History of the Renewable Energy Program



1996

AB 1890 required large IOUs to collect **\$135 million/year** from their ratepayers from **1998–2001** to support renewable resources.

1997

SB 90 created RRTF as funds depository and created **Renewable Energy Program** to distribute the funds.

2000

AB 995 and SB 1194 extended collection of **\$135 million/year** from **2002-2011**.

2002

SB 1038 authorized Energy Commission to use funds collected from **2002-2006** for continuing Renewable Energy Program.

2006

SB 1250 authorized Energy Commission to use funds collected from **2007-2011** for continuing Renewable Energy Program.

CA's Renewable Energy Program



Long-term goal of a fully competitive and self-sustaining California renewable energy supply

Existing Renewable Facilities Program

Emerging Renewables Program

Consumer Education Program

New Renewable Facilities Program

Customer Credit Program

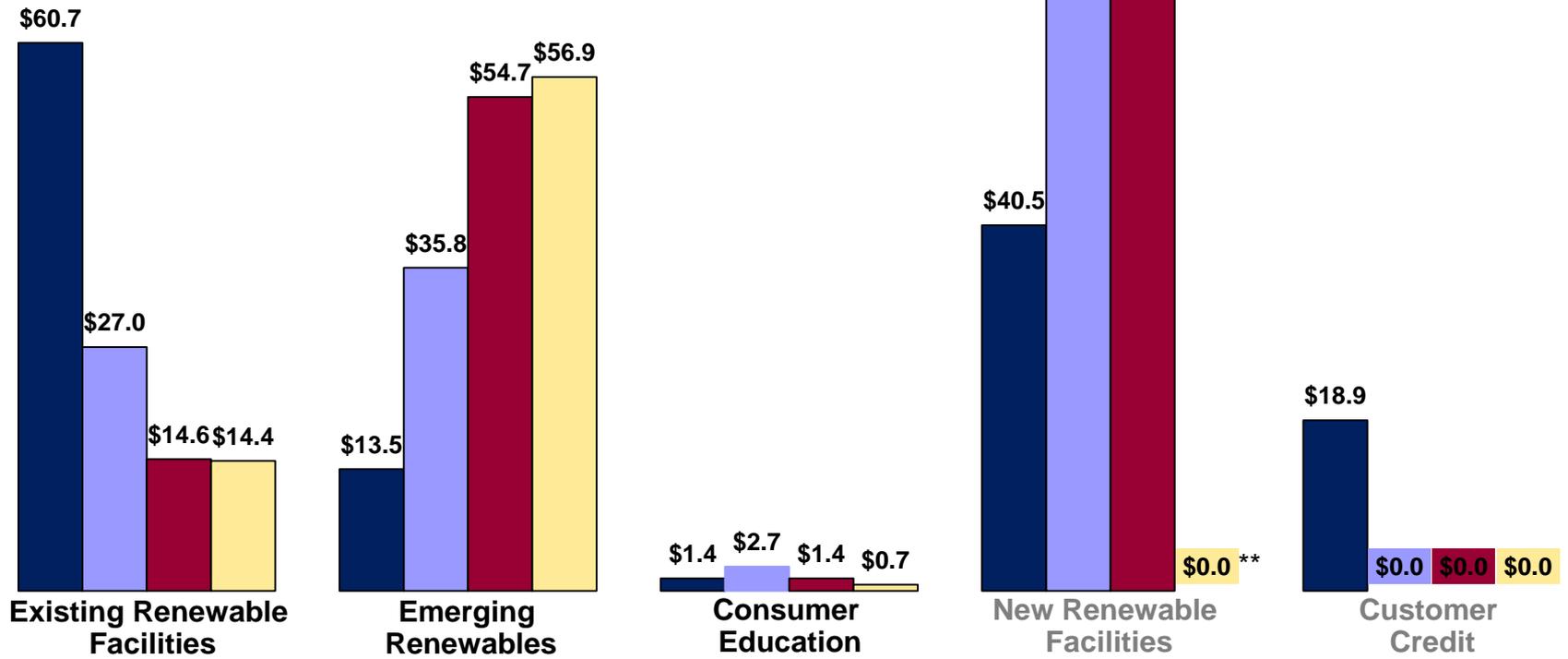
The REP is legislatively mandated to:

- Optimize public investment and ensure most cost-effective and efficient investments in renewable resources are vigorously pursued.
- Increase quantity of California's electricity generated by renewable resources, while protecting system reliability, fostering resource diversity, and obtaining greatest environmental benefits to the state.
- Identify and support emerging renewable energy technologies with greatest near-term commercial promise that merit targeted assistance.



Renewable Energy Program Annual Funding Allocations 1998 – 2011

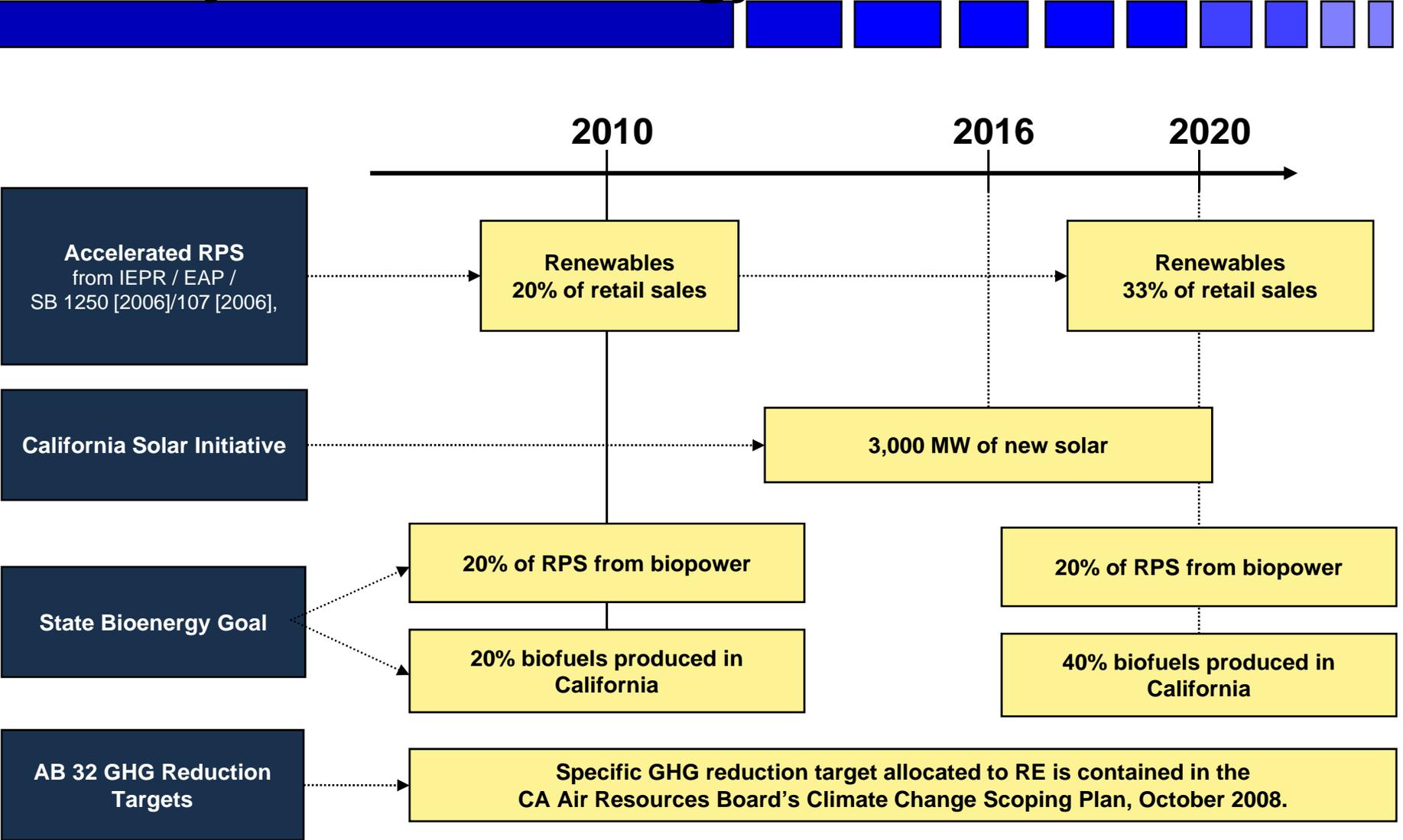
- 1998-2001 Annual Allocation: \$135 million
- 2002-2006 Annual Allocation: \$135 million*
- 2007 Annual Allocation: \$145.8 million*
- 2008-2011 Annual Allocation: \$72 million*



*The total amount collected each year is adjusted annually at a rate equal to the lesser of the annual growth in electric commodity sales or inflation, as defined by the gross domestic product deflator.

**Projected 2008-2011 annual allocation would have been approximately \$77.2 million.

Renewable Energy Program Supports CA's Key Renewable Energy Policies



Existing Renewable Facilities Program



The ERFP encourages existing renewable generation facilities to remain on-line while transitioning to a competitive market.

- Production incentives for generation from existing renewable facilities
- Payments are tied to market prices
- Eligible technologies: solid-fuel biomass, solar thermal, wind

Existing Renewable Facilities Program



RESULTS AS OF DECEMBER 2010

Technology	# of Projects	Capacity (MW)	Generation (GWh)	Payments (\$ million)
Biomass	34	760	35,895	\$214
Solar Thermal	8	410	9,187	\$40
Other	230	3,385	40,468	\$64
TOTAL	272	4,555	85,549	\$318

- Also provided \$6 million for 2004 Agriculture-to-Biomass Program to improve air quality in CA's agricultural areas.

Existing Renewable Facilities Program



➡ 2010 ERFPP GENERATION AND INCENTIVE PAYMENTS BY UTILITY

Utility	Generation (MWh)	Incentive Payments	% of Utility RE Procurement
PG&E	2,751,405	\$9,894,131	20%
SCE	1,241,311	\$2,735,871	9%
SDG&E	312,018	\$4,680,263	16%
Total	4,360,271	\$17,612,132	14.4%

* Utility renewable procurement claims from 2010 IOU RPS compliance report filings.

Existing Renewable Facilities Program



ERFP PAYMENTS AND RRTF COLLECTIONS BY UTILITY TERRITORY 2007-2010

Utility	Percentage of ERFP Payments	Percentage of RRTF Collections
PG&E	54%	50%
SCE	15%	41%
SDG&E	26%	9%
Total	100%	100%

Emerging Renewables Program



The ERP aims to reduce costs and expand sales of emerging renewable technologies. DG systems installed where the electricity is needed and consumed.

- Provides rebates for purchasing and installing eligible renewable energy systems to offset electricity needs at homes or businesses.
- Reduces up-front costs for customers.
- Through 2006, eligible technologies were solar photovoltaic, small wind, fuel cells using renewable fuels, solar thermal electric.
- Effective 1/1/07, only small wind and fuel cells eligible because solar component replaced with New Solar Homes Partnership and the CPUC's California Solar Initiative.

Emerging Renewables Program



RESULTS AS OF DECEMBER 2010

Technology	# of Projects	Capacity (MW)	Payments (\$ million)
Solar	28,036	123.6	\$398
Wind	558	3.6	\$8
Fuel Cells	2	0.4	\$1
TOTAL	28,596	128	\$407

Emerging Renewable Facilities Program



ERP PAYMENTS AND RRTF COLLECTIONS BY UTILITY TERRITORY 2007-2010

Utility	Percentage of ERP Payments	Percentage of RRTF Collections
PG&E	63%	50%
SCE	25%	41%
SDG&E	12%	9%
Total	100%	100%



SB 1 enacts California Solar Initiative



- Largest solar program of its kind in the country
 - \$3.35 billion effort by CPUC, CEC, and publicly owned utilities
 - Residential and nonresidential customers
-
- 3,000 MW combined public/ investor-owned utilities goal
 - Solar industry self-sufficiency in 10 years
 - Emphasis on energy efficiency and high performance installations



Senate Bill 1



SB 1 included additional mandates that were incorporated into the roles and responsibilities of the Renewable Energy Program.

The legislation...

- Modified the Renewable Energy Program's role in administering solar PV rebates.
- Established the New Solar Homes Partnership to be funded from the Renewable Resources Trust Fund.
- Mandated the Energy Commission to develop governing language that applies to all ratepayer-funded solar PV programs in the state (Energy Commission, CPUC, and publicly owned utility programs).

Solar incentive programs under SB 1

CALIFORNIA SOLAR INITIATIVE

CPUC Program

Commercial, Industrial,
Existing Residential

1,940 MW

\$2 Billion*

NEW SOLAR HOMES PARTNERSHIP

CEC Program

New Residential
Construction

400 MW

\$400 Million

SOLAR INITIATIVE PROGRAMS

POU Programs

Varies According
to POU

700 MW

\$784 Million

*Additional \$100 Million for Solar Thermal and Solar Water Heaters plus
\$50 Million for Solar R&D



New Solar Homes Partnership

The NSHP intends to create a sustainable market for solar homes and gain builder commitment to install solar energy systems.

- High-performing solar systems on highly efficient residential construction
- 400 MW installed capacity by the end of 2016
- Solar energy systems on 50% of new homes by end of program in 2016
- Self-sufficient solar industry
- Net Zero Energy homes in 2020 and beyond





New Solar Homes Partnership



Seal represents an NSHP home

➡ **RESULTS AS OF DECEMBER 2010:**

- More than **1,430 pending and received applications** representing **12,071 solar systems** in various stages of applying to the NSHP.
- **3,541 solar installations** represent **10 MW** of renewable solar capacity bringing total payments to **\$28.5 million**.

New Solar Homes Partnership Program



NSHP Reserved Systems, Paid and Unpaid 2007-2010

Utility	# of Systems	MW (AC)	\$ (Millions)	% of Total NSHP Payments	% of RRTF Collections
PG&E	7722	19.04	53.10	70%	50%
SCE	2329	5.29	14.43	19%	41%
SDG&E	799	3.05	8.51	11%	9%
Total	10850	27.38	76.04	100%	100%



SB 1 and New Solar Homes Partnership



AS OF JANUARY 2011

- Sellers of production homes shall offer solar energy system to all customers for homes for which an application for a tentative subdivision map for at least 50 units has been deemed complete on or after January 1, 2011
- Sellers are able to apply an off-set by installing a solar energy system equal to the amount of electricity generated assuming 20 percent of prospective home buyers would have installed solar energy systems



Consumer Education Program



- Raises consumer awareness about renewables and their benefits
- Increases purchases of emerging technologies
- Fosters renewable energy education partnerships
- Tracks and verifies RPS renewable energy procurement

- Provides information to California consumers to help build a market for renewable energy.
- Supports market development of emerging renewables technologies.

➡ **RESULTS AS OF DECEMBER 2010:**

- Over **\$9 million** provided for market research, **21** outreach and demonstration grant projects, and **4** public awareness campaign contracts.
- Marketing and outreach activities continue to support the New Solar Homes Partnership and SB 1.

California's Renewables Portfolio Standard



- California's RPS signed into law in 2002 with enactment of SB 1078, assigning roles to the Energy Commission, CPUC, and requiring retail sellers to procure 20% renewable energy by 2010.
- Publicly owned utilities set their own RPS goals recognizing the intent of the legislature to attain the 20% by 2010 target.
- State energy and GHG policy set further goals of 33% renewable energy by 2020.

RPS procurement compliance is measured in terms of **electricity delivered**, not signed contracts.



IOU, ESP, and CCA RPS Implementation

CEC ROLE

- **Certify renewable facilities as eligible for the RPS**
- **Design and implement an accounting system to track and verify RPS compliance**
- **Distribute Supplemental Energy Payments (Legislation deleted CEC authority to award SEPs and transfers administrative responsibility to CPUC)**

CPUC ROLE

Oversight of IOU procurement:

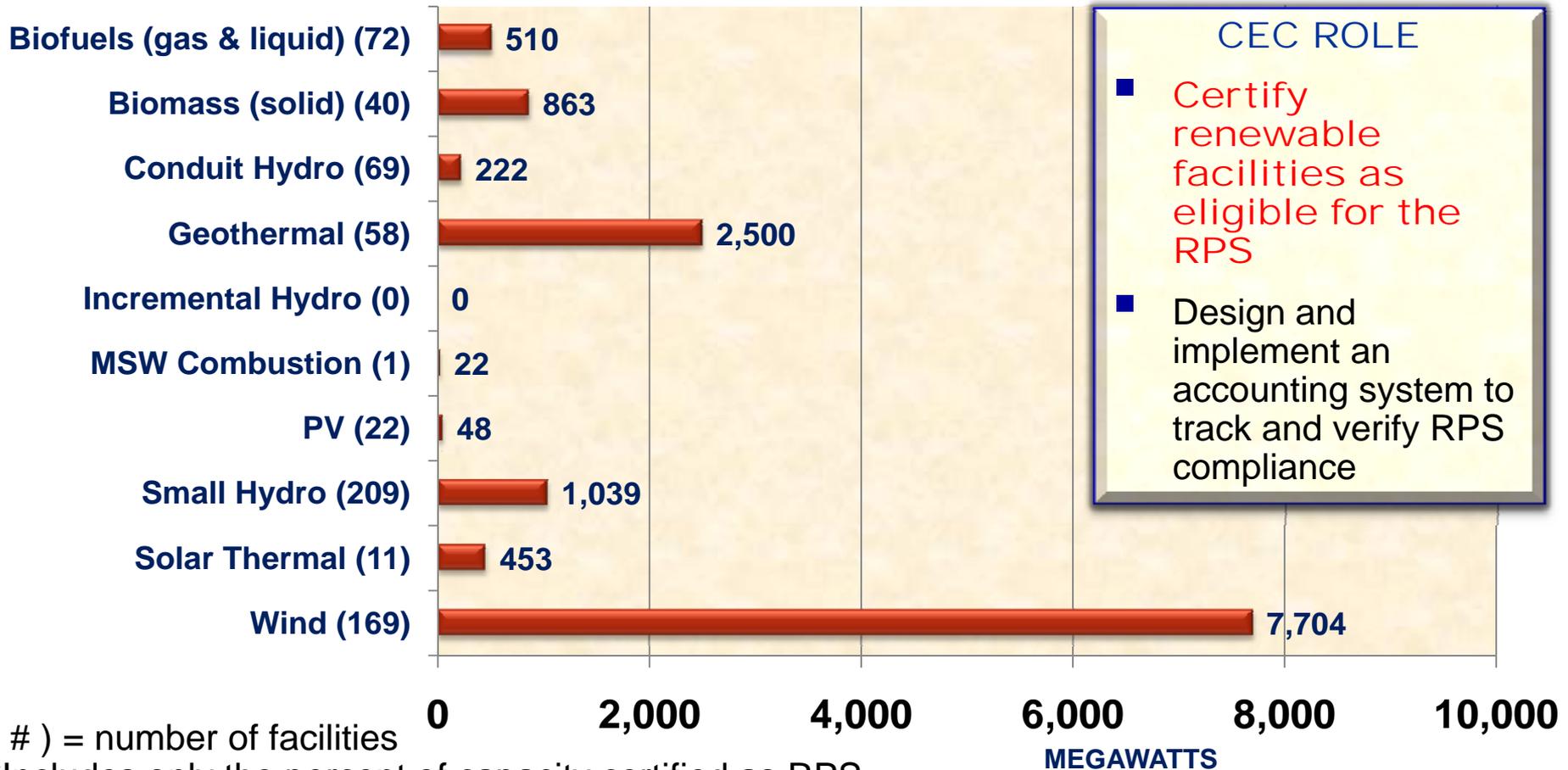
- **Approve procurement plans**
- **Set baselines and targets**
- **Develop market price referent**
- **Develop least-cost-best-fit process to evaluate bids**
- **Set rules for flexible compliance**
- **Standardize contract terms**
- **Approve/ reject contracts**
- **Ensure RPS competitiveness**
- **Administer above-market funds**

Oversight for other “retail sellers”

CEC RPS Certification



651 facilities certified as RPS eligible represent more than 13,360 MW of capacity.*



(#) = number of facilities

*Includes only the percent of capacity certified as RPS eligible.

Data as of March 2011.

Western Renewable Energy Generation Information System



WREGIS tracks renewable generation to help ensure the credibility of the "green" value of renewable electricity

- WREGIS is a **voluntary, independent** renewable energy registry and tracking system for the Western Interconnection transmission area
- WREGIS launched in June 2007
- Retail sellers and renewable facilities participating in California's RPS are required to register with and use WREGIS. POUs can opt to use WREGIS to track their RPS energy.

CEC ROLE

- Certify renewable facilities as eligible for the RPS
- Design and implement an accounting system to track and verify RPS compliance

➡ **RESULTS as of December 2010:**

- **More than 380** companies and **over 1,615** generators are approved to be WREGIS Account Holders.

RPS Procurement Verification Report



- SB 1078 set a broad mandate for the Energy Commission to implement an RPS tracking and verification system for retail sellers, but the statute is silent on how the Energy Commission should report the verification results to the CPUC.
- Energy Commission prepares *RPS Procurement Verification Report* to provide verified results of retail sellers' annual RPS claims and transmits report to CPUC.
- CPUC uses *Verification Report* and applies its flexible compliance rules to assess RPS compliance for retail sellers.



Thank You for your time

Contact Information

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