



Renewable Energy Status Update

Chair Robert B. Weisenmiller
California Energy Commission

rweisenm@energy.state.ca.us

(916) 654-5036

Northern California Power Association Conference
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California's Energy Goals

- GHG Emissions Reduction (AB 32)
- Energy Security & Reliability
- Job Creation & Economic Growth



Assembly Bill 32, The California Global Warming Solutions Act of 2006

- AB 32 (2006) - landmark legislation requiring California to reduce its greenhouse gas (GHG) emissions to 1990 levels by 2020
 - Executive Order S-3-05 set a goal to reduce GHG emissions 80% by 2050.
- AB 32 directs the California Air Resources Board (ARB) to establish a comprehensive program of regulatory/market mechanisms to achieve real, quantifiable, cost-effective reductions of GHG.
- ARB is responsible for monitoring and reducing GHG emissions; Energy Commission plays a key role in helping the state meet its greenhouse gas emission goals.
- In December 2008, ARB adopted the "Scoping Plan" -- California's policy blueprint containing the broad overview of programs, measures, and approaches to achieve the required GHG emission reductions.

Renewables and distributed generation are key elements of the ARB AB 32 Scoping Plan.



Distributed Generation Roadmap

- What renewable energy power projects are counted toward the Governor's goal?
- How much generation is already operating, pending or authorized?
- How should the remainder of the Governor's 12,000 MW goal be achieved?
- How do we make expansion local renewable energy more efficient, effective and equitable?

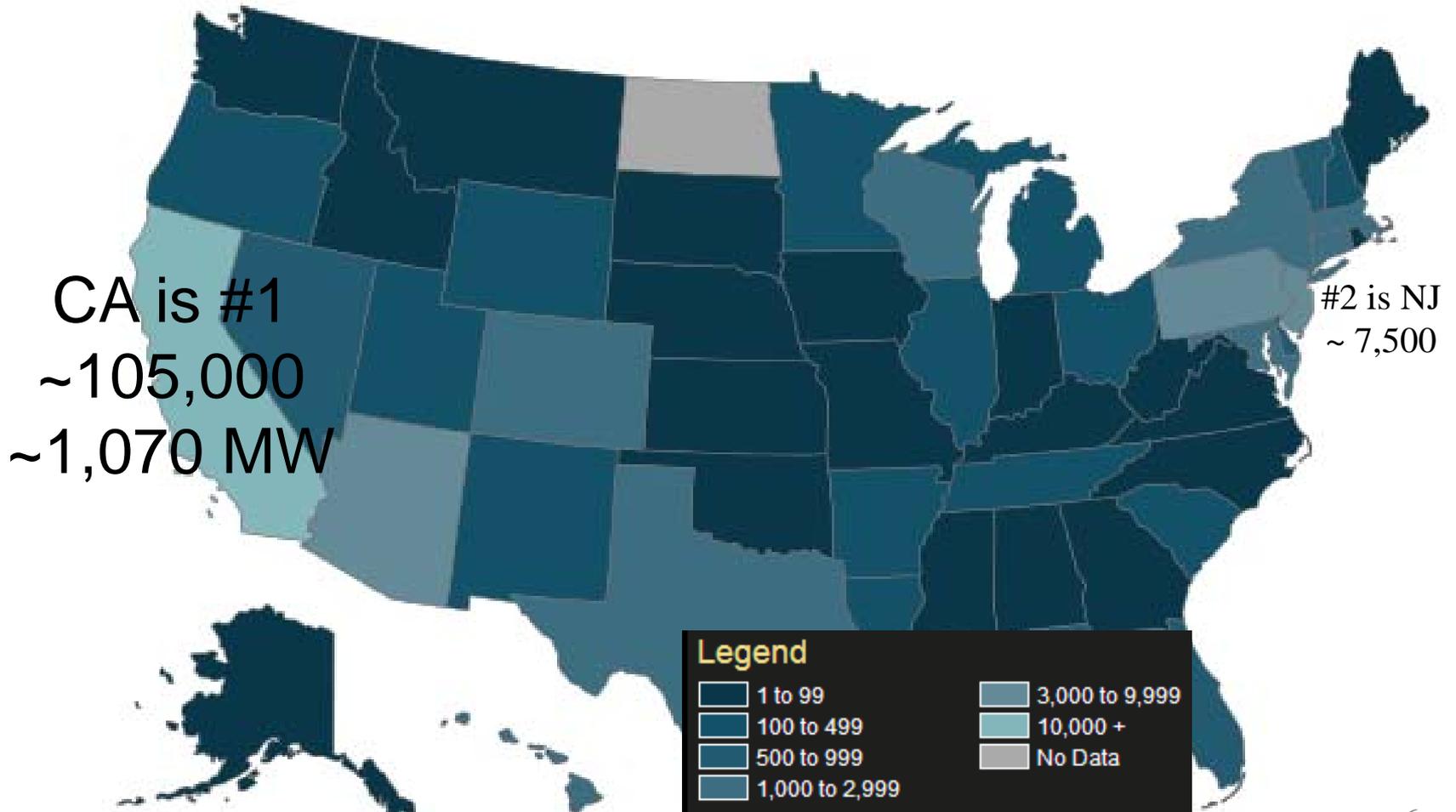


Definition of Distributed Generation

- Fuels and technologies accepted as renewable for purposes of Renewable Portfolio Standard
- Sized up to 20 MW
- Located within low-voltage distribution grid or supply power directly to consumer



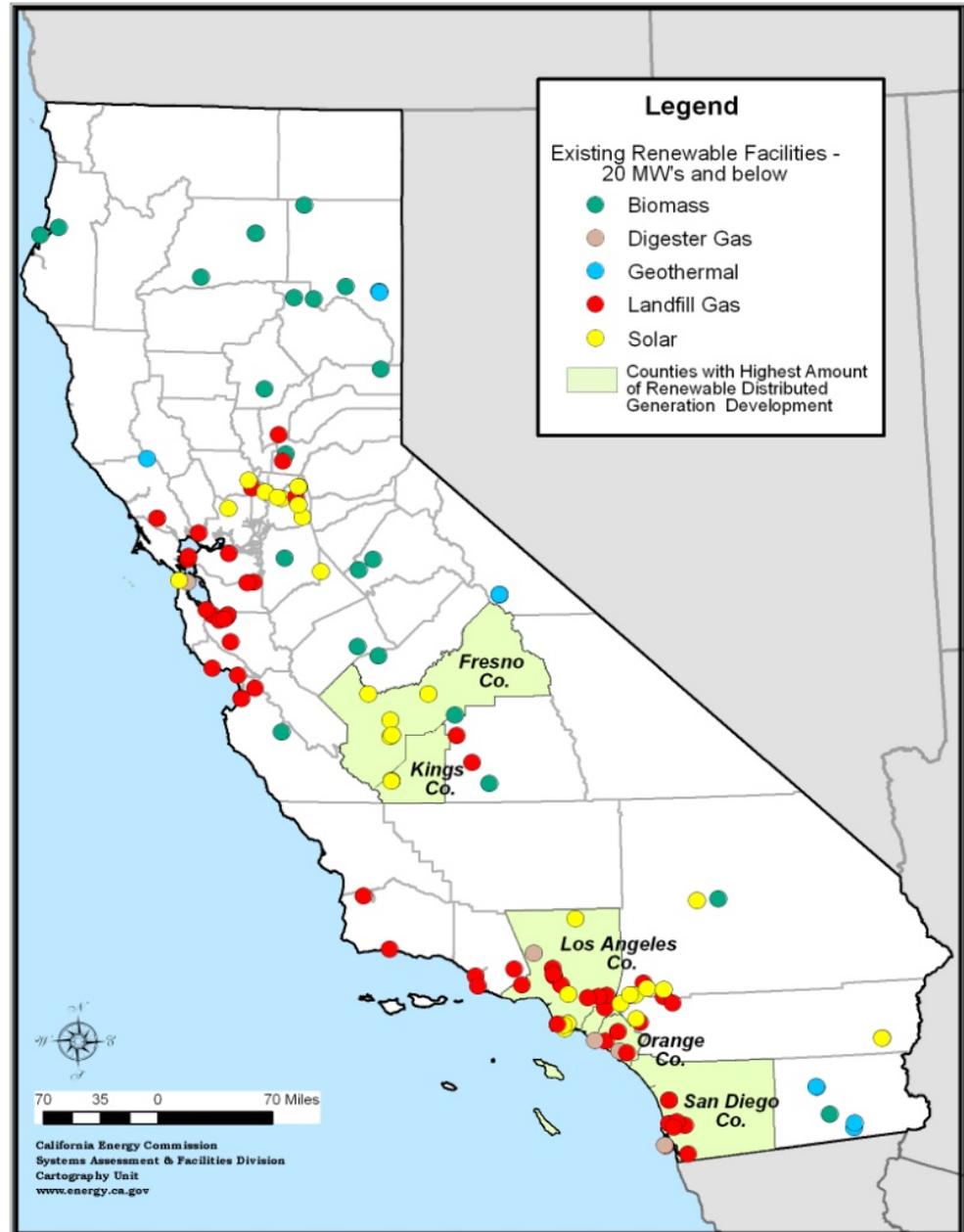
Number of PV Installations by State



Source: <http://openpv.nrel.gov/rankings>

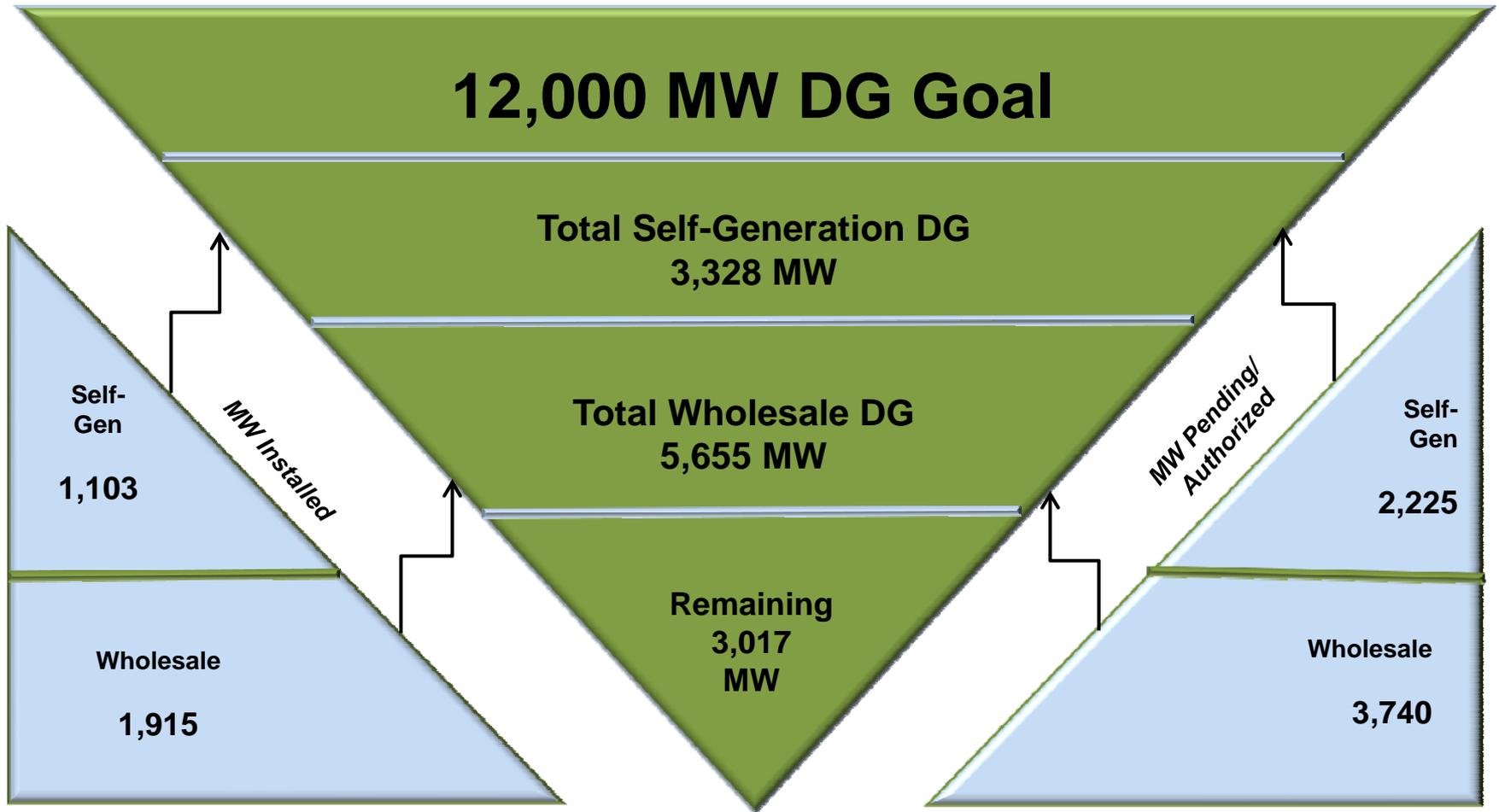


Wholesale
Distributed
Renewable
Capacity in CA
is ~1,900 MW





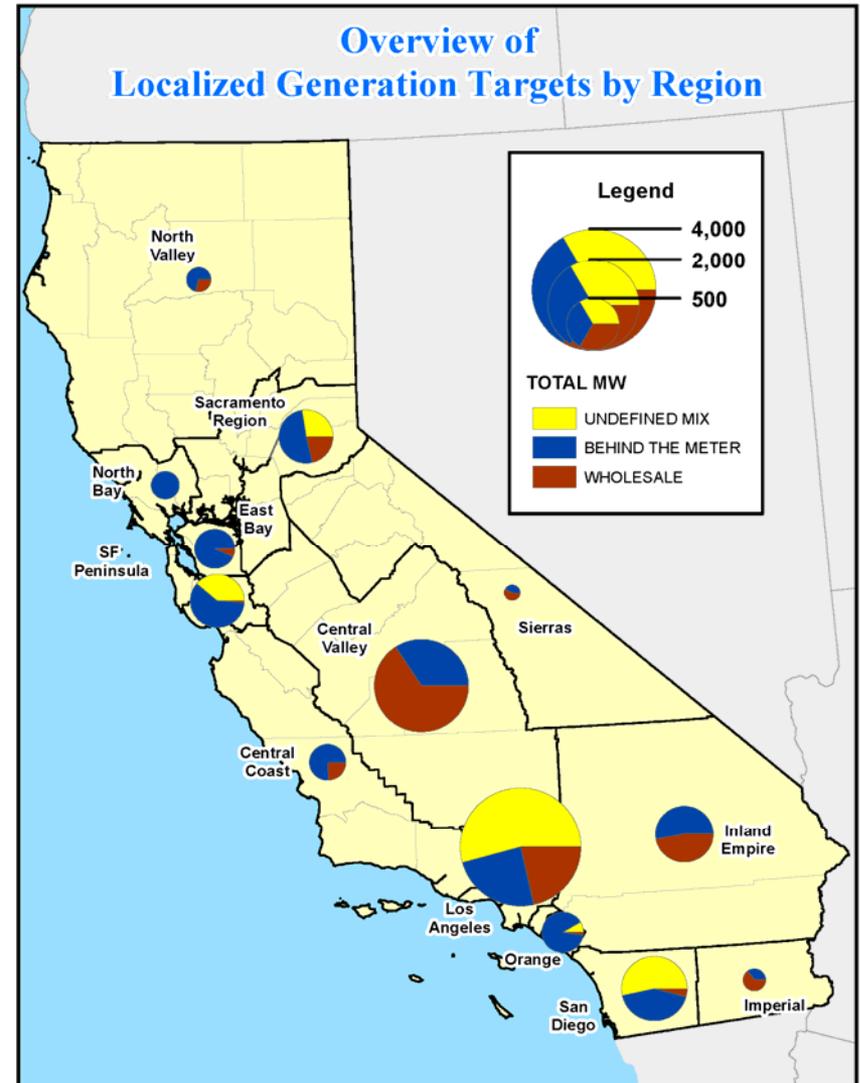
DG Progress





DG Regional “soft” Targets

- Localized Electricity Generation Allocated by Region and Type:
 - Wholesale
 - Behind the Meter
 - Undefined Mix
- Technology Neutral
- Plan to update annually to biannually





Job Creation & Economic Growth

POU Fiscal Year	Expenditures for Energy Efficiency Programs (millions \$)	Job-Years
2007-08	103.9	1,950
2008-09	146.1	2,750
2009-10	123.4	2,350

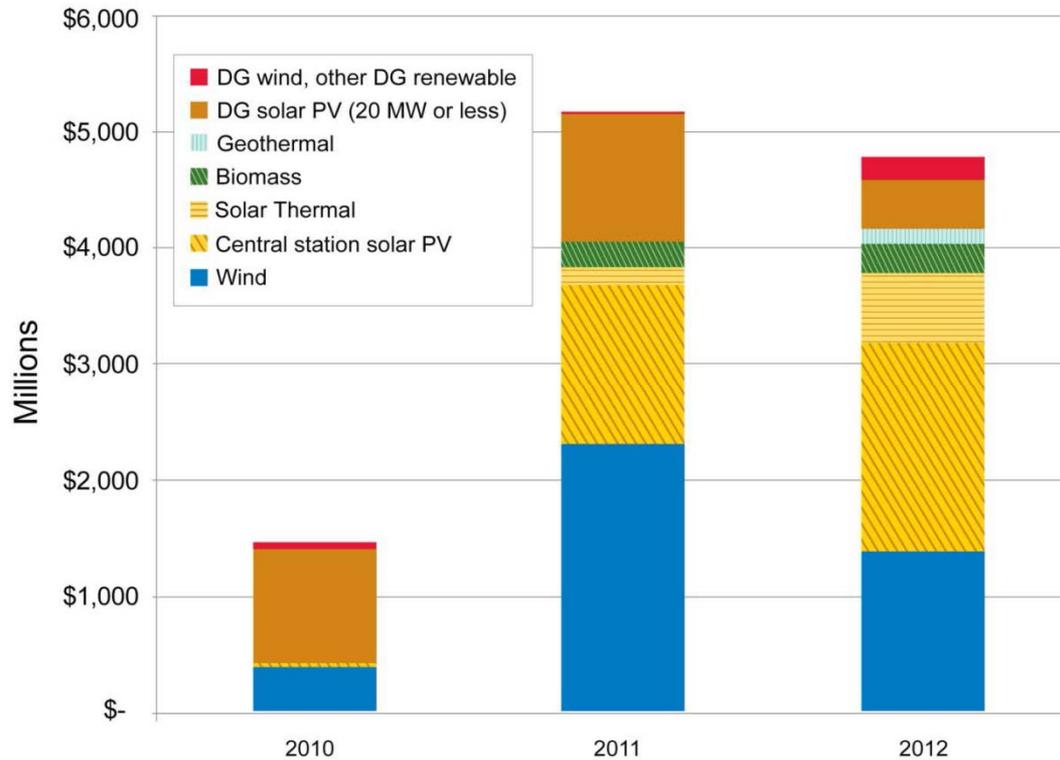
Table 1: Preliminary estimates of job-year creation from publicly owned utility expenditures on energy efficiency programs(CA Clean Energy Future Metrics)

	Job-years created 2010	Cumulative job-years created 2011-2020
Investor-Owned Utility Programs	36,150	361,500
Publicly-Owned Utility Programs	2350	23,500
Total Estimated Job Creation	35,500	385,000

Table 2: Preliminary estimates of job-year creation from publicly owned and investor-owned utility expenditures on demand-side programs (CA Clean Energy Future Metrics)



Renewables & Economic Growth



- In Governor Brown's Clean Energy Jobs Plan, investments in renewable energy are central elements in rebuilding California's economy.
- Despite the economic downturn, significant investments are being made in developing clean energy in California.

Table: Preliminary estimate of private investment in CA renewable energy facility (central station and distributed generation) for 2010-12 (CA Clean Energy Future Metrics)



Energy Commission 2012 Focus

1. Identify and prioritize geographic areas in the state for both renewable utility-scale and distributed generation development
2. Evaluate the cost of renewable energy projects beyond technology costs – including costs associated with integration, permitting, and interconnection – and their impact on retail electricity rates.
3. Develop a strategy that minimizes interconnection costs and time, and also minimizes integration costs and requirements at the distribution level and the transmission level and that strives for cost
4. Promote incentives for renewable technologies and development projects that create in-state jobs and support in-state industries, including manufacturing and construction.
5. Promote and coordinate existing state and federal financing and incentive programs for critical stages including research, development, and demonstration



Current NCPA Member Renewable Energy Generation

NCPA Pool LSE	2010 Retail Sales	2010 RPS GWh	2010 RPS %	RPS % Without Large Hydro
Palo Alto	950	195	20%	20%
Lodi	444	170	38%	21%
Alameda	400	344	86%	64%
Plumas-Sierra Rural Electric Cooperative	120	90	75%	32%
Lompoc	133	52	39%	24%
Ukiah	107	48	45%	26%
Healdsburg	75	46	62%	42%
Port of Oakland	44	10	24%	19%
Gridley	35	19	52%	9%
Silicon Valley Power	2,764	706	26%	26%
Roseville	1,177	405	34%	19%
Redding	770	17	2%	2%
Truckee Donner PUD	147	34	23%	23%
Biggs	17	9	53%	12%
Totals / Averages	7,182	2,145	30%	10%

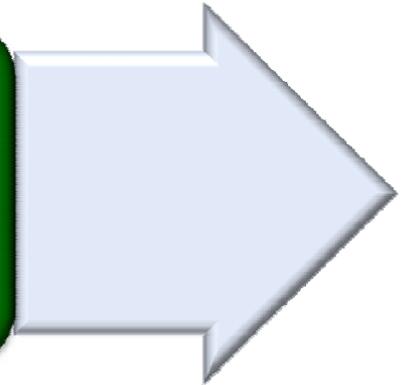
Table Updated: December 22nd, 2011 (CEC Electricity Analyst Office)



Renewables - Senate Bill X 1 2 (Simitian): Codified 33% RPS by 2020 in April 2011

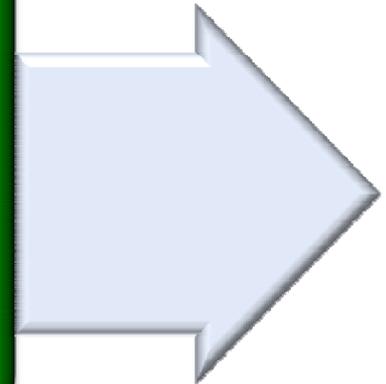
Retail sellers and POUs to adopt RPS goals of

- an average of 20% by December 31, 2013
- 25% by December 31, 2016
- 33% by December 31, 2020



RECs fall into one of 3 buckets and have the following limitations:

- Interconnected to a CA Balancing Authority or dynamically transferred (no less than 50% by 2013; 65% by 2016; and 75% after 2016)
- Firmed and shaped
- All other RECs including Unbundled RECs (no more than 25% by 2013; 15% by 2016; and 10% after 2016)





RPS Enforcement Roles for Energy Commission, Publicly Owned Utilities, and ARB – SB X1-2

- SB X1-2 directs the Energy Commission to adopt regulations specifying procedures for enforcement of the 33% RPS for Publicly Owned Utilities (POUs).
- Requires the Energy Commission to certify and verify eligible renewable energy resources procured by POUs and to monitor their compliance with the RPS. The Energy Commission will continue to certify and verify RPS procurements by retail sellers.
 - The Energy Commission refers the failure of a POU to comply to the Air Resources Board. The ARB may impose penalties.
- Energy Commission must provide a report to the legislature by June 30, 2011*, analyzing run-of-river hydroelectric generating facilities in British Columbia, including whether these facilities are, or should be, included as eligible renewable energy resources.

* Simitian has authored clean up language, SB 32 that, would extend the report deadline to June 30, 2012.



Next Steps: Regs & Guidebook

Event	Date
First Staff Workshop on draft POU Regulations	June 2011
Adopt 33% RPS Order Instituting a Rulemaking at a Business Meeting	July 2011
Meetings with focus groups of POUs on draft Regulations	July 2011
Release draft POU Regulations concept paper	August 2011
Staff Workshop on pipeline biomethane for RPS Eligibility Guidebook, 5 th Edition	September 2011
Staff Workshop on RPS Eligibility Guidebook, 5 th Edition	October 2011
CEC Website for posting of POU procurement plans is on-line	December 2011
Release draft POU Regulations	February 2012
Staff Workshop on draft POU Regulations	February 2012
Release final draft RPS Eligibility Guidebook, 5 th Edition	February 2012
Adopt RPS Eligibility Guidebook, 5 th Edition, at Business Meeting	March 2012
Publication of Notice of Proposed Regulations by OAL	March 2012
OAL 45-day public comment period on draft Regulations	March - May 2012
Public Hearing on draft Regulations	May 2012
Additional 15-day comment period on draft Regulations, if necessary	June 2012
Adopt Regulations at Business Meeting	July 2012

Table: Dates are tentative and are subject to change



Streamlining POU Reporting

(TO BE COMPLETED BY RETAIL SELLERS)
 REPORT to the CALIFORNIA ENERGY COMMISSION
 Procurement of
 Renewable Energy by Retail Sellers

ANNUAL REPORT TO THE CALIFORNIA
 ENERGY COMMISSION:
 Power Source Disclosure Program
 For Year ending: 12/31/2009

California Energy Commission POU Reporting Spreadsheet

GENERAL INSTRUCTIONS

Utility Name	
Calendar Year Covered in this Report	
Form Completion Date	

This reporting form has been created to replace prior data collection forms, including data requested and/or collected for the Power Source Disclosure Program (SB 1305/SB 162 Annual Report Form), the RPS Program (CEC-RPS-POU Form and POU Contract Database), and the SB 1 Solar Program Status Report. This form will additionally serve to supplement biannual data collection for AB 350, in years that data is not submitted to the California Energy Commission's Electricity Analysis Office. The color scheme below refers to the various colors used in Schedules 1-5 and their associated mandates or requests.

Schedules 1 and 3: Please complete annually and submit via e-mail to RPSTrack@energy.state.ca.us. Additionally, please print out the file, sign the attestation, and mail to the address below.

Schedule 2: Please complete biannually (every other year) during even-numbered years and submit with Schedules 1 and 3.

Schedule 4: This Schedule will be automatically populated with data from Schedules 1 & 3.

Schedule 5: Please complete annually and submit via e-mail to renewable@energy.state.ca.us. Schedule 5 is due on June 1 of each year, for previous year reporting.

California Energy Commission
 e-mail: RPSTrack@energy.state.ca.us
 email: renewable@energy.state.ca.us (Schedule 5 only)
 Renewable Energy Program
 California Energy Commission
 1516 Ninth Street, MS-45
 Sacramento, CA 95814-5512

Responses to this request are due on June 1 of each year.

For Schedules 1-4, please direct questions to Lorraine Gonzalez at (916) 654-3642 or lgonzalez@energy.state.ca.us.

For Schedule 5, please direct questions to Sherrill Reichert at (916) 651-1493 or sreichert@energy.state.ca.us.

NOTE: Information submitted in this report is not automatically held confidential. If your company wishes the information you submit to be held in confidence, it will be necessary to submit an application for confidentiality.

Color scheme:

Orange:	Mandated by AB 163 for the Power Source Disclosure Program
Purple:	Mandated by SB 107
Green:	Mandated by AB 350 and collected by the Renewable Energy Office biannually
Blue:	Data collected for the Energy Commission POU Contracts Database
Tan:	Mandated by Senate Bill 5 and collected by the Renewable Energy Office annually
White:	Data requested on a voluntary basis by the Renewable Energy Office
Red:	Data to be filed out by utility, unless utility prefers the Energy Commission to fill out

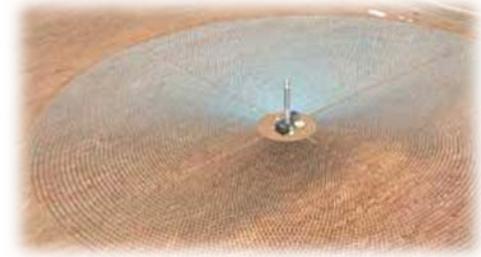
- Ongoing open dialogue and discussion with stakeholders to stream line reporting within the context of the law

- Condensing current reporting documents for efficiency within and across the Energy Commission offices



Next Steps: EPS Regulations

Event	Date
NRDC/Sierra Club Petition for OIR on ESP Filed	November 14, 2011
Commission Approval of NRDC/Sierra Club Petition	December 14, 2011
Commission Consideration of OIR	January 12, 2011
<p>Scope of Issues (Possible Questions and Information):</p> <ul style="list-style-type: none"> - Provision of SB 1386 to Re-evaluate and Continue, Modify, or Replace EPS in Accordance with Public Utilities Code §8341(f) - Are the Existing Regulations Functioning As Intended and Ensuring Compliance with SB 1368 Requirements - How Effective Have EPS Reporting and Compliance Provisions Been in Meeting SB 1368 Requirements - What Revisions to Reporting and Compliance Provisions Should be Considered - Clarification of Terms “designed and intended to extend the life” and “ routine maintenance” 	January & Beyond



Any Questions?

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