



# RPS Procurement Processes



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***California Public Utilities Commission***  
**November 28, 2011**





# Presentation Overview

- RPS procurement processes
- Forecasted RPS Generation
- Timeline of annual RPS solicitation
- Transmission inputs





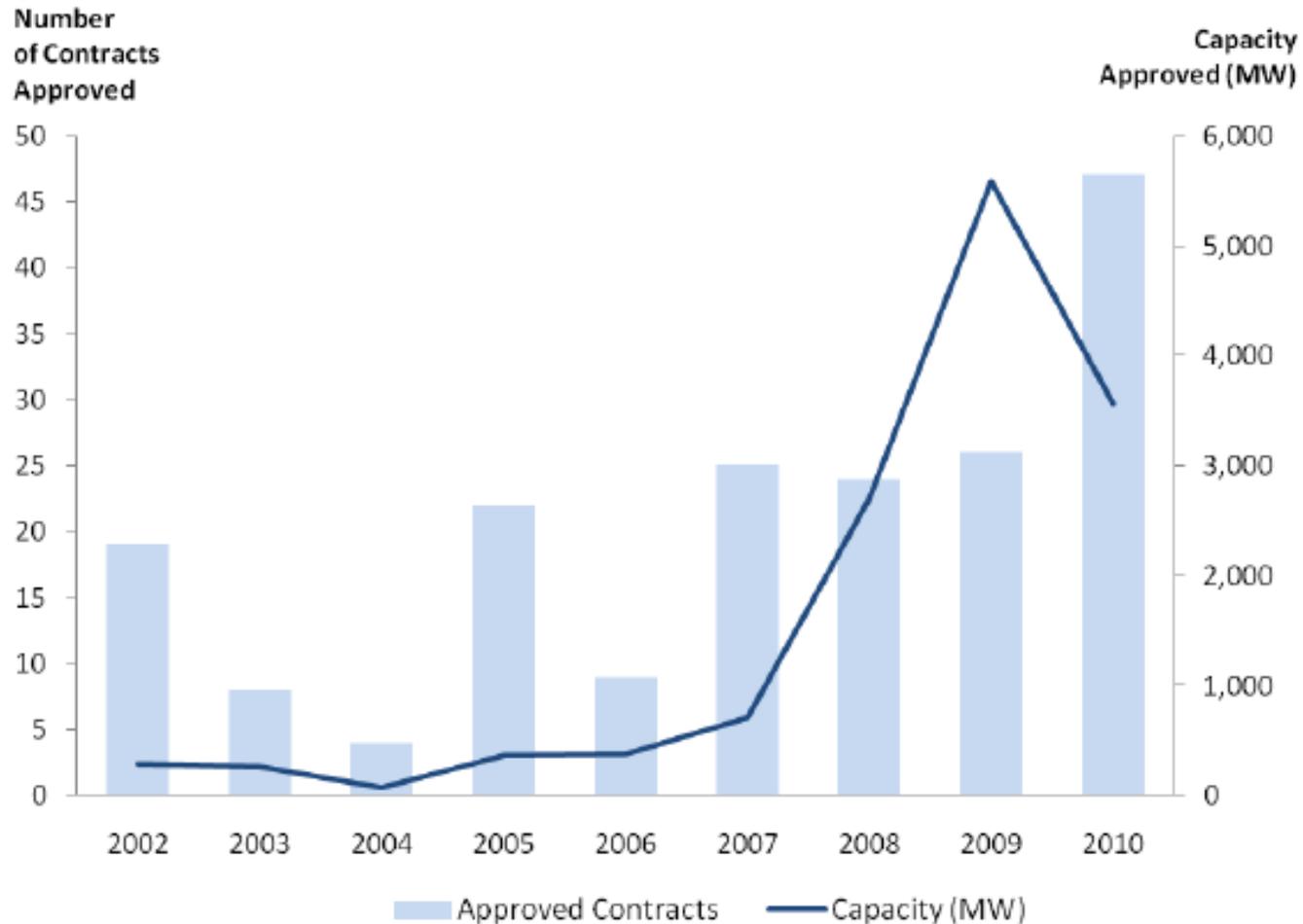
# RPS Procurement Programs

	RPS “traditional”	Feed-in Tariff	Renewable Auction Mechanism (RAM)	SB 32 FIT Expansion (TBD)	Qualifying Facilities	CHP AB 1613
<b>Project Capacity Limit (MW)</b>	Min. 1.5	Max. 1.5	Max. 20	Max. 3 MW	Min. 1.0	< 20
<b>Program Limit</b>	None	500 MW	1000 MW	750 MW	Bounded by “system need”	TBD





# RPS Contracts and Capacity Approved through 2010



Source: California Public Utilities Commission, 2nd Quarter 2011





# Snapshot of RPS Project Status Table

Commission Approval Date	Approved Contracts in Development (SDG&E)	PPA	Status	IOU	Min MW	Min Expected GWh/yr	Technology
May-06	<a href="#">Pacific Wind LLC</a>		On schedule	SDG&E	140	392	wind
Mar-07	<a href="#">Mt. Signal Solar</a>		Delayed	SDG&E	49	168	solar thermal
Jun-10	<a href="#">Alta Mesa</a>		Delayed	SDG&E	40	127	wind
Jan-11	<a href="#">Centinela Solar</a>		On schedule	SDG&E	110	231	solar pv
Jan-11	<a href="#">Centinela Solar (expansion)</a>		On schedule	SDG&E	30	62	solar pv
Jun-11	<a href="#">Naturener Film Rock</a>	D.11-07-002	On schedule	SDG&E	300	1054	wind
Jul-11	<a href="#">CSolar IV South</a>		On schedule	SDG&E	97	306	solar pv
Sep-11	<a href="#">NRG Solar Borrego I</a>		On schedule	SDG&E	26	60	solar pv
<b>Oct-11</b>	<b><a href="#">Arlington Valley Solar</a></b>		<b>On Schedule</b>	<b>SDG&amp;E</b>	<b>110</b>	<b>270</b>	<b>solar pv</b>

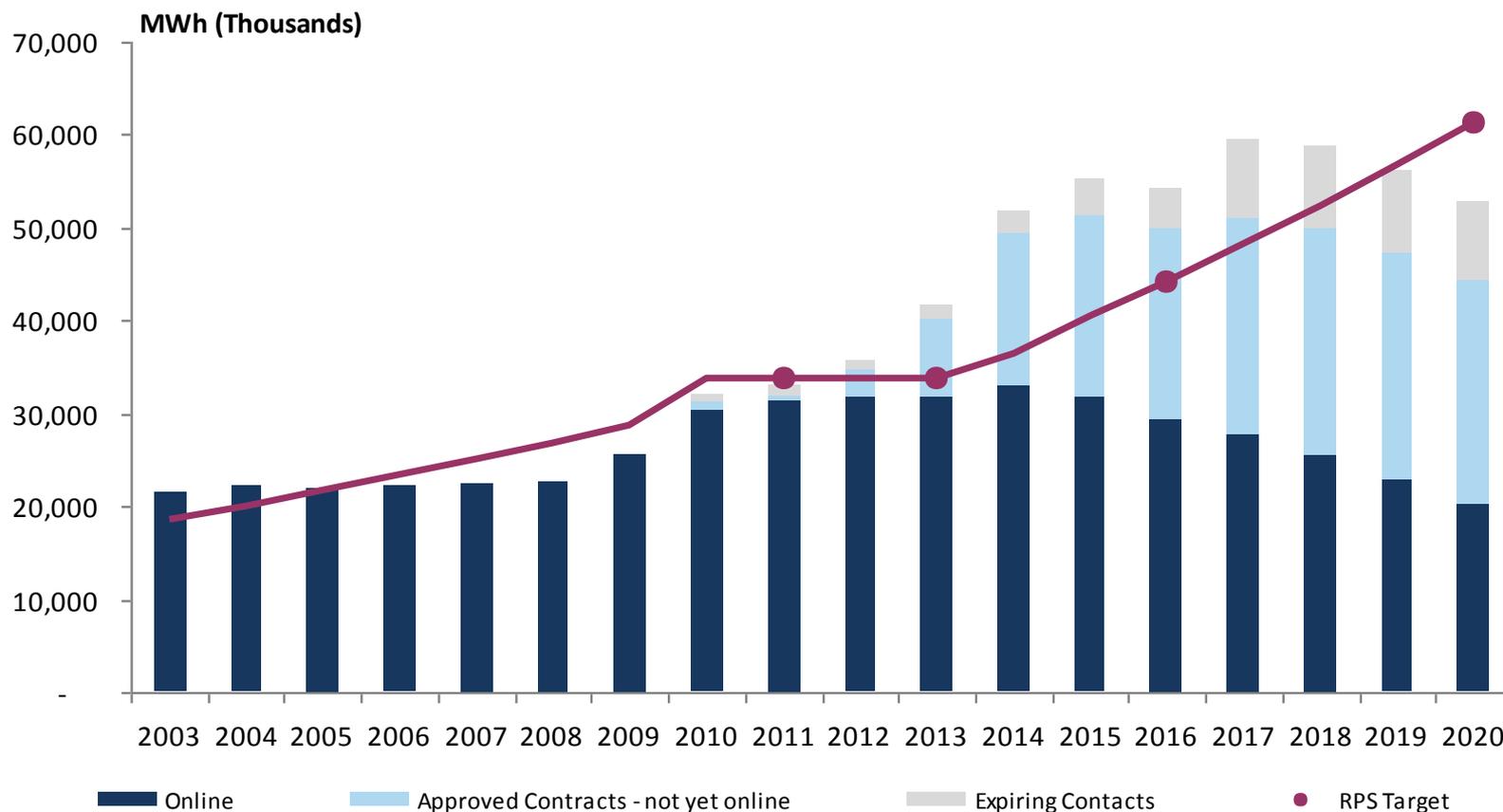
Commission Meeting Date	Contracts Pending Approval (PG&E)	Advice Letter or Application	Status	IOU	Min MW	Min Expected GWh/yr	Technology
11/10/2011	<a href="#">Abengoa Mojave Solar</a>	<a href="#">3547-E</a>	Pending approval	PG&E	250	617	solar thermal
11/10/2011	<a href="#">Abengoa Mojave Solar</a>	<a href="#">3547-E</a>	Pending approval	PG&E	250	617	solar thermal
11/10/2011	<a href="#">Abengoa Mojave Solar</a>	<a href="#">3547-E</a>	Pending approval	PG&E	250	617	solar thermal
	<a href="#">Transalta RECs</a>	<a href="#">3862-E</a>	Pending approval	PG&E	n/a	175	wind
	<a href="#">SPI RECs</a>	<a href="#">3854-E</a>	Pending approval	PG&E	n/a	100	biomass
	<a href="#">Barclays Hay Canyon Wind</a>	<a href="#">3600-E</a>	Pending approval	PG&E	100	250	wind
	<a href="#">Barclays Nine Canyon Wind Phase III</a>	<a href="#">3632-E</a>	Pending approval	PG&E	32	33	wind
	<a href="#">TGP Coyote Canyon</a>	<a href="#">3736-E</a>	Pending approval	PG&E	53	441	geothermal
	<a href="#">Kiara Solar</a>	<a href="#">3754-E</a>	Pending approval	PG&E	6	43	biomass
	<a href="#">Montezuma Wind II</a>	<a href="#">3847-E</a>	Pending approval	PG&E	78	201	wind
	<a href="#">Mojave Solar, LLC</a>	<a href="#">3876-E</a>	Pending approval	PG&E	250	617	solar csp
	<a href="#">Copper Mountain 2, LLC</a>	<a href="#">3884-E</a>	Pending approval	PG&E	150	303	solar pv
	<a href="#">North Sky River Energy, LLC</a>	<a href="#">3885-E</a>	Pending approval	PG&E	163	597	wind
	<a href="#">Shiloh IV Wind Project, LLC</a>	<a href="#">3893-E</a>	Pending approval	PG&E	100	269	wind

Commission	Advice Letter	Min Expected
ts / Feed-in Tariff Projects / Solar PV Programs /		





# Forecast of RPS Generation from Executed Contracts

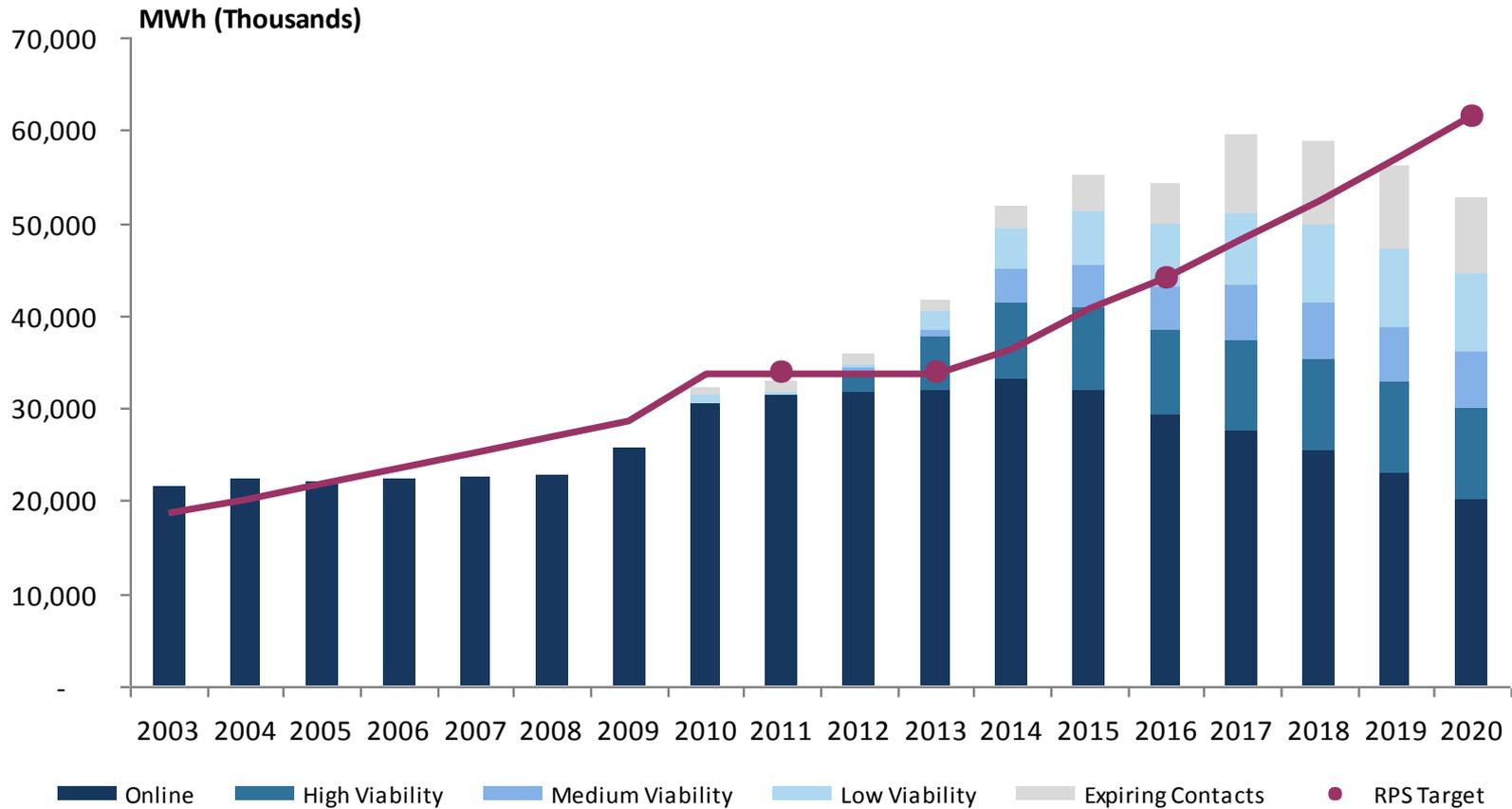


Source: California Public Utilities Commission, 3rd Quarter 2011





# Risk-Profile of Forecast of RPS Generation from Executed Contracts

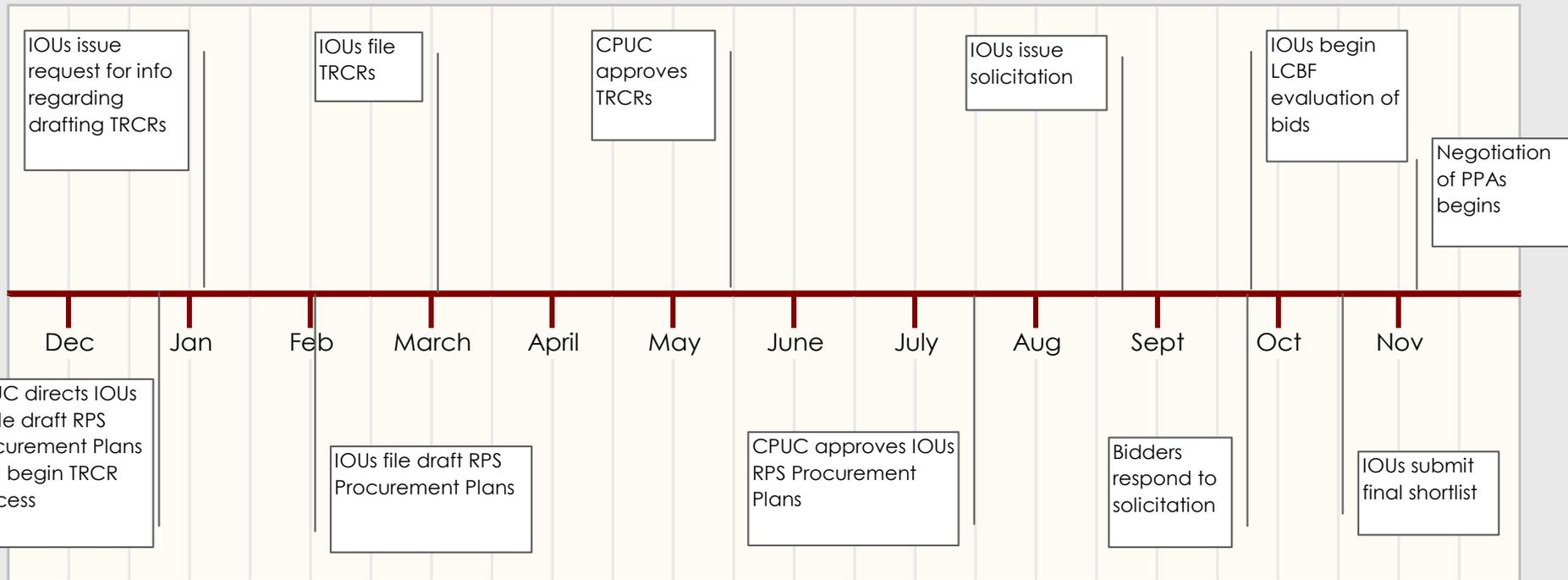


Source: California Public Utilities Commission, 3rd Quarter 2011



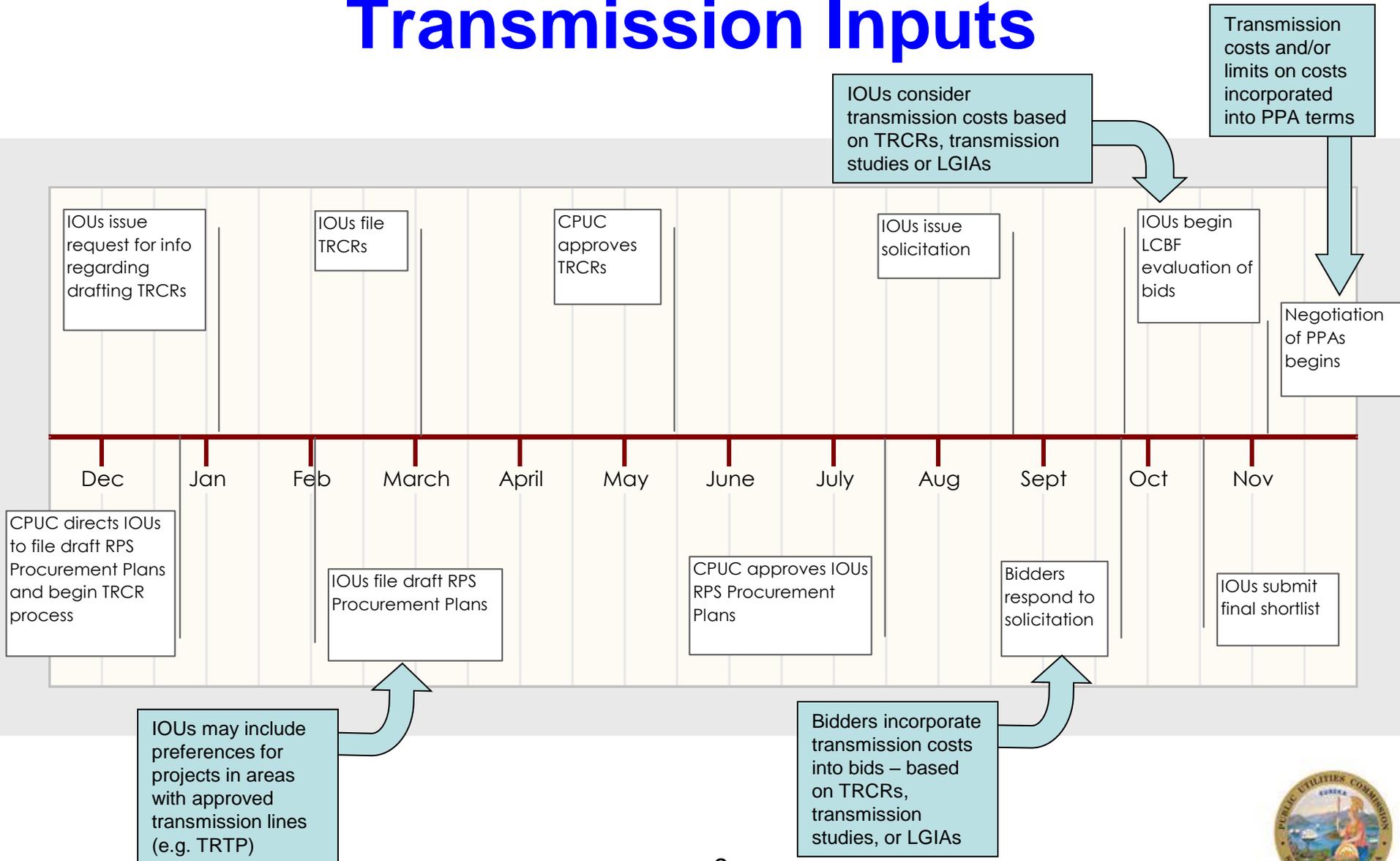


# General RPS Procurement Timeline





# Transmission Inputs





**Additional information on CPUC RPS website:**  
<http://www.cpuc.ca.gov/PUC/energy/Renewables/>

- his Website
- ilities Commission
- ness Avenue San
- , CA 94102
- ABLES
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## California Renewables Portfolio Standard (RPS)

Established in 2002 under Senate Bill 107, California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, electric service providers, and energy aggregators to increase procurement from eligible renewable energy resources by at least 33% by 2010. [See the Program Overview page for more information.](#)

Latest  
Quarterly Report

### Recent Updates, Documents

- [Q3 2011 RPS Report to the Legislature](#)
- [Q2 2011 RPS Report to the Legislature](#)
- [August Compliance Reports](#)
- [RPS Project Status Table - Nov](#)
- [33% RPS Implementation](#)

### Quick Links

Table of RPS projects

### Current Renewable Procurement Status

California's three large IOUs collectively served 17% of their 2010 retail electricity sales with renewable power.

- Pacific Gas and Electric (PG&E) - 15.9%
- Southern California Edison (SCE) - 19.3%
- San Diego Gas & Electric (SDG&E) - 11.9%

### [Large IOU RPS Procurement Data 2003-2010](#)

Additional data and charts can be found on the [Program Update](#) page.

### Status of RPS Projects

[Download a list of investor-owned utility RPS projects](#) (updated 11/01/2011) that are online, under development, and pending CPUC approval. Withdrawn and cancelled projects are also included. [Project names link to Commission](#)

of the RPS proceedings. For RPS proceeding items (decisions, resolutions, compliance reports), please

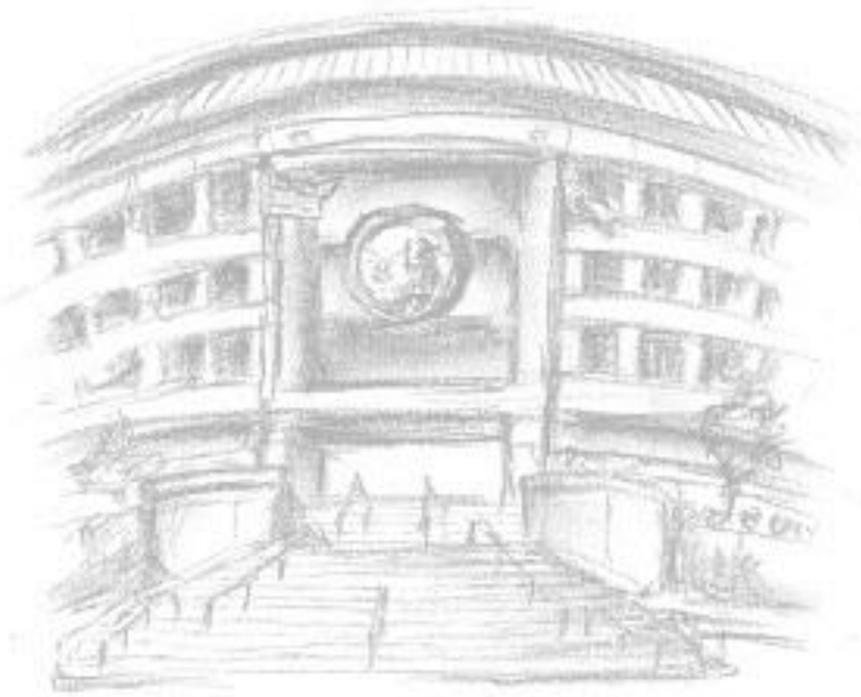
[Website](#)

the e-mail list matters outside



**For Additional Information see the RPS section of the CPUC website:  
<http://www.cpuc.ca.gov/PUC/energy/Renewables/>**

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# Back-up Slides





## Transmission Ranking Cost Report

- TRCRs directed in CPUC D.04-06-013 and D.05-07-040.
- Purpose of TRCR is to provide cost information to be used for evaluating renewable resource bids so that the least-cost, best-fit bids are selected.





# Transmission Ranking Cost Report

## (continued)

- TRCRs update is initiated by CPUC at the same time annual RPS Procurement Plans are initiated.
- IOUs issue requests for information regarding projects to interconnect to its transmission system.
  - Location, size, interconnection point, online date, etc.
- IOU issues report based on information received, transmission study results, and other available studies.





# Excerpt from SCE's most recent TRCR (1/20/2010)

Cluster No.	Cluster Name	Cluster-Specific Totals		Transmission Upgrade Costs (Estimated)		Transmission Bid Adder	
		MW	GW-hrs	Total Capital Cost of Required Upgrades (\$M)	Allocated Share of Annual Carrying Charges (\$M)	Bid Adder (cents per kW-hr)	Comment
1	Whirlwind	3,513	8,459	\$857	\$51	0.61	Zero bid adder should be applied to active TQC projects (see report for additional details)
2	Antelope 66-kV "North"	198	450	\$794	\$9	2.07	
3	Antelope 66-kV "South"	789	1,729	\$744	\$7	0.41	
4	Windhub/Highwind	4,404	10,939	\$778	\$50	0.45	
5	Vincent	937	5,614	\$744	\$23	0.41	
6	East of Pisgah	5,330	12,330	\$2,509	\$274	2.22	
7	Pisgah	7,797	17,102	\$1,159	\$101	0.59	
8	Control	478	3,975	\$2,975	\$225	5.67	
9	Inyokern	1,265	3,046	\$1,975	\$58	1.91	





# Least-cost, Best-fit Evaluation

- D.04-07-029 and D.06-05-039 direct LCBF process
- IOUs use to evaluate bids from solicitations
- Quantitative Criteria include:
  - PPA cost
  - Energy value
  - Resource adequacy value
  - Transmission cost
  - Congestion cost
- Qualitative Criteria include:
  - Location
  - Transmission
  - Environmental concerns

