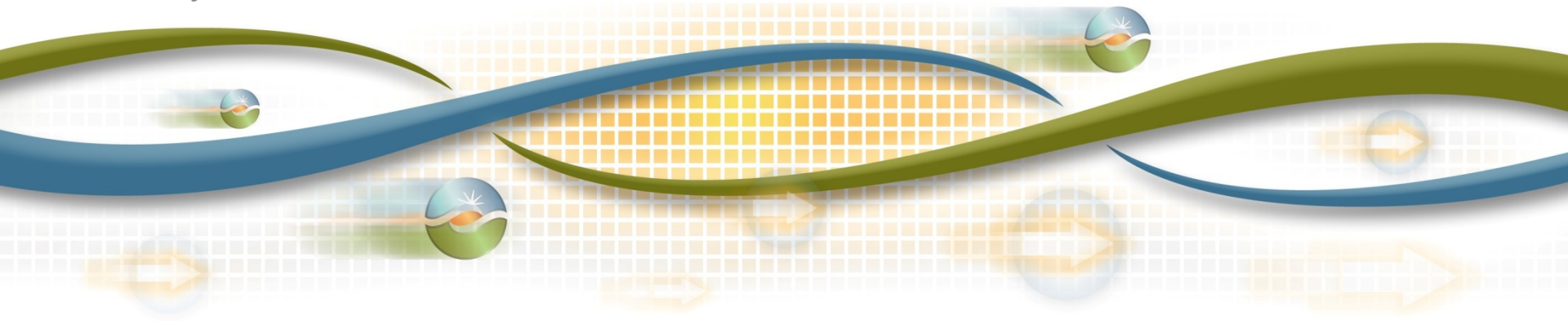


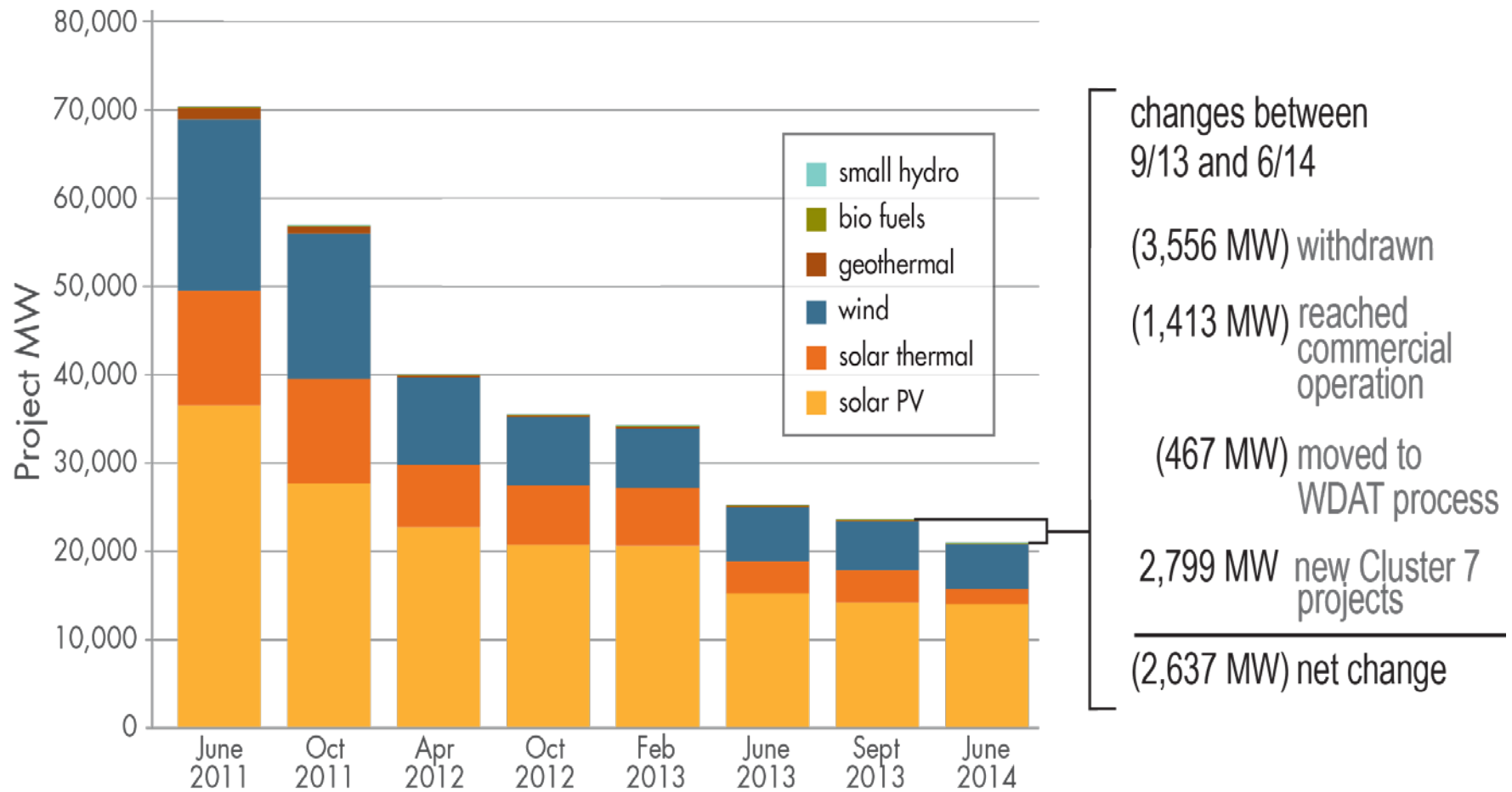
Briefing on renewable generation in the ISO generator interconnection queue

Bob Emmert
Manager, Interconnection Resources

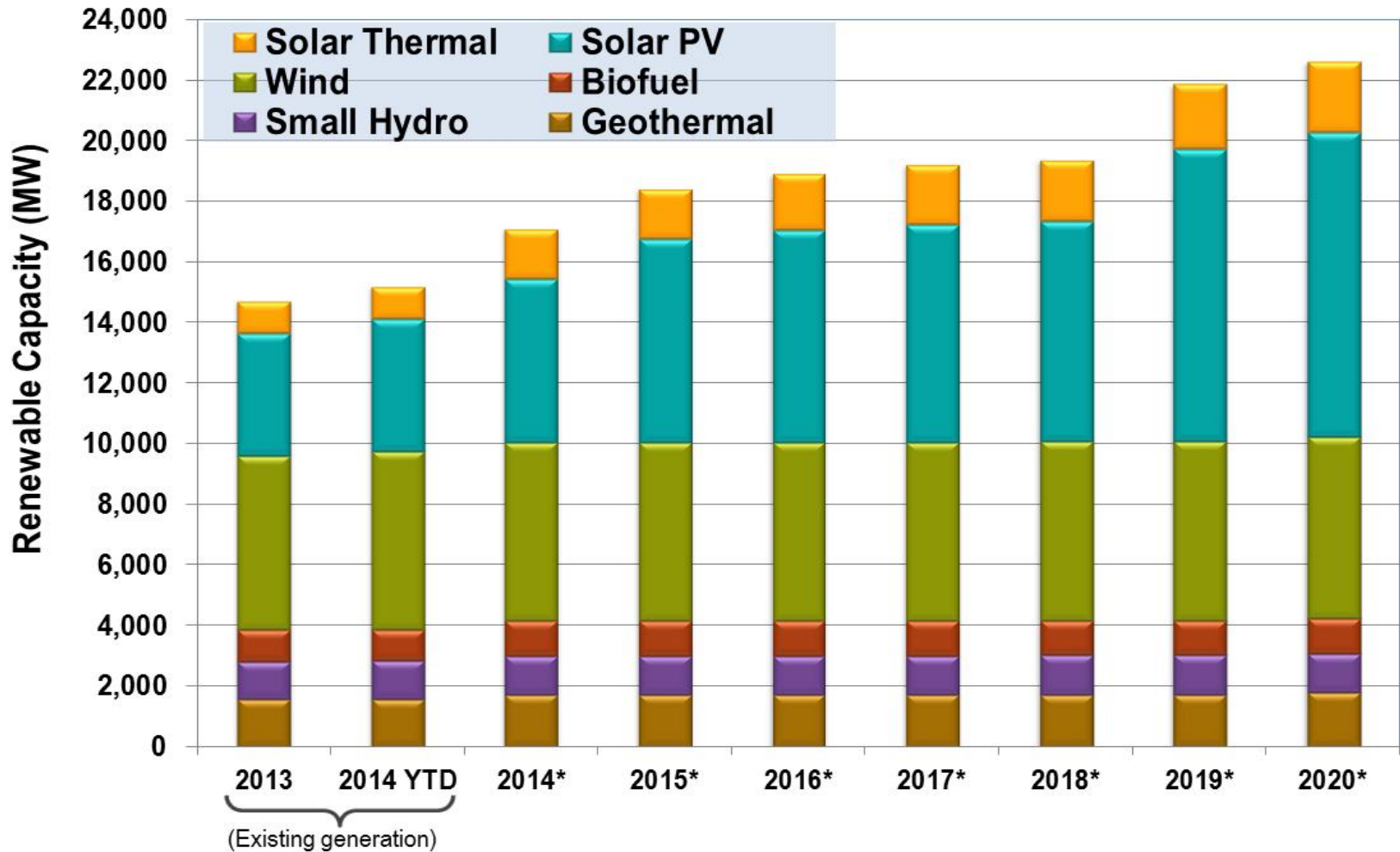
Board of Governors Meeting
General Session
July 15-16, 2014



Change in renewable capacity in the ISO queue

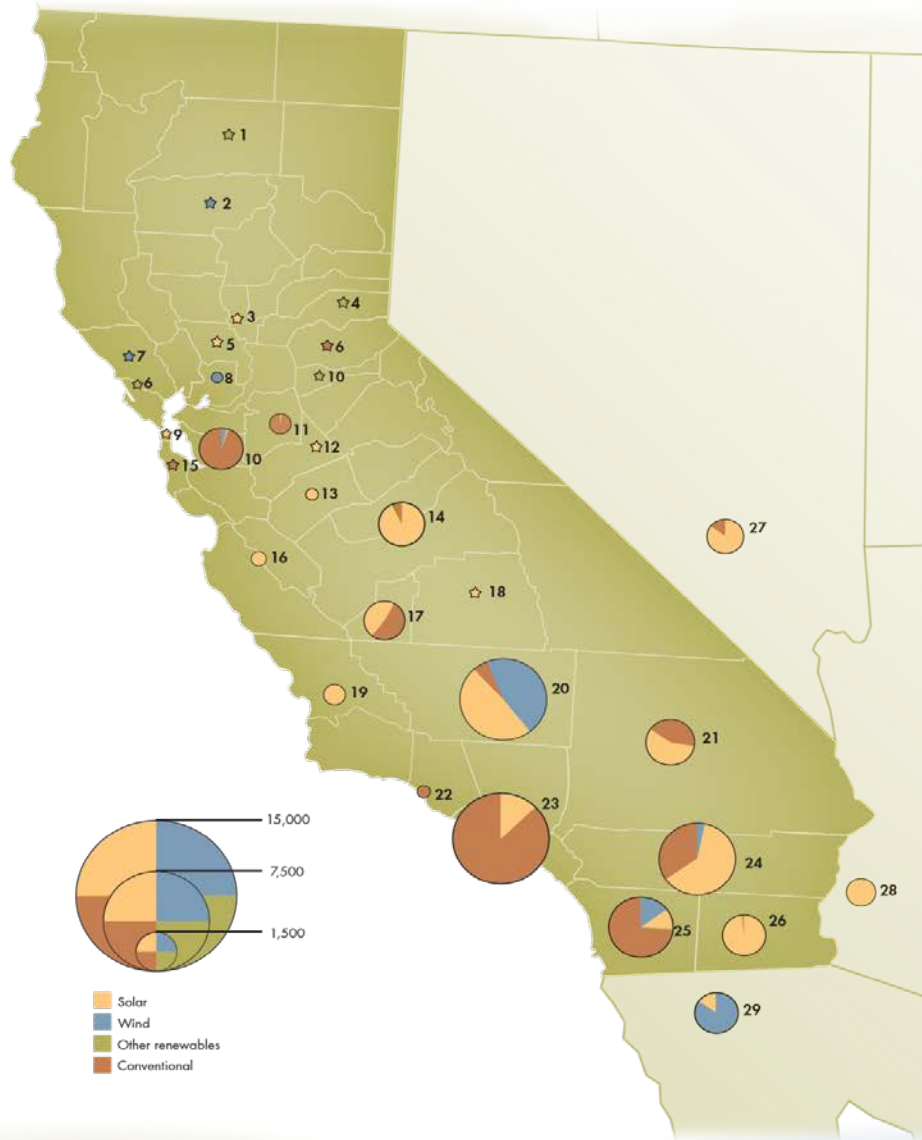


Current and projected renewable generation capacity in operation within the ISO



* Based on information obtained in March 2014 from LSEs within the ISO and the March 2014 CPUC RPS Calculator.

ISO Queue Map – Conventional & Renewables



Interconnection queue by county

County	# of Projects	Megawatts		
		Renewables	Conventional	Total
1 Shasta	1	27		27
2 Tehama	2	6		6
3 Sutter	1	20		20
4 Placer	2	16	20	36
5 Yolo	1	12		12
6 El Dorado	1		40	40
7 Sonoma	2	58		58
8 Solano	4	255	15	270
9 San Francisco	1	20		20
10 Alameda, Contra Costa	15	104	1,318	1,422
11 San Joaquin	8	25	664	689
12 Stanislaus	1	20		20
13 Merced	4	331		331
14 Fresno, Madera	38	1,209	300	1,509
15 San Mateo	1		50	50
16 Monterey, San Benito	2	520		520
17 Kings	15	639	650	1,289
18 Tulare	2	40		40
19 San Luis Obispo	3	380		380
20 Kern	53	5,813	816	6,629
21 San Bernardino	11	1,335	910	2,245
22 Ventura	1		305	305
23 Los Angeles, Orange	26	857	6,234	7,091
24 Riverside	20	3,680	1,980	5,660
25 San Diego	43	1,066	2,900	3,966
26 Imperial	10	1,310	20	1,330
In-state Totals	268	17,743	16,222	33,965
27 Nevada	15	1,167	204	1,371
28 Arizona	4	862		862
29 Mexico	4	1,321		1,321
Out-of-state Totals	23	3,350	204	3,554
TOTAL ALL PROJECTS	291	21,093	16,426	37,519

as of June 17, 2014

Significant amount of energy storage projects entered the ISO queue in 2014

- CPUC procurement target for energy storage capacity by 2020
 - 1,325 MW for all types for PG&E, SCE and SDG&E
 - 700 MW for transmission interconnected
 - 425 MW for distribution interconnected
 - 200 MW for customer-side behind the meter applications
- 2,320 MW of energy storage capacity in ISO Cluster 7
- Total of 39 projects
 - 27 stand-alone energy storage
 - 12 combined with other generation technologies
 - All but one project are battery technologies, one advanced rail energy storage project