

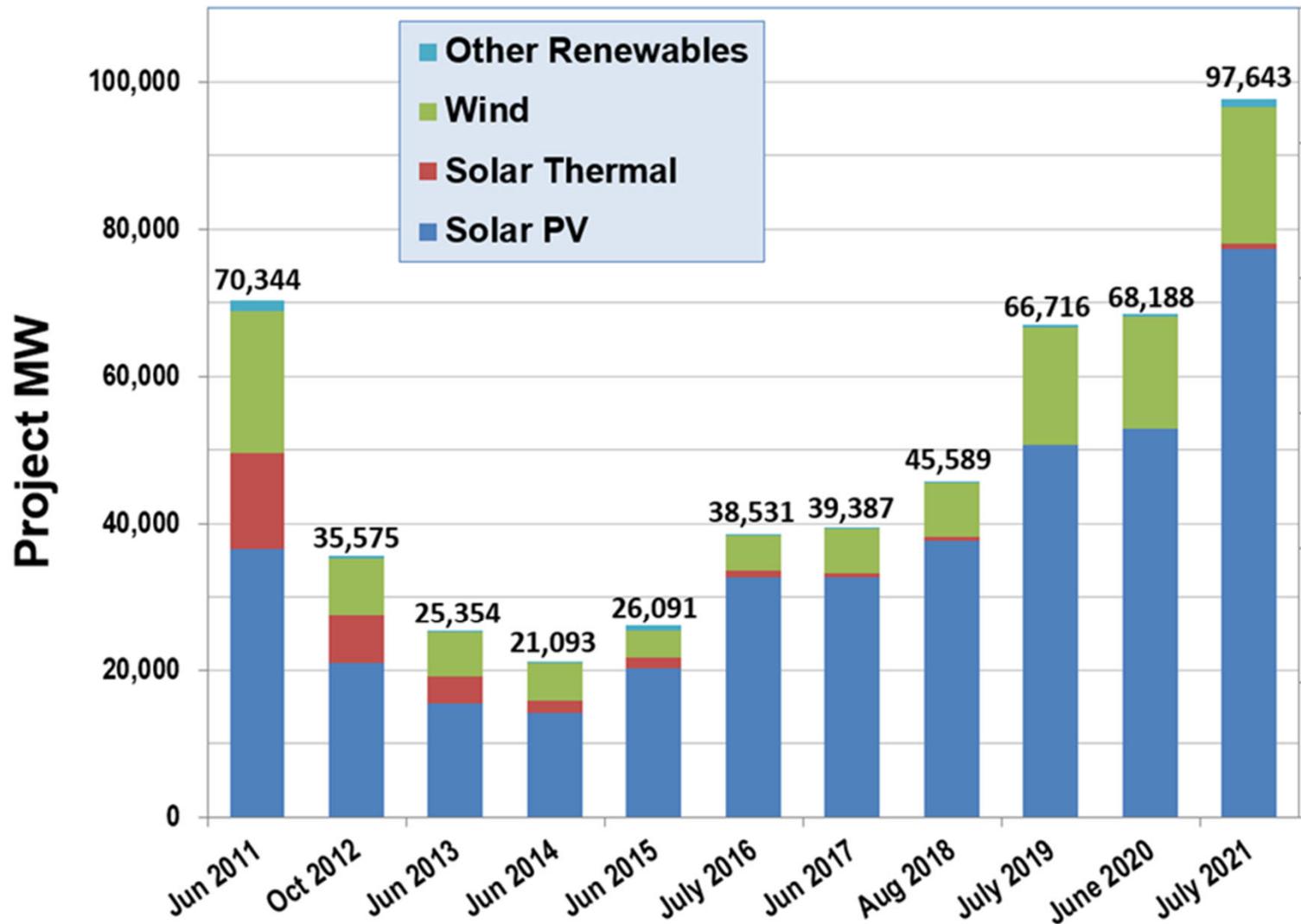


Briefing on renewable and energy storage in the ISO generator interconnection queue

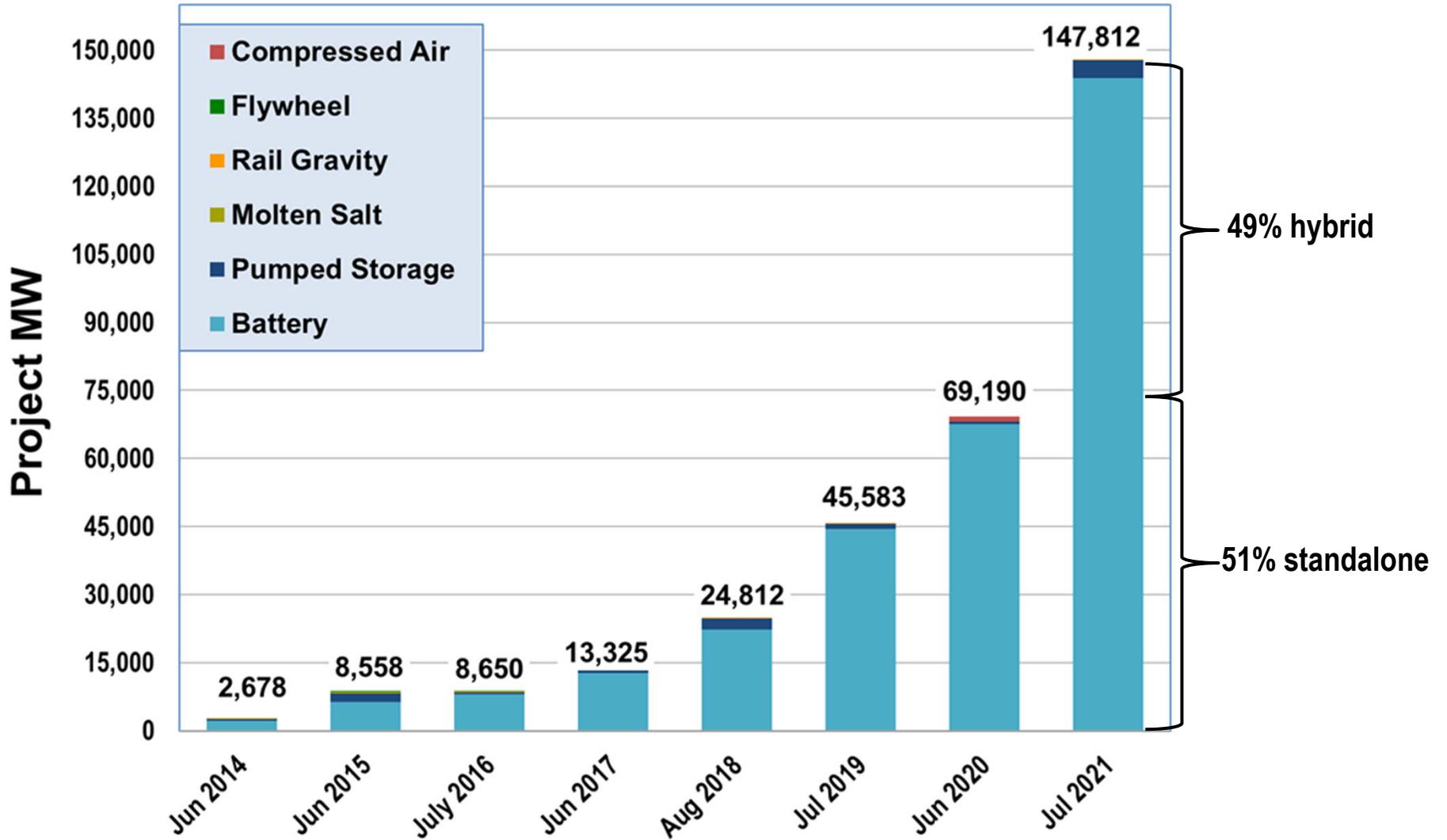
Bob Emmert
Senior Manager, Interconnection Resources

Board of Governors Meeting
General Session
July 15, 2021

Renewable capacity in ISO queue



Energy storage capacity in ISO queue



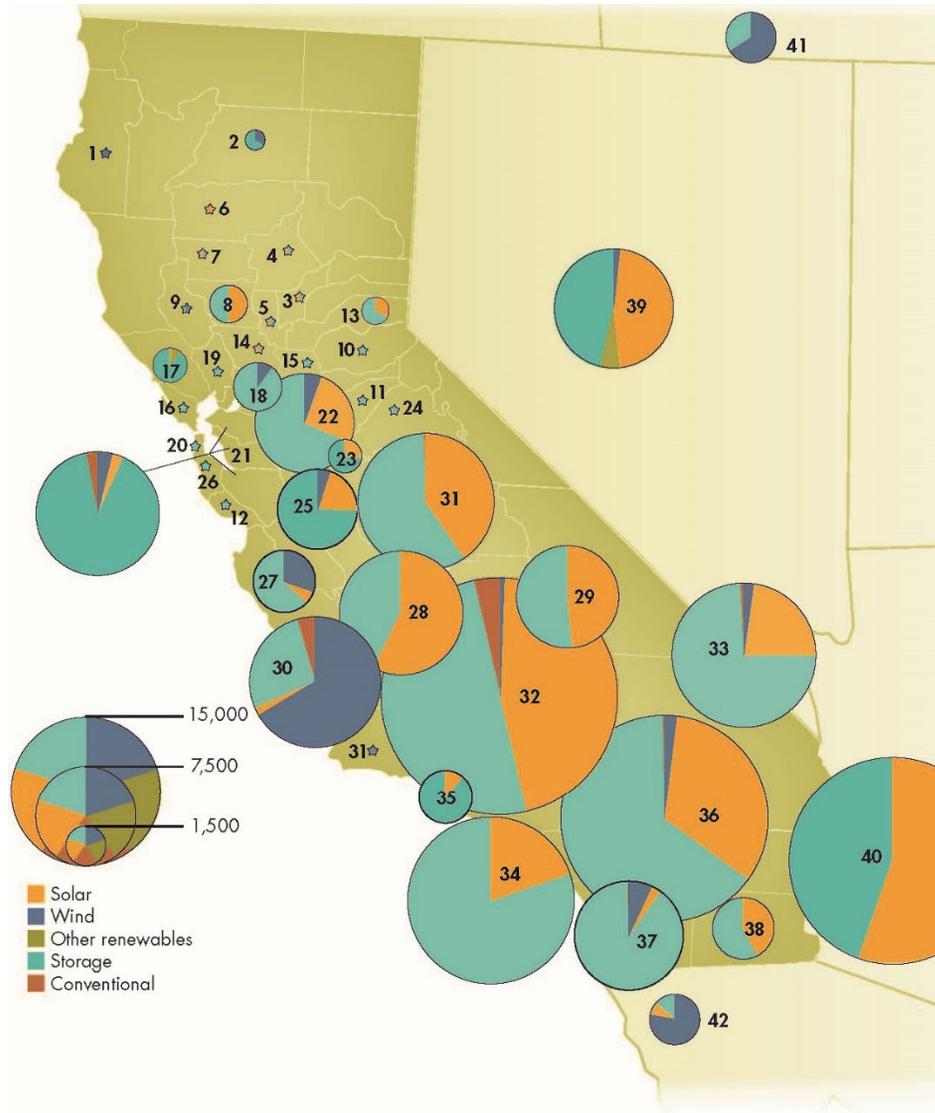
Queue statistics

- 245,456 MW of renewable and energy storage capacity
 - 37% in various stages of the study process and will finish Nov. 2021
- 97,643 MW renewable energy (stand alone & hybrid / co-located)
- 147,812 MW of energy storage
 - 51% stand alone, 49% as a component of a hybrid / co-located project

by type:

- 143,921 MW battery
 - 3,847 MW pumped storage
 - 44 MW rail gravity
- New cluster 14
 - Currently 366 projects
 - 53,339 MW renewable
 - 100,677 MW energy storage

Queue map – conventional, renewable and storage



Interconnection queue by county

County	# of Projects	Megawatts			Total
		Renewables	Storage	Conventional	
1 Humboldt	1	162			162
2 Shasta	4	294	333		627
3 Yuba	2	162	88		250
4 Butte	3	232	437		669
5 Sutter	4	111	210		321
6 Tehama	4	400			400
7 Glenn	2	160	159		319
8 Colusa	6	747	740		1,487
9 Lake	5	265	80		345
10 El Dorado	1		62		62
11 Calaveras	1		100		100
12 Santa Cruz	2		408		408
13 Placer	4	307	622		929
14 Yolo	4	97	97		194
15 Sacramento	2		273		273
16 Marin	1		314		314
17 Sonoma	11	138	1261		1,399
18 Solano	10	300	2,651		2,951
19 Napa	3	25	354		378
20 San Francisco	1		250		250
21 Alameda, Contra Costa, Santa Clara	58	785	10,513	329	11,627
22 San Joaquin	27	2,446	5,358		7,805
23 Stanislaus	10	281	759		1,040
24 Tuolumne	1		10		10
25 Merced	30	1,460	4,288		5,748
26 San Mateo	4		447		447
27 San Benito-Monterey	16	1,851	3,174		5,025
28 Kings	37	5,339	3,977		9,316
29 Tulare-Inyo	37	4,051	4,320		8,371
30 San Luis Obispo	21	8,131	3,241	520	11,892
31 Santa Barbara	1		62		62
32 Kern	158	15,071	16,237	1,168	32,476
33 San Bernardino	62	3,718	10,934	100	14,753
34 Los Angeles-Orange	59	3,269	13,305		16,574
35 Ventura	9	500	3,980		4,480
36 Riverside	84	9,758	18,061	50	27,869
37 San Diego	65	970	8,918	35	9,923
38 Imperial	12	1,996	2,753		4,749
In-state Totals	823	68,322	126,378	2,265	196,965
39 Nevada	50	9,060	7,766		16,826
40 Arizona	54	15,107	12,138		27,245
41 Idaho	4	1,992	1,030		3,022
42 Mexico	7	3,162	500		3,662
Out-of-state Totals	115	29,321	21,435		50,756
TOTAL ALL PROJECTS	938	97,643	147,812	2,265	247,720

CAISO PUBLIC