

**DOCKETED**

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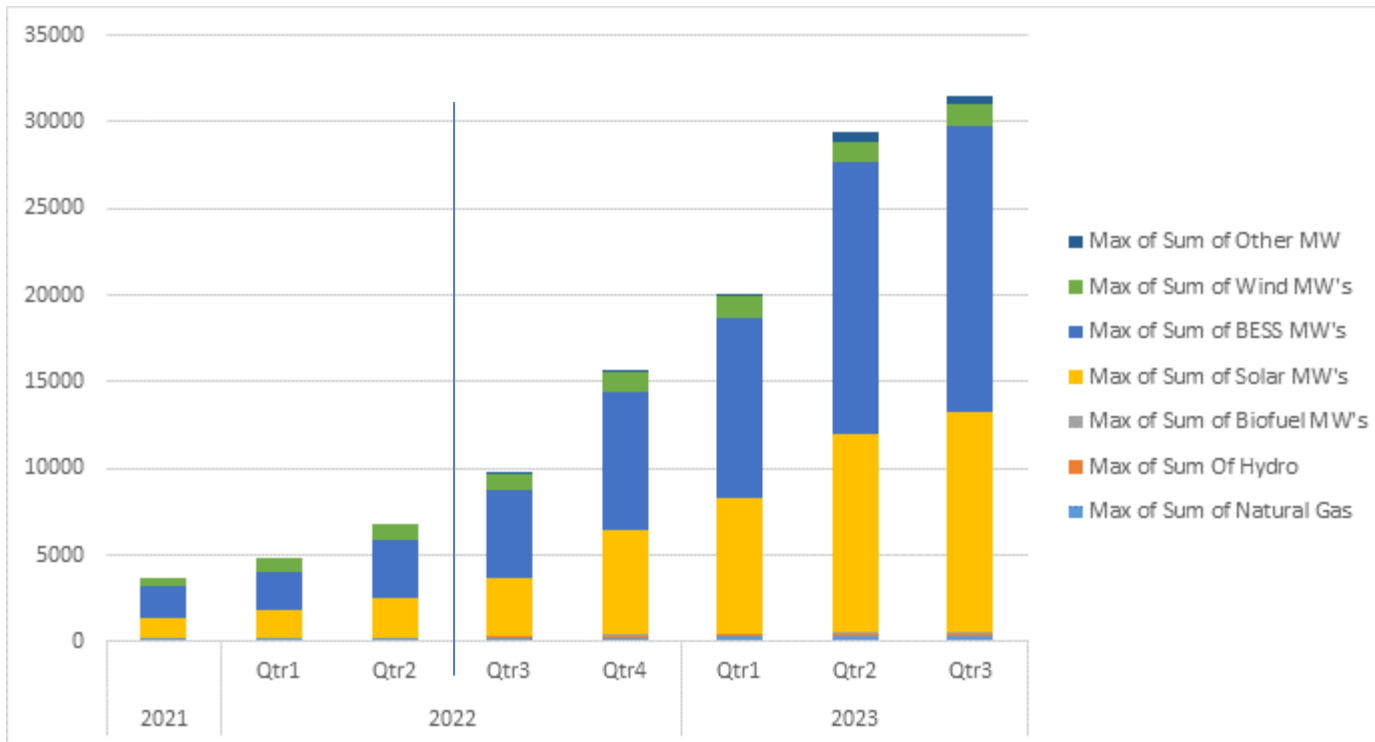
# Interconnection Issues and Advancements

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**Staff Workshop on Summer and Midterm Reliability, Session 2**  
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# The interconnection process has been successful in adding significant new capacity to the grid, and there are challenges

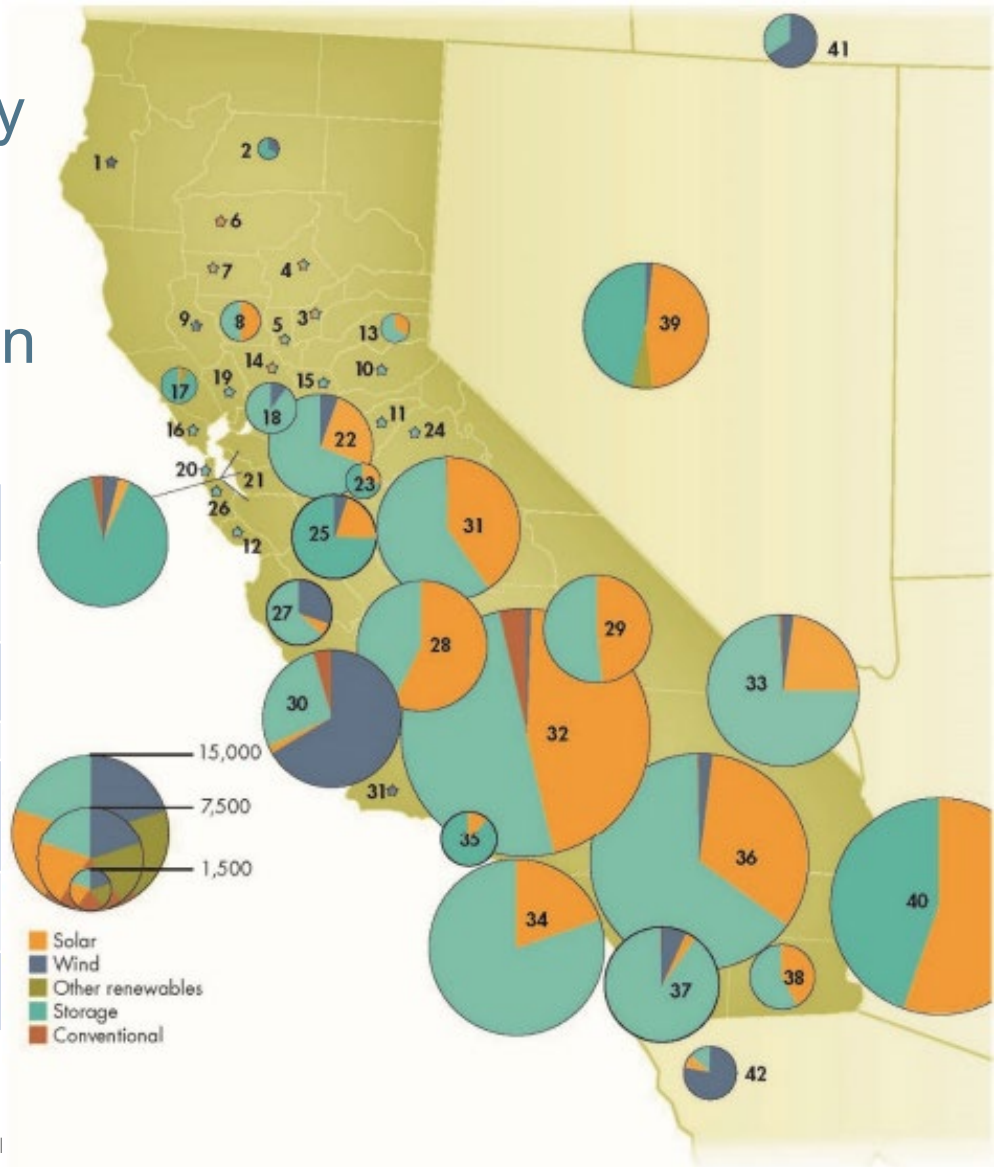
- 3698 MW of installed capacity was added to the ISO grid in 2021 and we are on track to add an additional 3062 MW by July 1, 2022
- Queue volumes beyond Q2 2022 reflect overheated levels of competition and the need for updated information from resource developers



Predominantly deliverable – some energy-only projects are included here.

The ISO's Interconnection Queue reflects accelerating procurement activity and very active competition; however, April 2021 was a game-changer calling for new action

Current Queue	
<b>97,643 MW</b>	Renewables
<b>147,812 MW</b>	Storage
April 2021 Application window (cluster 14) - 366 projects	
<b>53,339 MW</b>	Renewables
<b>100,677 MW</b>	Storage



# Transmission capacity exists

- The ISO has communicated where existing queued projects do not require any additional network upgrades

## Incremental capacity needing no transmission except interconnections:

	CC & storage	Solar & storage	Hydro	Solar PV	Wind	Storage	Gas Turbine	Total
PG&E	3	662	5	336	282	203	63	1554
SCE, SDG&E & GLW		1235				2004		3239
Total	3	1897	5	350	282	2207	63	4807

## Incremental capacity enabled by RAS:

	CC & storage	Solar & storage	Hydro	Solar PV	Wind	Storage	Gas Turbine	Total
PG&E		100		230				330
SCE, SDG&E & GLW		5805			227	369		6401
Total		5905		230	227	369		6731

- Additional 2000 MW is also available based on transmission under development
- Based on November 2021 – an update will be posted next week.

## We need to collectively explore all possible opportunities for improving overall speed and effectiveness:

- Interconnection process enhancements under way at the ISO to improve efficiency, manage queue volumes, and better align with procurement activity
- Power Purchase Agreements reaching out to 2025 and beyond need to be awarded as soon as possible to focus efforts and staff resources on the successful projects
- Industry-wide levels of engineering and construction staff are a concern – now and over the next decade – and industry would benefit from broader coordination of development and training
- Seek to reduce or remove permitting and regulatory barriers that create unnecessary delays in transmission