



Item 8: 2023 Integrated Energy Policy Report (Docket No. 23-IEPR-01)

February 14, 2024 Business Meeting

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Benefits to Californians

Puts forward energy policies that:

- Conserve resources
- Protect the environment
- Ensure energy reliability
- Enhance the state's economy
- Protect public health and safety





Scope of Report

- **Chapter 1: Accelerating the connection of clean energy resources**
- **Chapter 2: Hydrogen in electricity generation and transportation**
- Chapter 3: California Energy Demand Forecast
- Appendixes, updates include:
 - Clean Transportation Program benefits
 - Gas system decarbonization
 - Energy efficiency
 - Publicly owned utilities' resource adequacy



Report Development

- March 2023: Scoping Order
- Public meetings: 11 workshops, 1 webinar
- Nov. 2023: Posted Draft 2023 IEPR
- Jan. 2024: Posted Proposed 2023 IEPR
- Feb. 2024: Consider for adoption





Speeding Deployment and Connection of Clean Resources to the Grid

Ben Wender, Advisor to Commissioner Monahan



Close Coordination Across Energy Entities



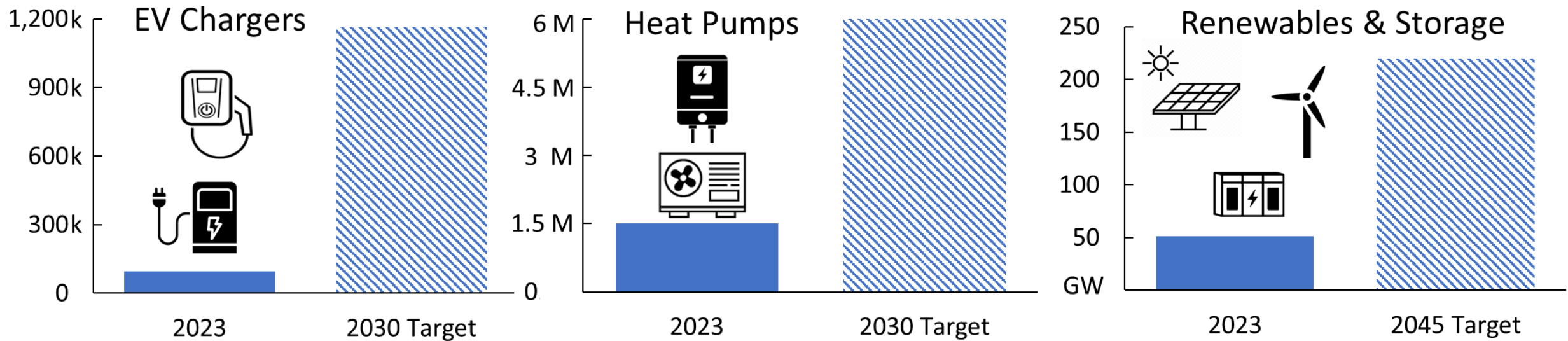
California ISO



Chapter presents an all-of-California perspective



California Needs to Deploy a Lot of Clean Energy Resources, Quickly and Equitably



2030 projected EV charger needs taken from 2023 Staff Draft AB2127 Report

2030 goal for 6M heat pumps established by Governor Newsom in 2022

2045 projected renewable generation and storage needs from 2021 SB100 Joint Agency Report



Organized Around Challenges, Efforts Underway, and Recommendations

5 interrelated challenges

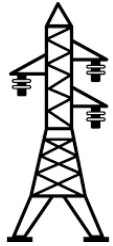
1. The pace of deployment strains planning
2. The growing number and size of projects overwhelm processes
3. Rate impacts must be managed while preparing the grid
4. Grid capacity and processes are not always transparent
5. Permitting is slow and broader public engagement is needed

34 efforts underway

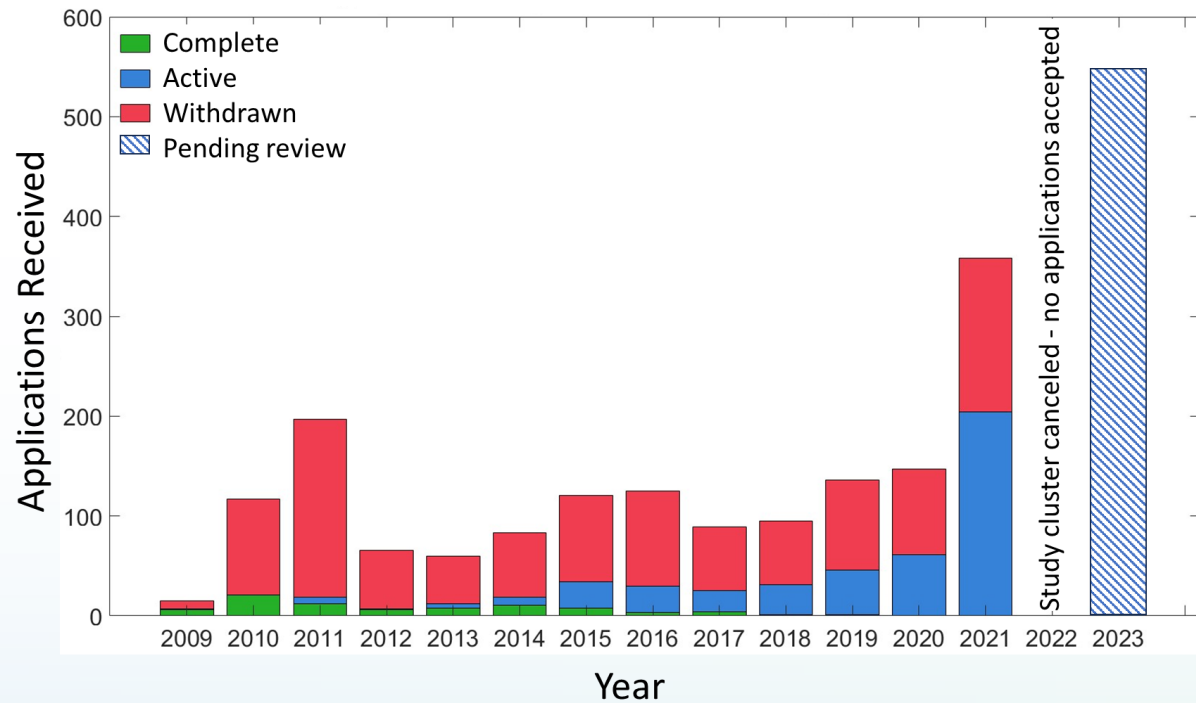
21 recommendations



Issue 2: Growing Number and Size of Projects Overwhelm Processes and Lack Capacity



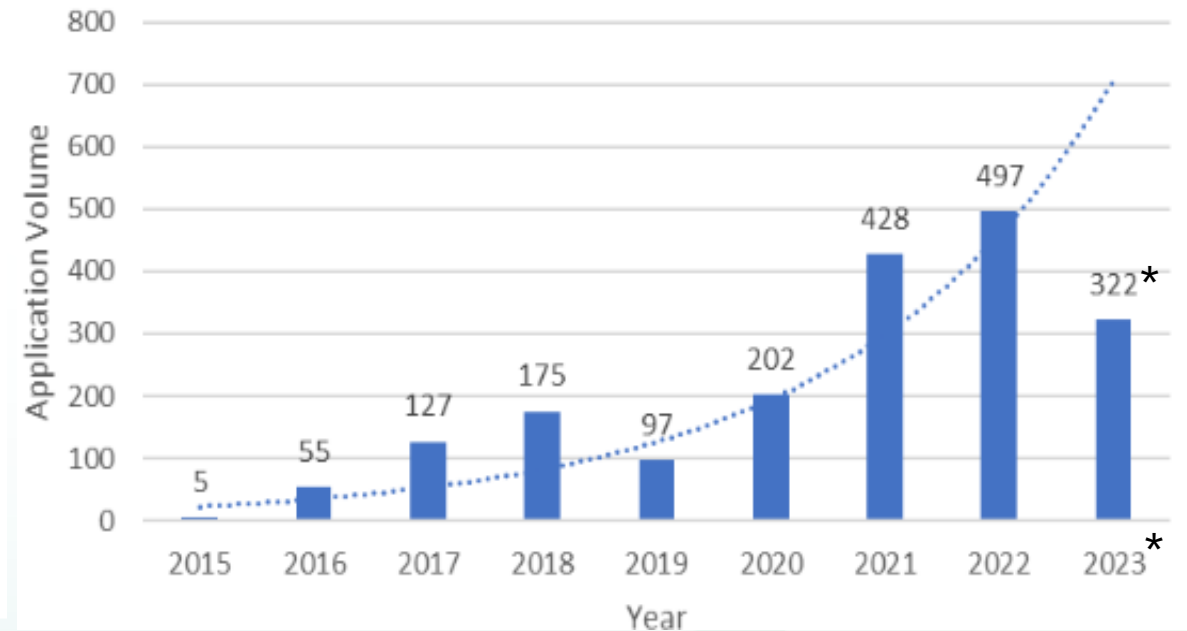
Transmission



Interconnection Requests to California ISO



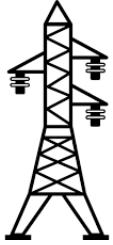
Distribution



SCE Reported TE New Service Applications



Issue 2: Efforts Underway to Connect Growing Numbers of Larger Projects



Transmission

- CAISO's interconnection process enhancements
- CAISO's implementation of FERC Order 2023
- CAISO's deliverability methodology review
- CAISO, CPUC, and CEC's Tracking Energy Development Taskforce



Distribution

- CPUC's implementation of SB 410 and AB 50
- CPUC's development of IOU EV infrastructure rules
- CPUC's exploration of limited generation profiles
- CPUC's Demand Flexibility Rulemaking
- CEC's Load Management Standards



Issue 2: Select Recommendations to Help Manage Growing Numbers of Projects



- Consider expanding use of shared resources or contractors for studies, design work, or construction delayed because of resource constraints.



- Encourage more flexible service connections and explore temporary power solutions to connect projects while permanent infrastructure is built.



- Study long-term workforce needs and increase investments in education, training, and workforce development, prioritizing justice communities.



Potential Growth of Clean and Renewable Hydrogen

Jennifer Campagna and Quentin Gee, Energy Assessments Division



Illustrative Scenario Analysis

- SB 1075 (Skinner) directed the CEC to study potential growth of hydrogen to decarbonize the electric power and transportation in California
- Estimated financial and resource requirements of hydrogen adoption for:
 - Electrolytic hydrogen only, high bookend of potential renewable capacity
 - 2 electricity generation scenarios
 - 2 transportation scenarios



Preliminary Findings – High Bookend

Electric Generation

- 1.88 million MT/year of hydrogen
- 921 electrolyzers
- 35 gigawatts of renewables



Transportation

- 971,000 MT/year of hydrogen
- 475 electrolyzers
- 18 gigawatts of renewables





Recommendations

- SB 1075 directed analysis in 2023 and 2025 IEPRs. For 2025, will evaluate:
 - Other production pathways, including biomass feedstocks
 - Delivery and storage infrastructure
 - Scenarios from 2025 joint agency SB 100 analysis





Staff Recommendation

- Adopt the Final 2023 Integrated Energy Policy Report, with errata docketed on February 13, 2024, and
- Approve staff recommendation that the report is not a project under CEQA or, in the alternative, if deemed to be a project that it is exempt

Thank you!