



Inter-Agency Resource Plan

Background

- What is the IARP?

- It is the Inter-Agency Resource Plan, a goal established in NCPA’s 2021-2026 NCPA Strategic Plan
- It is a NCPA and member document to prepare, develop, and maintain a diverse generation resource portfolio in accordance with or exceeding renewable portfolio standards and capacity obligations.
- It is for internal use by NCPA and to facilitate discussions with NCPA members. It is not designed for regulatory filings.

- Why is important?

- California is transitioning to renewable and zero-carbon resources by 2045.
- Load growth is rising and existing generation is changing
 - Drastically reducing fossil fuel energy
 - Achieving zero carbon
 - Meeting energy efficiency goals
- Plan an energy portfolio, for NCPA, for Members.



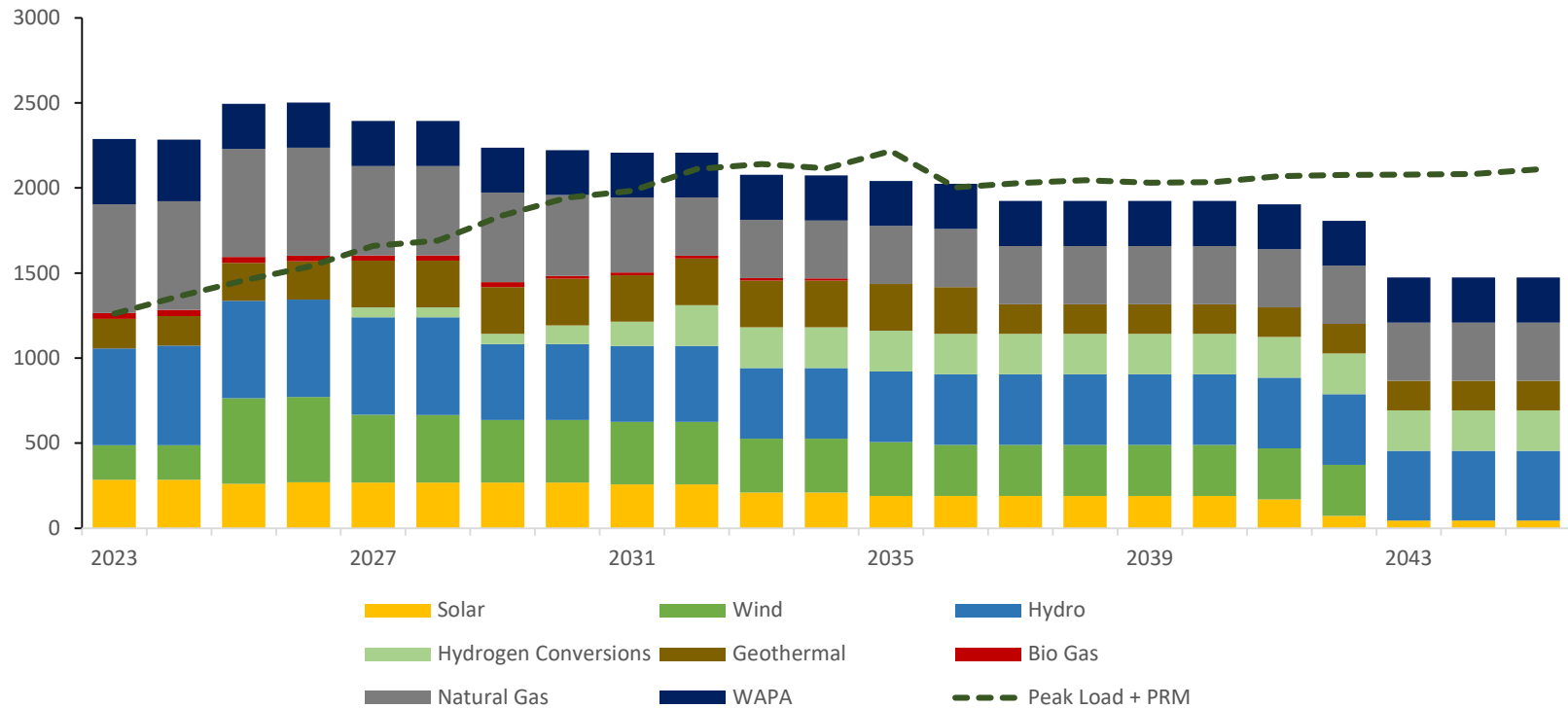
IARP Modeling Assumptions

- Ascend performed Long-Term Capacity Expansion using PowerSimm modeling software.
- The model included energy price forecasts, new resources cost projection, estimated loads, hydro and renewable projections, and dispatchable resources
- Cost-Effective resources are selected by the model to meet RA and RPS requirements
- RPS banking was not included in this report

The “Toolbox”

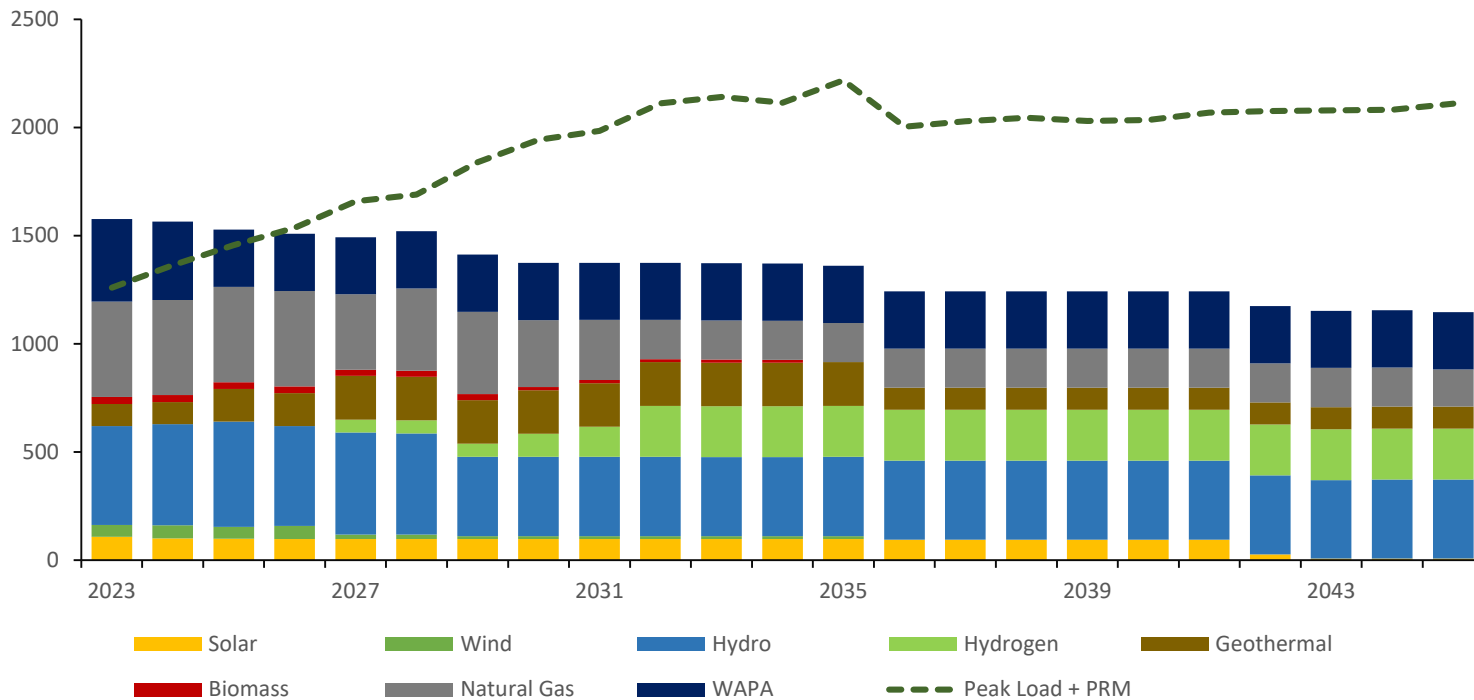


Nameplate Capacity (MW) of Existing Resources



Net Qualifying Capacity (MW) of Existing Resources

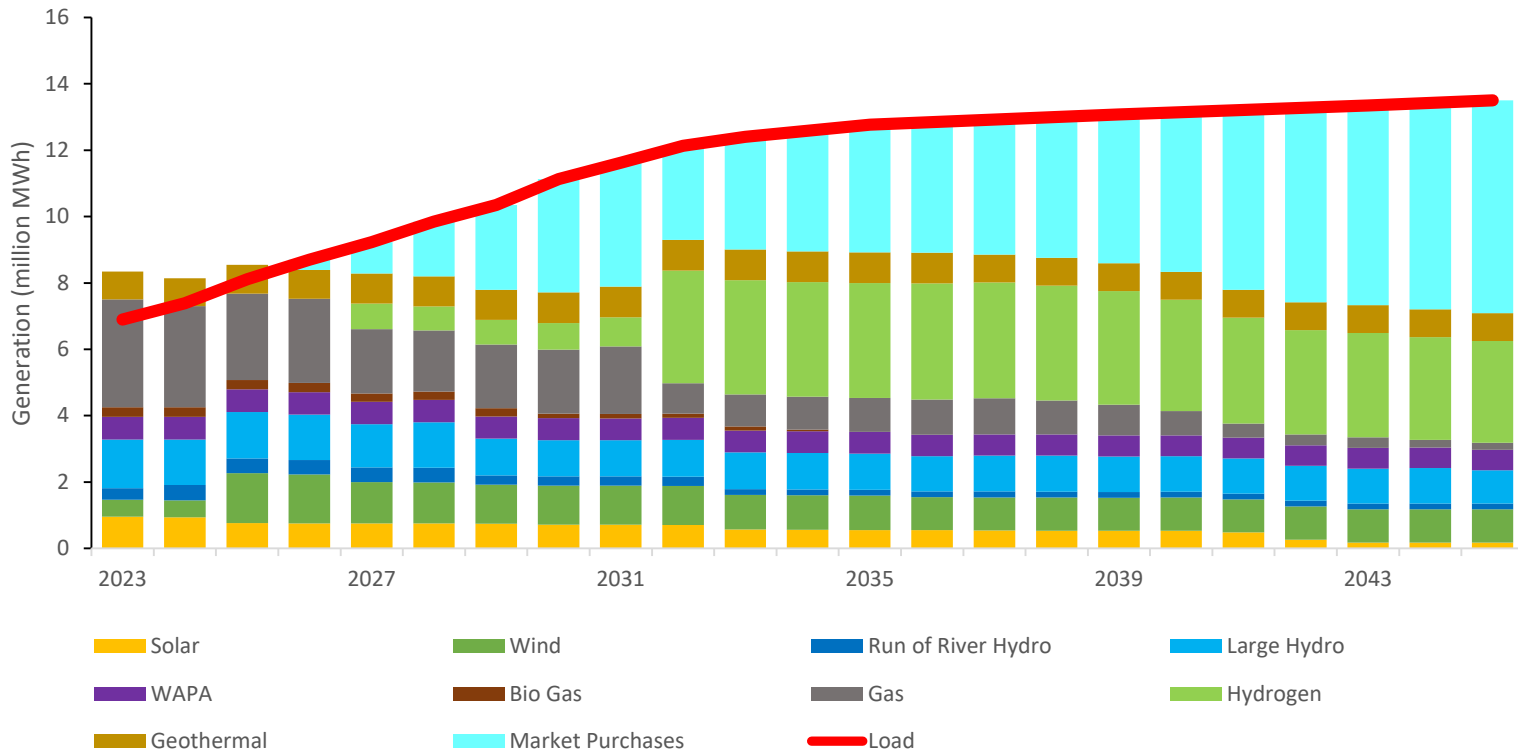
- Current Portfolio will need RA additions starting in 2026 assuming a planning reserve margin of 17%



Note: Annual peak load projection does not include expected load from hydrogen electrolyzers

Annual Energy Production from Existing Resources

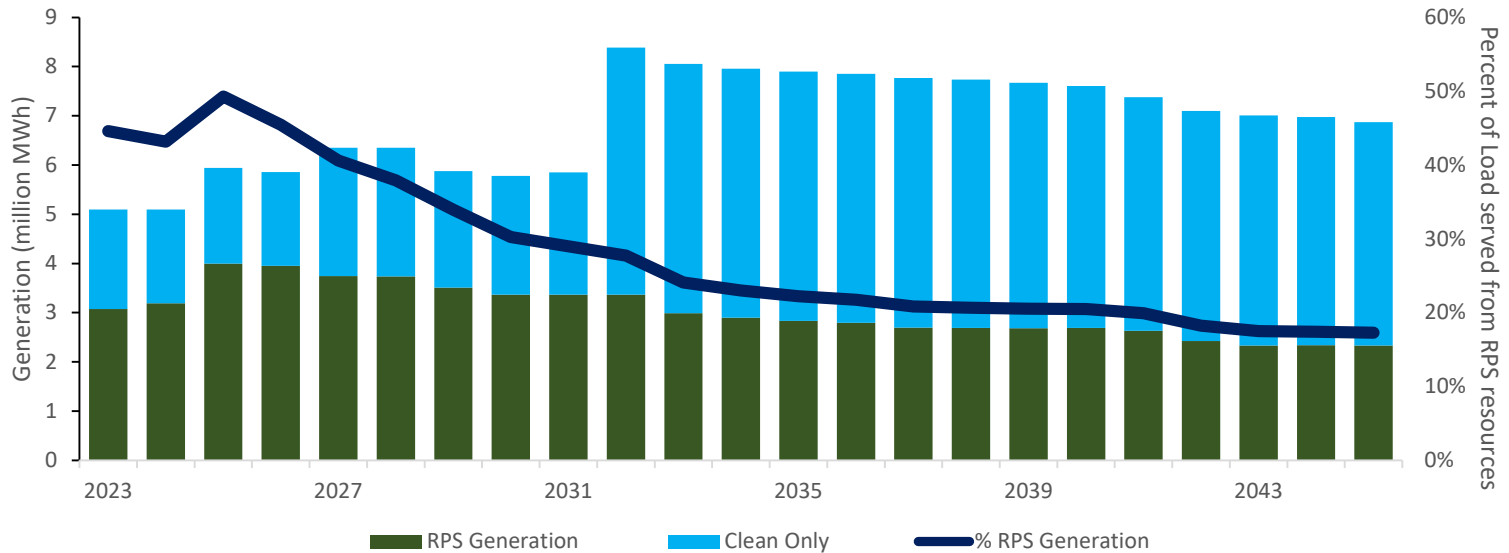
- Current Portfolio meets annual load through 2025



Note: Hydrogen generation assumes permits allow units to run at higher capacity factors

Clean Energy and RPS Position of Existing Resources

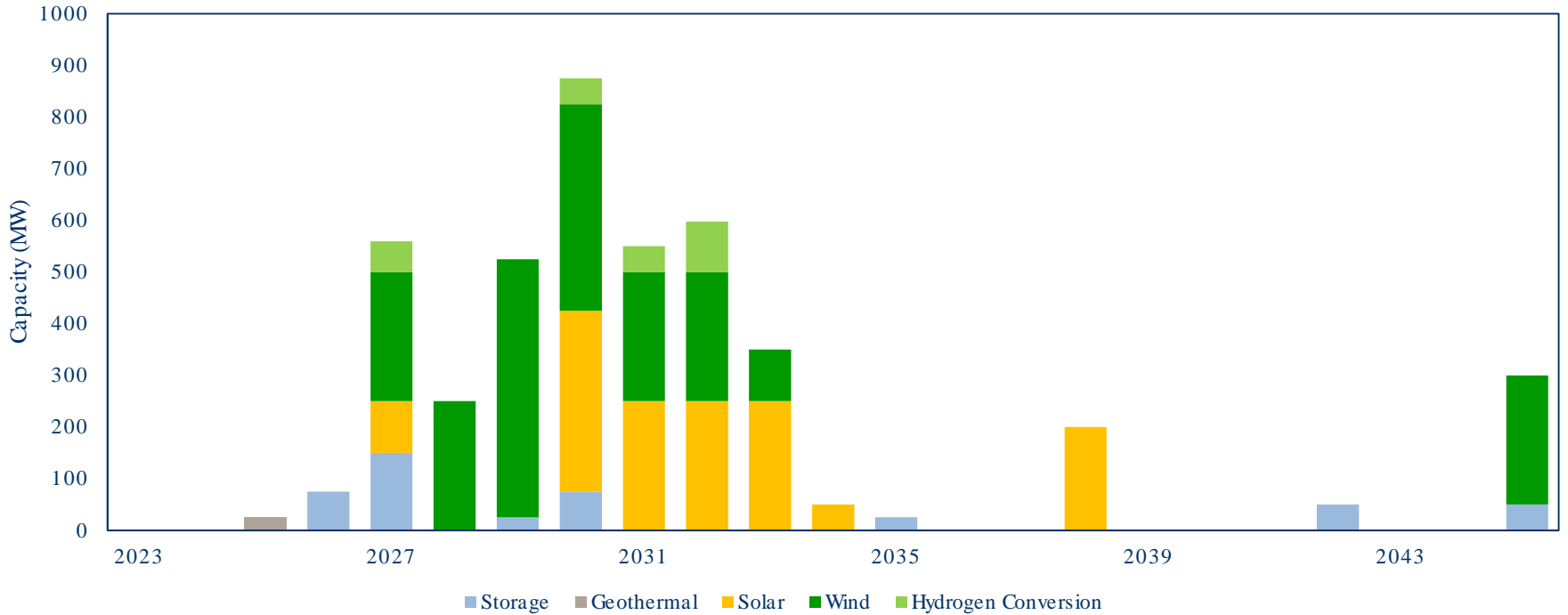
- Geothermal additions increase RPS position in 2025 and 2027
- Wind and solar PPA expirations reduce RPS position beginning near 2030



Findings

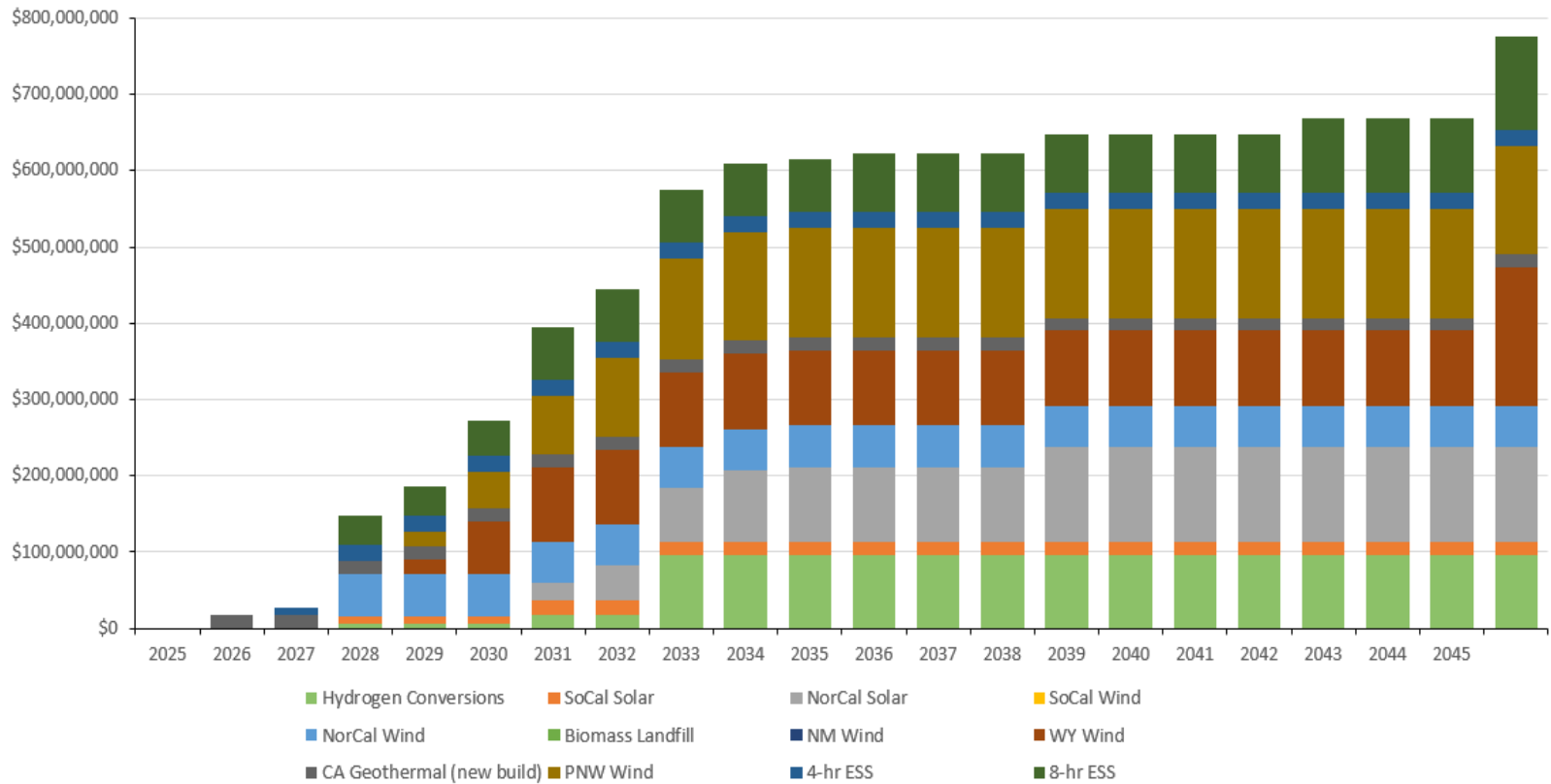
- Short Term
 - Today NCPA member portfolio meets RA, energy, and RPS mandates
 - New resources are needed after 2026
- Mid and Long Term
 - Transition LEC to hydrogen
 - Plan for full hydrogen conversions for LEC, CT1, and CT2
 - Add resources to cover capacity, energy and RPS requirements
 - Continue evaluating energy storage options

New Resource Buildout - Nameplate Capacity (MW)



	2025	2027	2028	2029	2030	2031	2032	2033	2034	2035	2038	2042	2045	Total
Geo	25	0	0	0	0	0	0	0	0	0	0	0	0	25
Solar	0	100	0	0	350	250	250	250	50	0	200	0	0	1,450
H2 Conversion	0	60	0	0	50	50	98	0	0	0	0	0	0	257
Wind	0	250	250	500	650	250	250	100	0	0	0	0	250	2,500
ESS	75	150	0	25	75	0	0	0	0	25	0	50	50	450
Total	100	560	250	525	1,125	550	598	350	50	25	200	50	300	4,682

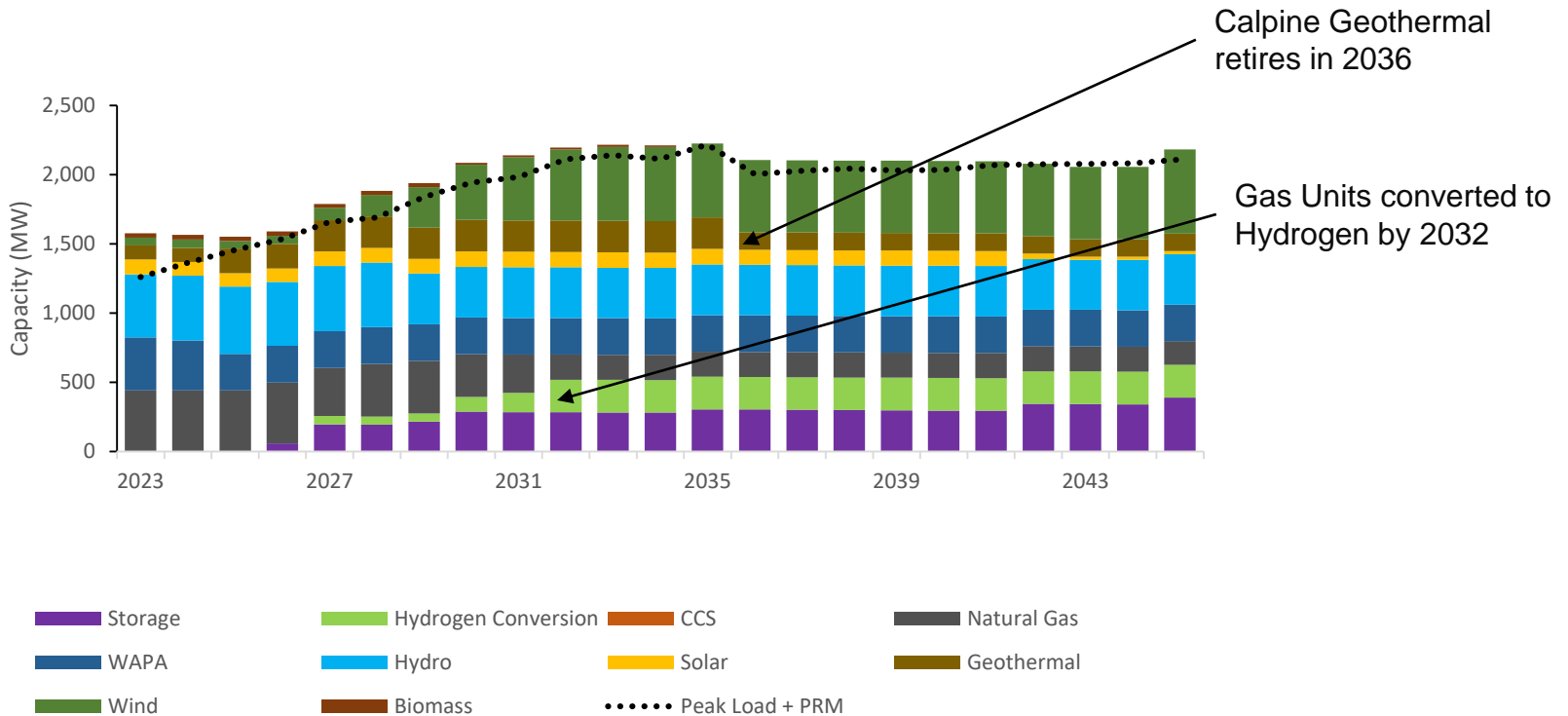
Annual Cost of New Resources



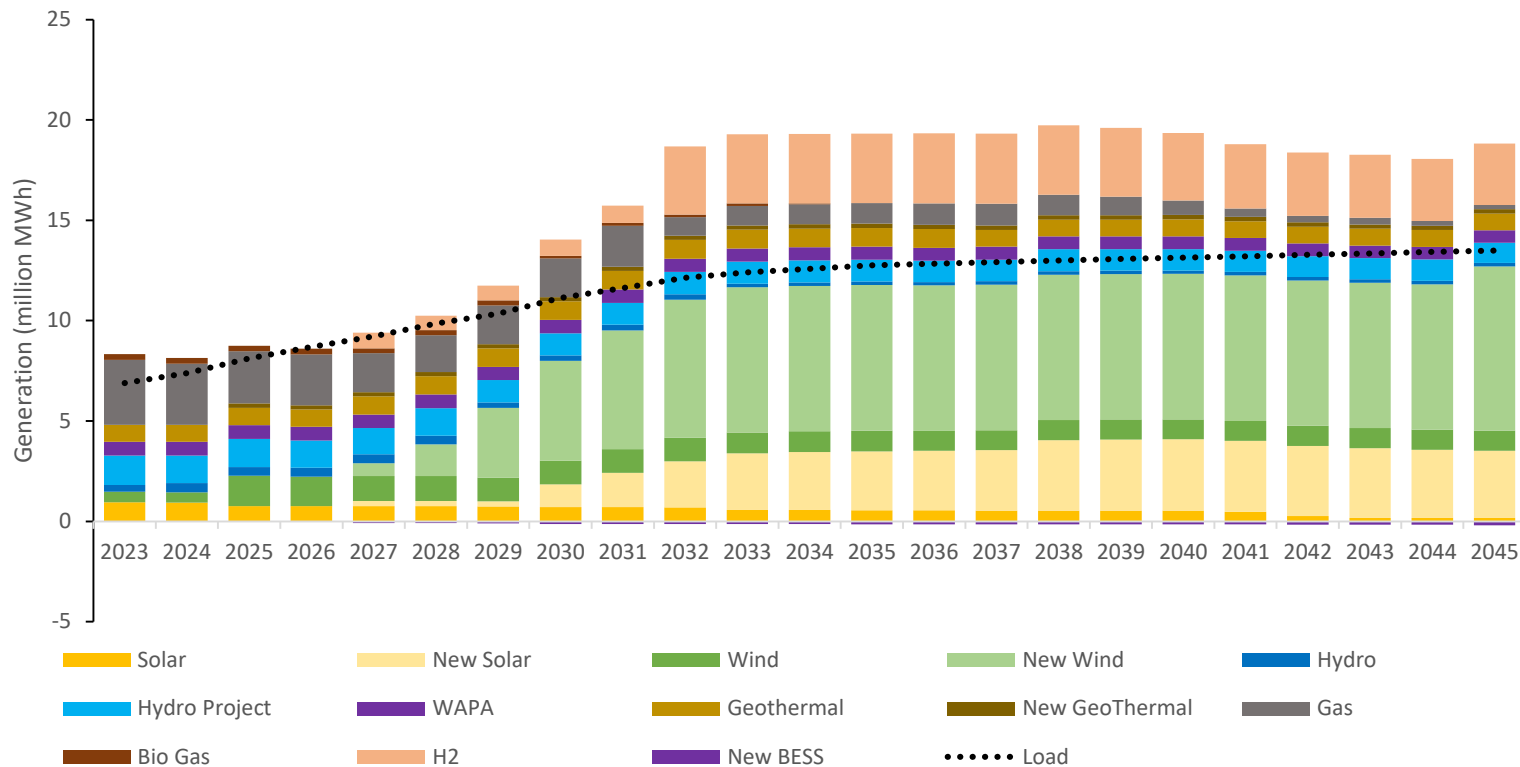
Note: The expectation is that these resources will be acquired via bonded indebtedness or a Power Purchase Agreement (PPA).

Net Qualifying Capacity (MW)

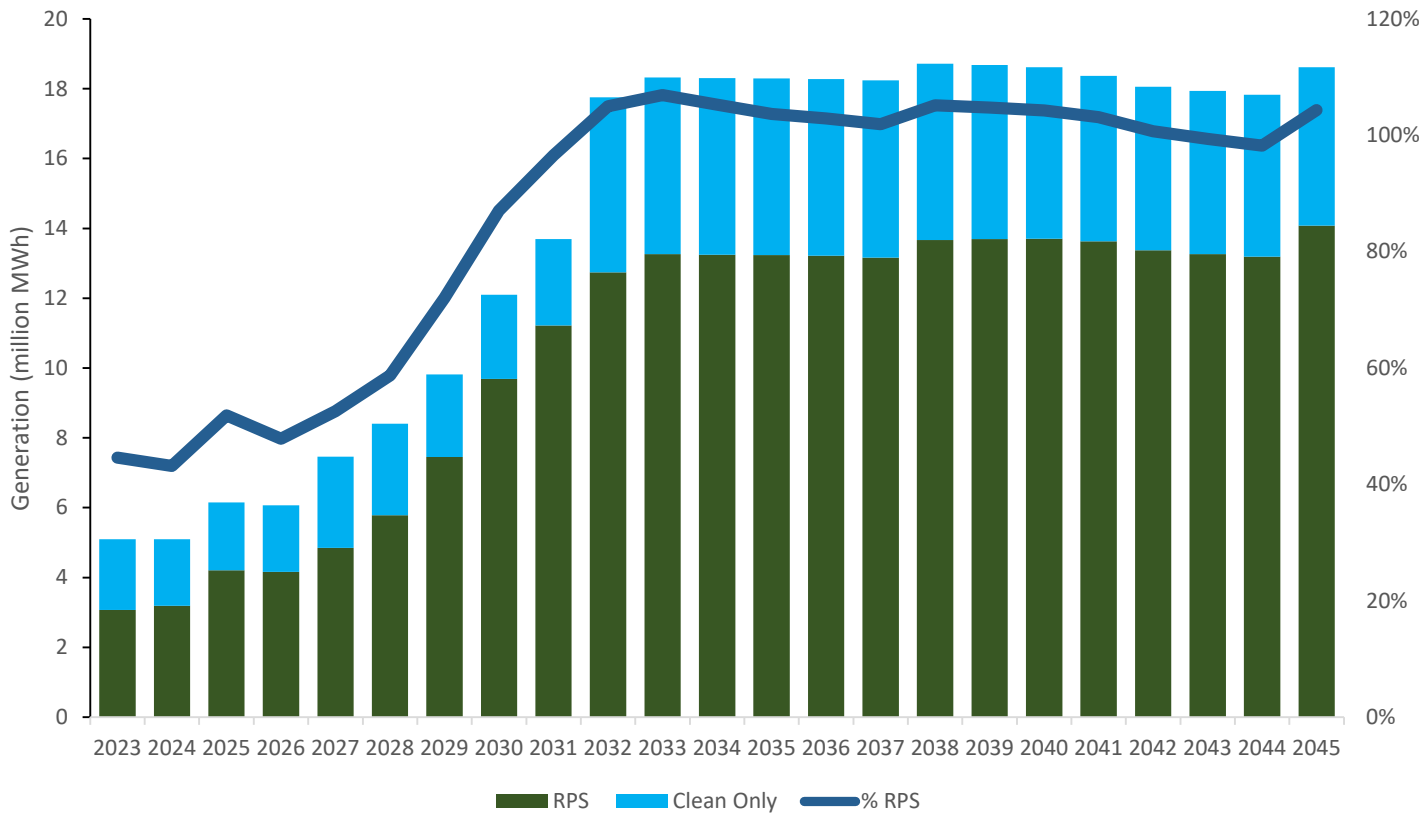
- New Resources are added starting 2025 to meet Capacity Requirements



Energy Position with Added Resources



RPS and Clean Energy Position



Capacity Expansion Modeling Results Overview

- Total 4.6 GW of Capacity were selected by 2045
- The model picks Geothermal, Wind (from Wyoming and Pacific Northwest), Solar, Long and short duration storage to meet energy and capacity needs
- Transition to Hydrogen enables NCPA to retain clean energy from firm and dispatchable resources

Thank You