Presentation for R.21-10-002 (Resource Adequacy) Workstream 2 Workshop on Resource Counting: "Exceedance for Wind / Solar"

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ACP – CALIFORNIA REPRESENTS THE INTERESTS OF UTILITY-SCALE REGIONAL AND OFFSHORE WIND, SOLAR AND STORAGE ("CLEAN CAPACITY") IN CALIFORNIA AND THROUGHOUT THE WEST. ACP-CALIFORNIA ADVOCATES FOR CLEAR AND PREDICTABLE RULES FOR PLANNING NEW CLEAN CAPACITY AS WELL AS MARKET RULES THAT ENCOURAGE COLLABORATION WITH ENERGY-PARTNERS THROUGHOUT THE WEST.

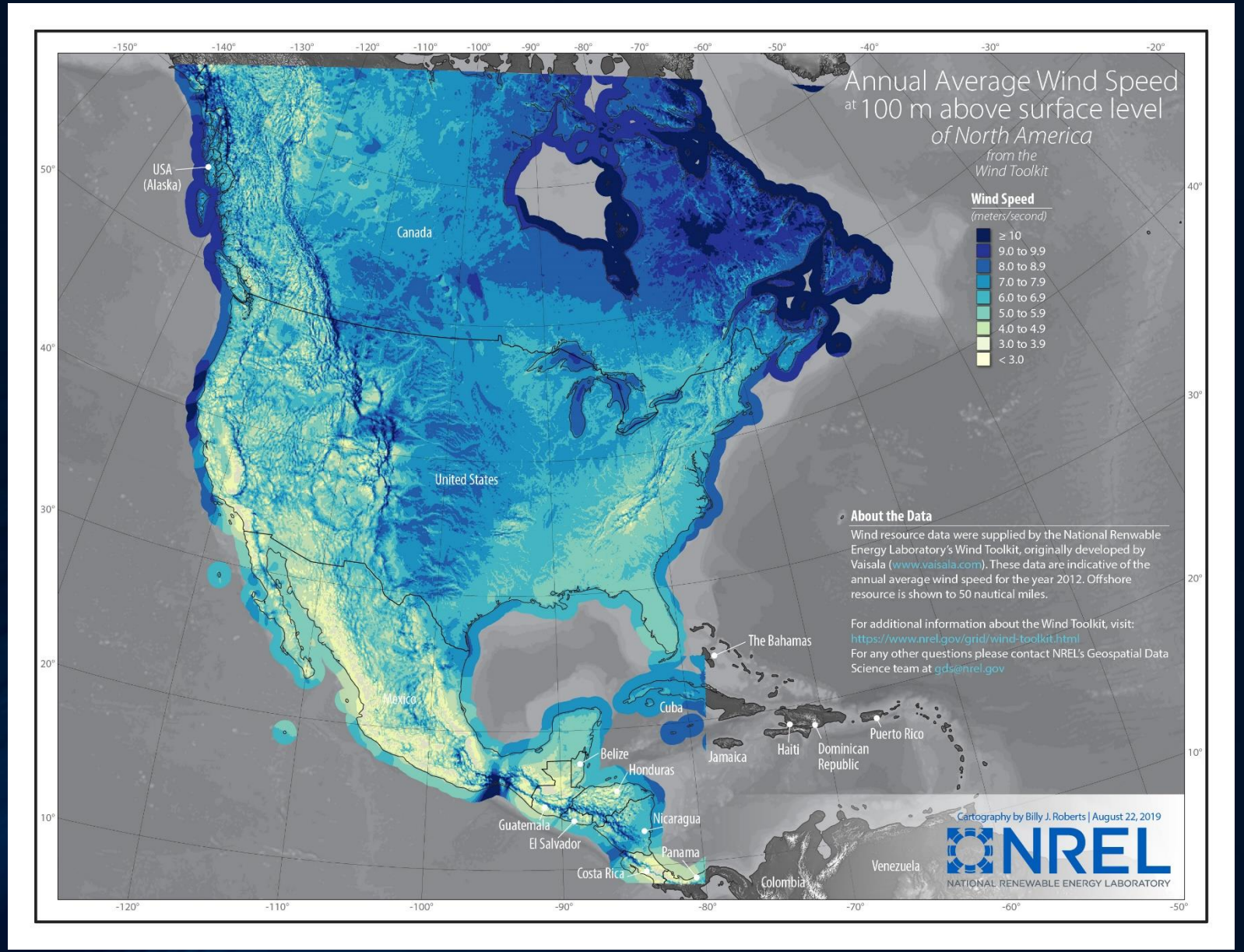
ACP-California Proposal on Exceedance for Wind Resources

- D.22-06-050 - Rejection of ELCC and selection of exceedance methodology as ELCC
  - Scope of presentations: Recommend broad consideration of different proposals to best approximate reliability contributions in distinct geographic regions.
  - Commission direction for further workshopping on "exceedance": "monthly hourly profiles should be based on technology and/or general geographic region." (App. A, p.3)
- Wind parties have expressed concern with the uncertainty and effect of exceedance on QC values compared to relative predictability of the ELCC.
  - Data needs for more granular, regional analysis
  - Accounting for new resources, especially offshore wind
  - Historic vs. simulated data sets: don't focus solely on existing resources in CAISO
- Proposal 1: Use Marginal ELCC for new wind resources for the first three years, subject to updating with "exceedance".
- Proposal 2: Exceedance – recommend focusing on a subset of days with highest net-peak loads in each month to derive a monthly NQC for resources in each region. Consider region-specific exceedance thresholds.

National Renewable Energy Laboratory (NREL)

Annual Average Wind Speed Map (100 M hub height)

Diversity and Geographic Value of Wind Should Be Recognized – To a Greater Degree Than It Has Been To Date



Source: https://www.nrel.gov/gis/assets/images/wtk-100-north-america-50-nm-01.jpg

38 MMT Scenario: Marginal Need + ELCCs

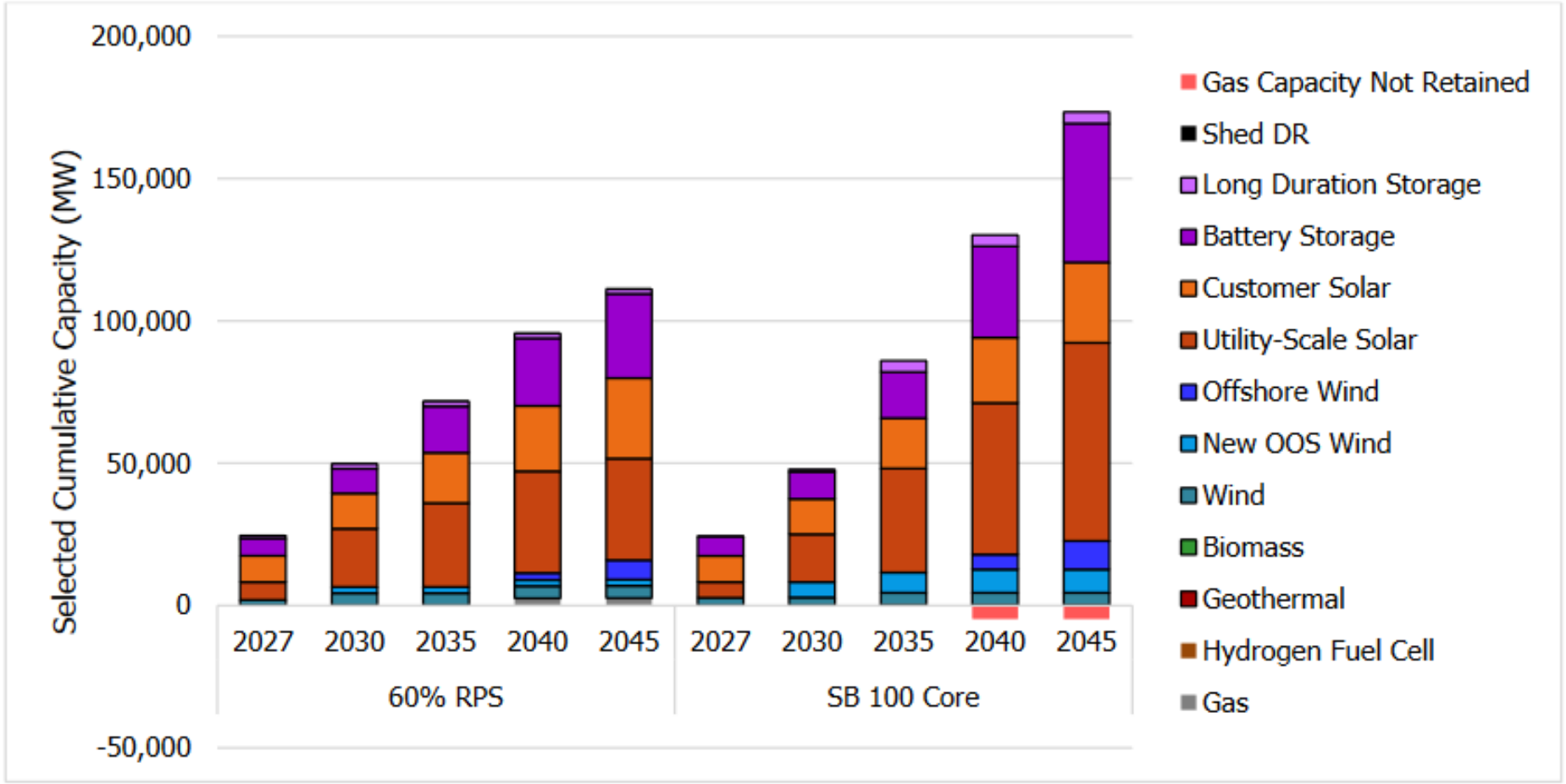
Modeled Year (results complete)	Modeled Year (results still pending)	Interpolated Year

Resource Class	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
In-state Wind (SoCal)	15%	15%	15%				8%					
In-state Wind (NorCal)	30%	30%	31%				16%					
Out-of-state Wind (WY/ID)	43%	39%	36%				24%					
Out-of-state Wind (WA/OR)	26%	24%	22%				14%					
Out-of-state Wind (AZ/NM)	38%	35%	32%				21%					
Offshore Wind	55%	51%	46%				43%					
Utility PV	10%	10%	11%				6%					
BTM PV	9%	9%	10%				5%					
4-hr Battery Storage	71%	79%	87%				76%					
8-hr Battery Storage	90%	91%	92%				84%					
Pumped Hydro Storage	92%	93%	93%				82%					
Demand Response	89%	91%	92%				59%					
Hydro (large)	57%	56%	56%				48%					
Hydro (small)	41%	40%	40%				35%					
Firm*	85%	86%	87%				84%					
Marginal Reliability Need	48,800	50,165	51,530				46,974					

* Firm sub-class ELCCs included in Appendix slide

Source: CPUC Energy Division's July 19, 2022 Modeling Advisory Group Presentation
Results of PRM and ELCC Studies

Figure 3: Cumulative Capacity Additions for SB 100 Core Scenario and 60 Percent RPS Reference Scenario



Source: CEC staff and E3 analysis

Source: SB 100 Joint Agency Report: Charting a Path to a 100% Clean Energy Future