



Platte River
Power Authority

Estes Park • Fort Collins • Longmont • Loveland

Board of directors

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Resource Adequacy Reporting per HB23-1039

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and sustainable resource integration**



Resource Adequacy

- Resource adequacy (RA) is the ability of utilities' generation to meet all end-use customer energy demand.
- We serve our customers under all conditions, 24 hours a day, 7 days a week.
- RA ensures there is enough accredited capacity and reserves for the grid operator to maintain a balanced supply and customers' demand across the electric system.

Planning Reserve Margin

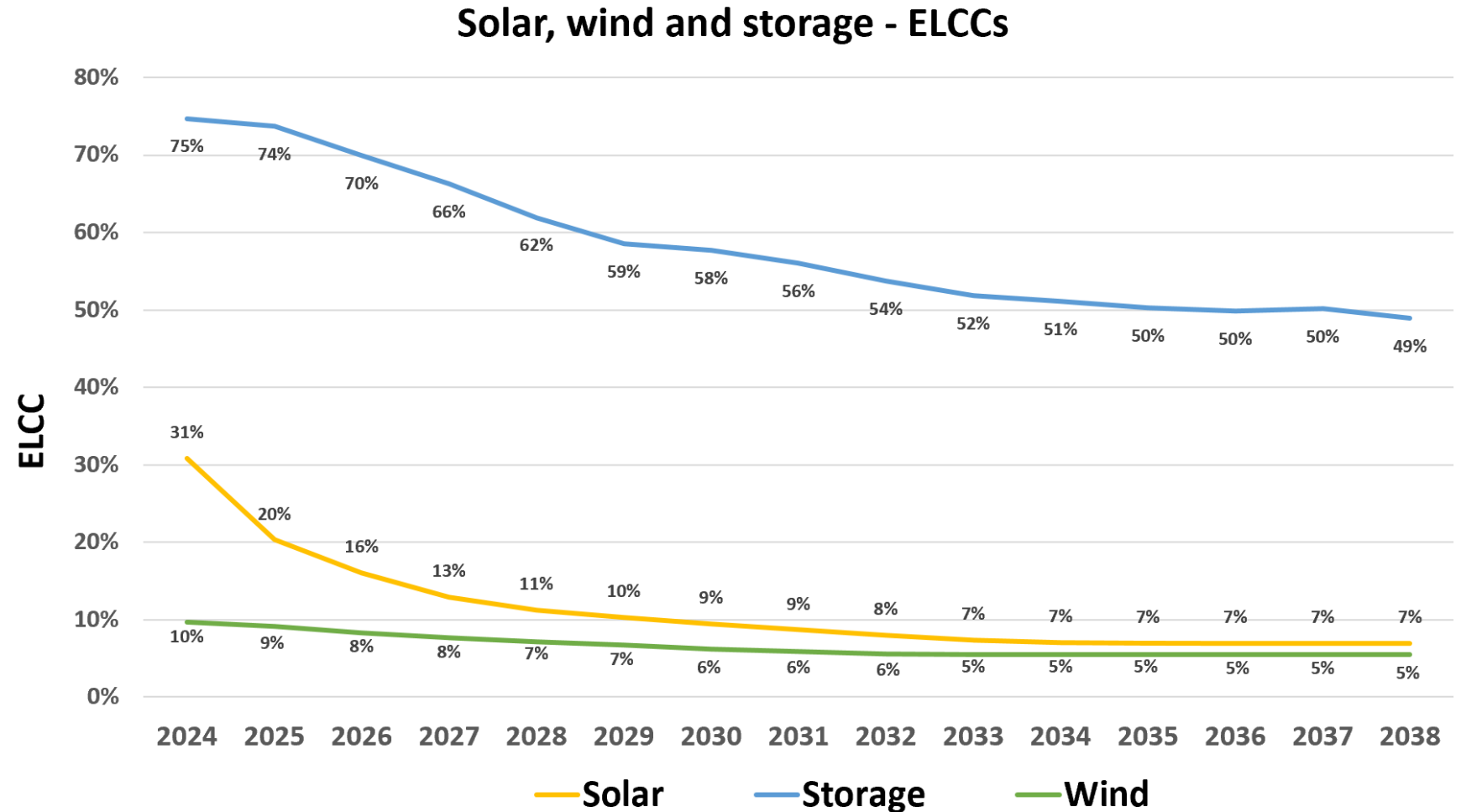
- North American Electric Reliability Corporation (NERC) defines RA requirement to have a Planning Reserve Margin (PRM – additional capacity relative to the peak demand) that will limit the probability of loss of load in a planning year being equal to 0.1
- Historically, utilities have been able to meet this RA criteria by carrying a PRM of 12-15%
- With the retirement of dispatchable resources and the addition of intermittent renewables, expected PRM is going up – a recent Western Electricity Coordinating Council study recommended 20%+
 - An independent consultant specializing in this area advised Platte River uses 19.9% for 2024 Integration Resource Plan
- A critical factor in maintaining resource adequacy under a changing grid mix is accurately assessing renewable energy potential and future demand for electricity, particularly when there is likely going to be stress on the power system.

Supply side resources

Installed capacity in MWs		2024	2025	2026	2027	2028	2029	2030
Dispatchable Generation								
	Rawhide Unit 1	280	280	280	280	280	280	
	Craig 1	77	77					
	Craig 2	74	74	74	74	74		
	Existing CTs	388	388	388	388	388	388	388
	New Dispatchable					200	200	200
	Total Dispatchable Generation	819	819	742	742	942	868	588
Carbon-Free Generation								
	Hydro	81	78	75	72	70	70	70
	Wind	231	231	231	431	631	631	691
	Utility Solar	52	202	352	352	352	352	352
	Utility Storage	1	1	26	51	111	186	186
	Total Carbon Free Generation	365	512	684	907	1,164	1,239	1,299
	Total Generation Capacity	1,184	1,331	1,426	1,649	2,106	2,107	1,887

ELCC of intermittent resources

- Effective Load Carrying Capability (ELCC) is the average capacity available at the time of peak load
- As more intermittent capacity is added, ELCC continues to drop



PRM projections for Platte River

Platte River will have enough resources to meet the NERC approved RA criteria during the next five years.

Firm or Accredited capacity	2024	2025	2026	2027	2028	2029	2030
Dispatchable generation UCAP	784	784	711	711	907	836	565
Hydro	81	78	75	72	70	70	70
Wind - ELCC Adjusted Capacity	39	39	39	55	69	69	79
Solar - ELCC Adjusted Capacity	29	60	84	84	84	84	84
Storage - ELCC Adjusted Capacity	1	1	18	35	75	119	119
Firm Capacity	934	961	927	956	1,204	1,178	917
<i>Total Generation Capacity</i>	<i>1,184</i>	<i>1,331</i>	<i>1,426</i>	<i>1,649</i>	<i>2,106</i>	<i>2,107</i>	<i>1,887</i>
Load and other Obligations							
Owner Community Load	732	740	747	755	762	770	778
Firm Sales	65						
DERs Obligations (BE, EV and DS)	1	1	2	3	6	10	15
Demand Response	(7)	(8)	(9)	(13)	(20)	(26)	(31)
Net Load Obligation	791	733	740	745	748	754	762
Planning Reserve Margin (PRM)	18%	31%	25%	28%	61%	56%	20%
Target PRM 2024-2025	15.0%						
Target PRM 2026 onward	Per RTO West guidelines						