

Capacity Accreditation

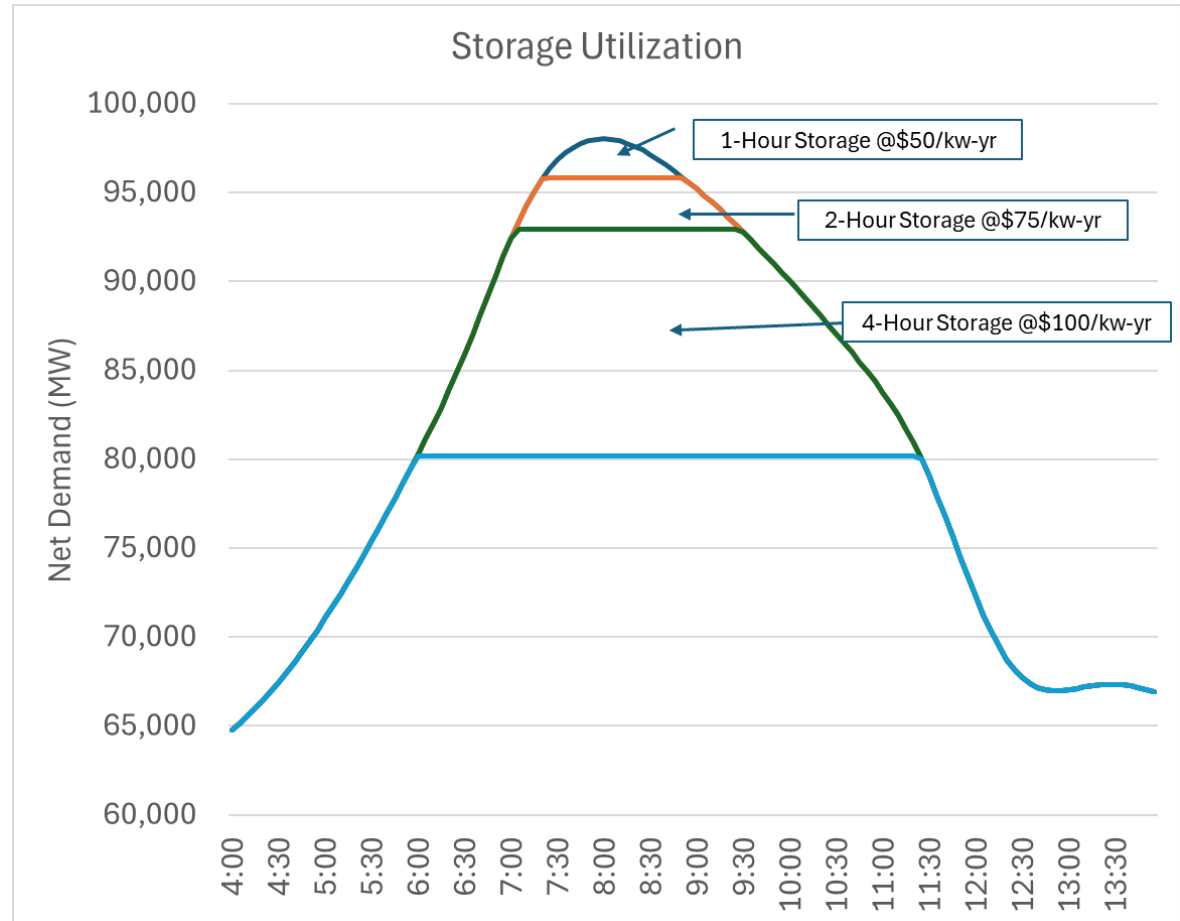
04-02-2024

Principle of Capacity Accreditation

- **Pay all resources the same price for the same product**
 - Not all resources provide the same contribution to reliability. How should their reliability contribution be normalized?
 - Marginal ELCC? Average ELCC? DLOL?
 - Pay all resources based on their output or availability during critical hours
 - What is a critical hour?

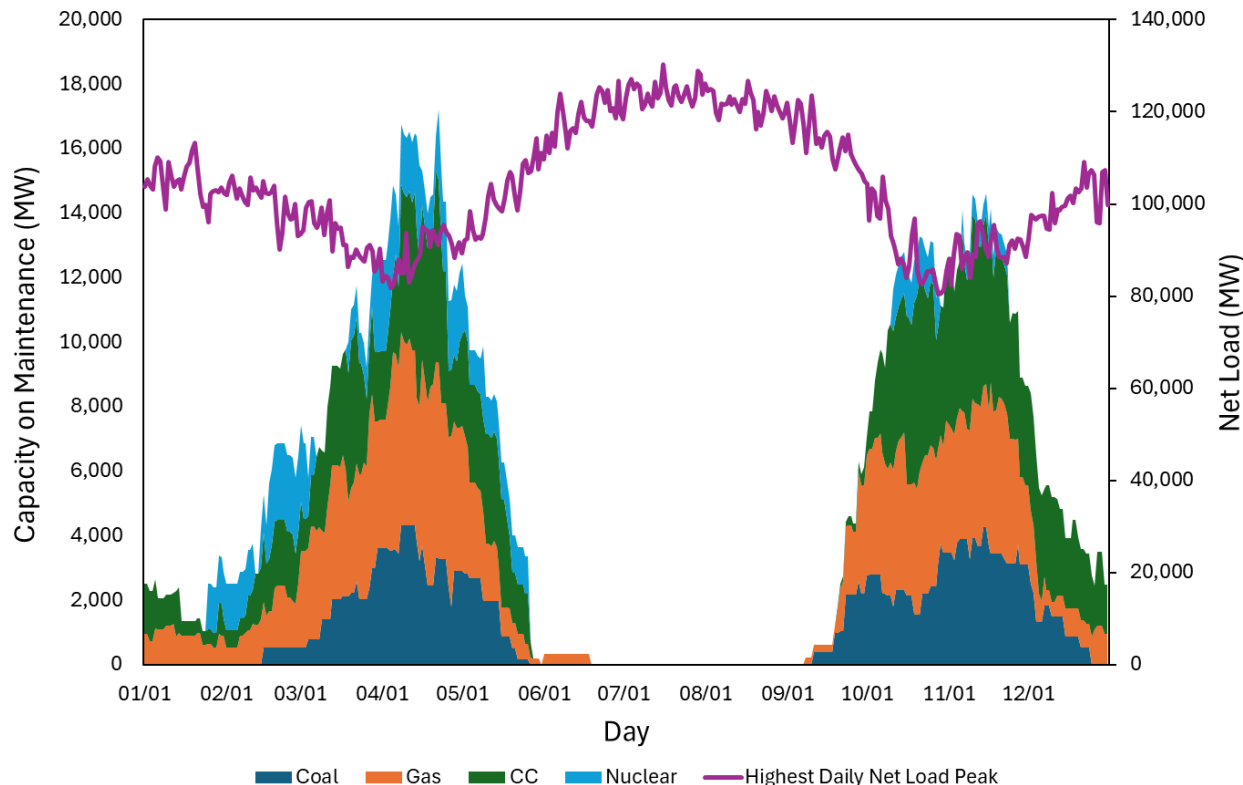
Challenges to Capacity Accreditation – Storage Duration

- Capacity and energy attributes vary yet still affect reliability
- How should the marginal contribution affect accreditation?



Challenges to Capacity Accreditation - Maintenance

- Since the objective function of maintenance scheduling is system reliability, some units' maintenance may be arbitrarily scheduled in reliability-sensitive periods.



Challenges to Capacity Accreditation – Critical Hour Definition

- Are loss of load hours too concentrated to properly incentivize optimal portfolios and resource performance?

MISO DLOL Hours

		Month											
		1	2	3	4	5	6	7	8	9	10	11	12
Hour	1	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	2	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	3	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	4	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	5	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	6	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	7	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	8	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	9	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	10	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	11	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	12	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	13	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	14	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
	15	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%
	16	0%	0%	0%	0%	0%	6%	0%	1%	0%	0%	0%	0%
	17	0%	0%	0%	0%	0%	10%	0%	1%	0%	0%	0%	0%
	18	0%	0%	0%	0%	1%	15%	0%	2%	0%	0%	0%	0%
	19	0%	0%	0%	0%	1%	18%	0%	2%	0%	0%	0%	0%
	20	0%	0%	0%	0%	1%	16%	0%	2%	0%	0%	0%	0%
	21	0%	0%	0%	0%	1%	10%	0%	0%	0%	0%	0%	0%
	22	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
	23	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	24	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

MISO RA Hours

		Month											
		1	2	3	4	5	6	7	8	9	10	11	12
Hour	1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	3	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	4	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	5	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	6	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	7	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	8	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
	9	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
	10	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
	11	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
	12	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	13	0%	1%	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%
	14	0%	1%	0%	0%	2%	0%	1%	1%	0%	1%	0%	0%
	15	0%	1%	0%	0%	2%	1%	2%	1%	1%	2%	0%	0%
	16	0%	0%	0%	0%	3%	1%	2%	2%	2%	2%	0%	0%
	17	0%	0%	0%	0%	3%	1%	2%	2%	2%	2%	0%	0%
	18	0%	0%	0%	0%	3%	1%	2%	1%	1%	2%	0%	0%
	19	0%	1%	0%	0%	2%	1%	1%	1%	1%	2%	0%	0%
	20	0%	1%	0%	0%	1%	0%	0%	0%	0%	1%	1%	0%
	21	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	22	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	23	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	24	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%