Agenda Item 4.1: ICS Report to NYSRC Executive Committee (EC)
April 3, 2024, ICS Meeting #288
Prepared for: April 12, 2024 EC Meeting #300
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4.1.1 Assumptions Matrix

ICS reviewed the 2025-26 PBC assumptions matrix, at this time there are limited updates. ICS recommended an improvement to Attachment C (generator EFORds) to separate intermittent generation EFORd from thermal generation EFORd for reporting purposes.

4.1.2 Preliminary Base Case Parametric Results

NYISO began updating the MARS model and performing the parametric analysis which included updating thermal unit EFORd's (-0.06%), Run-of-River Hydro shapes (-0.11%) and the wind/solar/LFG shapes (-0.03%)

4.1.3 Tan45 Methodology Review White Paper

NYISO presented options of how to zonally allocate renewable resources for the renewable buildout used in the analysis. There will be 9 GW of each land-based wind, solar and offshore wind resource added to the model. ICS expects the most impactful resource will be offshore wind and recommends modeling 6 GW in NYC and 3 GW in LI which is consistent with expected allocations and previous studies. ICS also recommended prioritizing a sensitivity case with Champlain Hudson Power Express (CHPE) to understand near term impacts to the Tan45 process.

4.1.4 2024-25 Capacity Accreditation Factors

For informational purposes, NYISO presented the Capacity Accreditation Factors (CAF) that will be used for the 2024-25 capability period. CAFs are determined using the Marginal Reliability Improvement (MRI) methodology, which compares the change in LOLE of a resource class versus perfect capacity and is performed using the IRM database. Capacity suppliers are qualified to sell UCAP = ICAP x CAF x (1-Derating Factor)

CARC	Rest of State	GHI	NYC Locality	LI Locality
2-Hour Energy Duration Limited	55.42%	56.16%	55.93%	52.76%
4-Hour Energy Duration Limited	64.47%	67.95%	68.84%	78.94%
6-Hour Energy Duration Limited	91.77%	91.92%	90.41%	91.53%
8-Hour Energy Duration Limited	100.00%	100.00%	100.00%	99.72%
Landfill Gas	59.67%	--	--	--
Solar	15.64%	15.62%	15.18%	11.62%
Offshore Wind	--	--	--	31.56%
Land-based Wind	12.89%	--	--	--
Limited Control Run of River	32.78%	41.23%	--	--
Large Hydro	100.00%	--	--	--
Large Hydro with partial Pump Storage	100.00%	--	--	--
Generator	100.00%	100.00%	100.00%	100.00%

4.1.5 DER Modeling White Paper

NYISO presented proposed principles for modeling DERs:
Principle 1: model Demand Side Resource only aggregations by zone and use similar modeling approach as SCRs.
Principle 2: combine single resource type aggregations without an energy limitation by zone and technology.
Principle 3: combine single resource type aggregations with an energy limitation into one unit per zone by technology and duration limitation.
NYISO is still evaluating how best to model mixed resource aggregations.

4.1.6 Gas Constraint Modeling Whitepaper

NYISO presented an updated proposal to model gas constraints in the 2025 PBC. ICS is requesting EC agreement to move forward with the PBC assumption based on the table below while ICS finalizes the whitepaper. The whitepaper is almost complete however there was discussion at ICS of how best to model gas unavailability in the final base case (FBC) after the generators make firm or non-firm fuel elections in August. Starting in 2025, generators will need to elect to be firm fuel units (gas with firm transportation contract or 6 days of 16 hour run time oil backup) or non-firm fuel units which will be designated as a separate capacity accreditation resource class (CARC from table in 4.1.4).

Tier	NYCA Load Conditions (MW)	Available Gas (MW)	Available Oil (MW)	Total Available Fuel (MW) (Gas + Oil)**	Illustrative Modeled Derate (Rounded MW)***
1	>26,000	375	11,000	11,375	8,600
2	25,000 - 26,000	750		11,750	8,225
3*	24,000 - 25,000	2,750		13,750	6,225
4*	23,000 - 24,000	4,500		15,500	4,475
5	22,000 - 23,000	5,500		16,500	3,475
6	<22,000	No Constraint		No Constraint	0

4.1.7 Load Shapes Comparison Analysis

NYISO presented analysis whether the current procedure of developing load shapes for the IRM model accurately captures high load hours of recent observed load shapes of 2022 and 2023. The results of the analysis indicated that the current IRM load shape adjustment procedure does not overrepresent high load hours, however an alternative method to capture seasonal peaks and annual energy would better represent historical load at the near peak hours. ICS requested further analysis on the IRM impacts as well as an assessment of when the modeled risk occurs following the alternative load modeling procedure.