

# NYISO 2025-2029 ICAP Demand Curve Reset (DCR)

Financial Parameter Recommendations, Battery Operating Reserve Eligibility, and Voltage Support Services (VSS) Adder

ICAP Working Group

May 30, 2024

## Agenda

- Financial Parameter Recommendations
- Battery Operating Reserve Eligibility
- Review of VSS Adder Methodology

# Financial Parameter Recommendations

# ATWACC

## Summary of Current Recommendation

- Current recommended values for individual financial parameters, including debt-to-equity ratio, cost of debt, cost of equity and tax rate, and after-tax weighted average cost of capital (ATWACC) are provided below
- The recommended values reflect the values provided in Analysis Group’s April 17, 2024 ICAPWG presentation

Inputs	Recommendation	2021-2025 DCR Parameters
Debt and Equity Shares of Capital	<b>55% and 45%</b>	<b>55% and 45%</b>
Cost of Debt	<b>6.45%</b>	<b>6.70%</b>
Cost of Equity	<b>14.00%</b>	<b>13.00%</b>
Tax Rate	<b>33.13% (NYC) 26.14% (All Other)</b>	<b>36.35% (NYC) 27.50% (All Other)</b>
<b>Recommended ATWACC</b>	<b>8.67% (NYC) 8.92% (All Other)</b>	<b>8.20% (NYC) 8.52% (All Other)</b>

# ATWACC

## Considerations

- Analysis Group's April 17, 2024 ICAPWG presentation summarizes information used in developing recommended values
  - Final recommended values will reflect an update of this information prior to the completion of the independent consultant's final report in order to capture the most recent market data
- This recommendation reflects information received from stakeholders regarding the financial parameters, including the information that parties authorized for posting on the NYISO's website
  - We appreciate the information provided by stakeholders
  - The information does not lead us to change our recommendation from the values provided in the April 17, 2024 ICAPWG presentation:
    - Information on cost of debt may not be fully appropriate/representative for purposes of the DCR: (1) reflects debt/loan products with variable rates that are not suitable for measuring cost of debt over an extended future period; (2) provided without information on corresponding capital structure, cost of equity and loan terms; and (3) reflects a selective subsample.
    - Information on cost of equity reflects methodological approaches inconsistent with basic principles of financial economics employed by Analysis Group for the DCR or illustrative values.

# ATWACC

## Considerations

- Tax rate on corporate returns
  - The recommended corporate tax rate on corporate income is 6.5%
  - Currently, provisions in New York's tax law provide for an increase in the tax rate to 7.25% for businesses with revenue exceeding \$5 million, which would be the case for the peaking plant (New York Tax Law Section 210(1)(a))
  - The provision for the higher 7.25% tax rate currently expires at the end of 2026
  - However, given period covered by the DCR and the assumed life of the hypothetical new resources, at most a very limited amount of potential income earned from the peaking plant would occur prior to 2027 such that the higher tax rate would likely not affect project economics – thus, we assume a corporate tax rate of 6.5% as more representative of the tax rate applicable over the assumed life of the peaking plant

## Other Financial Parameters

### Considerations

- Our current recommendation reflects the potential values for amortization period provided in the April 17, 2024 ICAPWG presentation:
  - 13 years for the fossil-fired frame turbine and 20 years for battery storage
  - We continue to evaluate the appropriate amortization period, particularly in light of development risks for merchant entry in New York State (including consideration of market structure and capacity accreditation considerations)
  - These considerations potentially lead to a lower amortization period for battery storage, generally, or potentially certain shorter-duration (e.g., 2-hour and/or 4-hour) battery storage options (e.g., 15 years)

## Modified Accelerated Cost Recovery System (MACRS) Recommendations

- In the 2021-2025 DCR, Analysis Group assumed a MACRS tax depreciation schedule of 7 years for batteries, and 15 years for simple cycle gas turbines (SCGTs).
- Provision 13703 of the Inflation Reduction Act of 2022 permits energy storage technologies, as defined in 26 U.S. Code Section 48E(c)(2), to be classified as 5-year property for the purposes of MACRS depreciation if the unit is placed into service after December 31, 2024.
- SCGTs continue to be classified as 15-year property for the purposes of MACRS depreciation per Table B-1 of IRS Publication 946 .
- Analysis Group recommends a 5-year MACRS depreciation schedule for battery storage units, and a 15-year depreciation schedule for SCGT units.

Year	Tax Depreciation Schedules	
	5 Year (Battery)	15 Year (Simple Cycle)
1	20.00%	5.00%
2	32.00%	9.50%
3	19.20%	8.55%
4	11.52%	7.70%
5	11.52%	6.93%
6	5.76%	6.23%
7	0.00%	5.90%
8	0.00%	5.90%
9	0.00%	5.91%
10	0.00%	5.90%
11	0.00%	5.91%
12	0.00%	5.90%
13	0.00%	5.91%
14	0.00%	5.90%
15	0.00%	5.91%
16	0.00%	2.95%



## Summary of Financial Parameters by Capacity Region

Finance Category	NYCA	G-J	NYC	LI
Inflation Factor (%)	2.12%	2.12%	2.12%	2.12%
Debt Fraction (%)	55.00%	55.00%	55.00%	55.00%
<b>Debt Rate (%)</b>				
Nominal	6.45%	6.45%	6.45%	6.45%
Real	4.24%	4.24%	4.24%	4.24%
<b>Equity Rate (%)</b>				
Nominal	14.00%	14.00%	14.00%	14.00%
Real	11.63%	11.63%	11.63%	11.63%
Composite Tax Rate (%)	26.14%	26.14%	33.13%	26.14%
Federal Tax Rate	21.00%	21.00%	21.00%	21.00%
State Tax Rate	6.50%	6.50%	6.50%	6.50%
City Tax Rate	0.00%	0.00%	8.85%	0.00%
WACC Nominal (%)	9.85%	9.85%	9.85%	9.85%
ATWACC Nominal (%)	8.92%	8.92%	8.67%	8.92%
ATWACC Real (%)	6.66%	6.66%	6.42%	6.66%
Amortization Period (Years)	13-Year for SCGT; 20-Year for Battery	13-Year for SCGT; 20-Year for Battery	13-Year for SCGT; 20-Year for Battery	13-Year for SCGT; 20-Year for Battery
Tax Depreciation Schedule	5-Year MACRS (Battery); 15-Year MACRS (SCGT)	5-Year MACRS (Battery); 15-Year MACRS (SCGT)	5-Year MACRS (Battery); 15-Year MACRS (SCGT)	5-Year MACRS (Battery); 15-Year MACRS (SCGT)
Fixed Property Tax Rate (%)	0.6% with 15-Year Abatement for Battery	0.6% with 15-Year Abatement for Battery	4.77% with 15-Year Abatement for Battery and SCGT <sup>[1]</sup>	0.6% with 15-Year Abatement for Battery
Insurance Rate (%)	0.60%	0.60%	0.60%	0.60%
Levelized Fixed Charge (%)	10.35% BESS 14.57% SCGT	10.35% BESS 14.57% SCGT	11.12% BESS 14.58% SCGT	10.35% BESS 14.57% SCGT

**Notes.** [1] The New York Real Property Tax Law Section 489-BBBBBB provides a 15-year tax abatement in New York City for the peaking plant underlying the NYC ICAP Demand Curve, which currently ceases to apply for construction activities after April 1, 2025. If the 15-year tax abatement is not extended through the 2025-2029 DCR reset period, the tax abatement will be removed for the SCGT in NYC.

# Battery Operating Reserve Eligibility

## Battery Operating Reserve Eligibility

- At the 5/20/2024 ICAPWG meeting, certain stakeholders requested that Analysis Group confirm whether storage resources are eligible to provide Operating Reserves using its Energy withdrawal schedule (charging)
- The tariff does allow batteries to provide Operating Reserves using its Energy withdrawal schedule, as indicated in Market Administration and Control Area Services Tariff (MST) Section 15.4.1.2.1:
  - “Suppliers utilizing inverter-based energy storage technology, and that meet the criteria set forth in the ISO Procedures, shall be eligible to supply Spinning Reserve when withdrawing or injecting Energy, and when idle.”

# Review of VSS Adder Methodology

## Review of VSS Adder Methodology

- Section 5.14.1.2.2.2 of the NYISO MST allows use of an adder to account for the estimated annual value of any applicable net Ancillary Services revenue that is not determined by the model
  - Historically, this adder has been utilized to account for the estimated annual value of revenues from the provision of VSS
- In the 2021-2025 DCR, the VSS adders for the evaluated technologies were determined based on historical settlement data
  - Based on data from January 2016-December 2019, a \$2.04/kW-year VSS adder was determined to be an appropriate estimate for the combustion turbines and battery storage options and \$1.63/kW-year was determined appropriate for the informational combined cycle plant
- Analysis Group recommends completing an updated analysis based on settlements data from 2020-2023 to determine the appropriate VSS adder estimate for the evaluated technologies for the 2025-2029 DCR

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