New York ISO
Independent System Operator

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Annual Update for 2023-2024 ICAP Demand Curves

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Note: Although the final 2023-2024 ICAP Demand Curve values were correct as presented, a minor data copying error was identified on Slides 26 and 28 in the main body of the presentation and Slides 37, 38, 39 in the Appendix. This error resulted in certain Net EAS revenue offset values being misstated by $0.01 kW-year. The corrected values on Slides 26 and 28 are noted in 'red' text.

ICAPWG

November 14, 2022, 10 Krey Boulevard

Agenda

- Background
- Process Overview
- Winter-to-Summer Ratio Values
- Gross CONE Composite Escalation Factor Value
- Net Energy and Ancillary Services Revenue Offset Values
- ICAP Reference Point Values
- Appendix

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Background

Background

- As a part of the 2021-2025 ICAP Demand Curve reset process, annual updates to the ICAP Demand Curves are completed each year within the reset period.
- ICAP Demand Curve reference points are calculated for the upcoming Capability Year

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Process Overview

Annual Update Process Overview

- **Three components of the ICAP Demand Curve input parameters will be updated**
  - Gross cost of new entry (CONE) for peaking plants using a composite escalation factor
  - Net Energy and Ancillary Services (Net EAS) revenue offset
  - Winter-to-Summer ratio (WSR) values

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Annual Update Process Overview

- **The 2023-2024 Capability Year (CY) ICAP Demand Curves will use data from September 1, 2019 – August 31, 2022, for updating the WSR and Net EAS revenue offset values**
  - Year 1: September 1, 2019 – August 31, 2020
  - Year 2: September 1, 2020 – August 31, 2021
  - Year 3: September 1, 2021 – August 31, 2022
  - *Rolled Off: September 1, 2018 – August 31, 2019*

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Annual Update Process Timeline

- **October:**
  - Updated WSR values (posted to NYISO website)
- **November:**
  - Updated Gross CONE values
  - Updated Net EAS revenue offset values
  - ICAP Demand Curve reference point values

All annual update information is posted in the "Installed Capacity Market (ICAP)" section of the NYISO public website under "Reference Documents" > "Demand Curve Reset Annual Updates" > "2023"

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Winter-to-Summer Ratio

Winter-to-Summer Ratio

- The WSR captures differences in quantity of ICAP available between winter and summer seasons given differences in seasonal operational capability
- The annual update process requires adjustments for certain qualifying resource entry and exit circumstances

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Adjustments for Qualifying Generators

- **Entry adjustments for Year 3 WSR:**
  - Branscomb Solar
- **Exit Adjustments for Year 3 WSR:**
  - Madison County LF
  - Ravenswood GT 1
  - Ravenswood GT 11
  - Nassau Energy Corporation

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ZONE	GEN_PTID	GEN_NAME	Year 3	Year 2	Year 1
A	323751	Arkwright Summit Wind		Add	
A	23543	Kintigh			Remove
B	24207	Monroe Livingston			Remove
B	323720	Red Rochester		Add	
C	24147	Auburn-State St.			Remove
C	23584	Cayuga 1			Remove
C	323667	Steuben County LF			Remove
E	323628	Madison County LF	Remove		
F	323615	Albany LFGE			Remove
F	323811	Branscomb Solar	Add		
F	323763	Dahowa Hydroelectric		Add	
F	323630	Fulton LFGE		Add	
G	323756	Cricket Valley CC1			Add
G	323757	Cricket Valley CC2			Add
G	323758	Cricket Valley CC3			Add
H	23530	Indian Point 2			Remove
H	23531	Indian Point 3		Remove	
J	24113	Gowanus GT1-8		Remove	
J	23810	Hudson Ave GT 3		Add	
J	23810	Hudson Ave GT 3			Remove
J	23729	Ravenswood GT 1	Remove		
J	24259	Ravenswood GT 11	Remove		
K	323695	Nassau Energy Corporation	Remove		

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2023 - 2024 WSR Ratio Values

Three-year average WSR	2022-2023 CY	2023-2024 CY Annual Update
NYCA	1.035	1.032
GHIJ	1.062	1.063
NYC	1.078	1.076
LI	1.077	1.082

One-year WSR	2021 - 2022 (Year 3)	2020 - 2021 (Year 2)	2019 - 2020 (Year 1)	2018-2019 Rolled Off
NYCA	1.035	1.033	1.027	1.046
GHIJ	1.062	1.067	1.060	1.059
NYC	1.073	1.081	1.074	1.080
LI	1.085	1.084	1.076	1.069

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Gross CONE Composite Escalation Factor

Gross CONE Escalation Factor Process

- **Update escalation factor indices in the demand curve model**
  - Materials, Labor, and Turbine costs
    - Source: Bureau of Labor Statistics
  - General/non-EPC cost index
    - Source: Bureau of Economic Analysis
- **Use most recently available data published as of October 1st**
  - Preliminary values and missing data are not used
  - May include revisions by the index publisher to a prior year's data values that are re-used in the current calculation

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Gross CONE Escalation Factor Process

- Process for determining the change for each factor is described in MST 5.14.1.2.2.1
- Change is measured based on the difference between index values from the "baseline period" (represents the periods with the most current values as October 1, 2020) to the current period (data as of October 1, 2022)
  - Results represent the change for each factor over the duration of the reset period completed as of each annual update
- To maintain consistency with measuring the change from the baseline period, the resulting composite escalation factor determined in each annual update is applied to the Gross CONE values used in establishing the ICAP Demand Curves for the first year of each reset period
  - These initial Gross CONE values are set forth in the table in MST 5.14.1.2.2.3

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Material Cost Index

Materials Cost Index

Source:	BLS Producer Price Index - Commodities
Seasonal:	Not Seasonally Adjusted
Series Id:	WPUID612
Group:	(ID6) Intermediate demand by commodity type
Item:	(12) Materials and components for construction
Base Date:	198200
Access:	http://data.bls.gov/cgi-bin/dsrv?wp

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	202.3	203.5	204.6	206.1	207.4	206.6	206.3	206.2	205.9	205.9	206.3	207.0
2011	208.3	209.5	210.9	212.1	212.8	213.7	214.7	214.6	214.5	214.4	214.2	214.2
2012	215.3	216.9	217.4	218.3	219.1	219.2	218.5	218.7	219.2	219.1	219.5	219.9
2013	221.2	222.2	222.7	223.4	222.9	222.6	222.4	223.0	222.9	222.9	223.0	223.1
2014	224.8	225.8	226.6	226.9	227.4	227.4	227.7	228.2	228.5	228.6	228.5	228.4
2015	229.0	229.1	229.1	229.4	229.1	229.0	228.8	228.0	227.5	227.7	227.6	227.2
2016	227.5	227.5	227.8	228.3	228.7	229.1	229.7	230.3	230.0	229.7	229.7	230.1
2017	231.5	232.5	233.2	234.4	234.6	234.8	234.7	235.6	236.0	237.0	237.5	237.7
2018	239.7	241.2	244.3	245.4	248.1	249.0	249.4	249.2	249.6	249.6	249.1	249.7
2019	250.7	251.5	251.2	251.9	251.7	251.2	252.3	251.3	251.1	250.8	250.8	250.8
2020	252.1	252.8	254.3	252.9	252.8	253.8	255.3	258.8	263.2	262.5	261.4	263.4
2021	269.1	273.8	280.4	288.1	298.4	306	306.649	306.394	307.483	311.36	316.861	322.954
2022	34.225	340.583	347.214	348.764	351.724	*350.747*	*351.329*	*352.934*				
2023												

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Construction Labor Cost Index

Construction Labor Cost Index

Source:	BLS Quarterly Census of Employment and Wages
Series Id:	ENU360005052371
State:	New York
Area:	New York -- Statewide
Industry:	NAICS 2371 Utility system construction
Owner:	Private
Size	All establishment sizes
Type	Average Annual Pay
Access:	http://data.bls.gov/cgi-bin/dsrv?en

Year	Annual
2010	78,635
2011	79,665
2012	87,406
2013	88,850
2014	92,531
2015	97,529
2016	102,788
2017	101,108
2018	105,039
2019	107,893
2020	105,547
2021	106,961
2022	

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Turbine Cost Index

Source: BLS Producer Price Index - Commodities
Seasonal: Not Seasonally Adjusted
Group: (11) Machinery and Equipment
Item: (97) Turbines and Turbine Generator Sets
Series ID: WPU1197
Base Date: 198706

Access: http://data.bls.gov/cgi-bin/dsrv?wp

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	222.9	221.2	220.2	220.5	221.6	221.5	221.8	222.1	221.9	223.0	223.0	223.8
2011	225.5	224.9	224.5	225.7	227.7	228.8	225.9	224.2	226.0	223.7	221.7	223.5
2012	218.9	220.0	222.1	222.3	224.3	225.2	225.4	224.4	222.9	225.1	226.2	225.7
2013	225.4	225.4	226.3	226.4	227.2	226.6	228.8	227.8	229.1	229.0	232.0	231.7
2014	230.8	231.2	232.7	232.2	231.7	232.2	231.6	233.6	236.1	237.2	237.5	238.5
2015	229.7	230.9	234.4	230.9	231.7	227.9	233.5	230.0	232.9	232.8	232.4	233.1
2016	231.9	232.2	232.5	231.2	231.4	233.2	233.5	232.7	232.5	*NA*	*NA*	*NA*
2017	*NA*	224.3	223.9	223.4	223.5	227.7	225.6	225.8	225.8	224.5	217.5	211.6
2018	210.1	215.1	221.0	221.0	219.4	219.7	219.8	221.4	221.0	224.4	225.9	228.8
2019	229.4	231.0	231.1	231.6	232.7	233.3	233.7	234.4	234.8	234.3	234.9	236.3
2020	237.8	238.4	238.9	238.9	239.5	241.3	242.0	241.4	241.2	241.6	242.3	242.7
2021	243.1	243.8	244.2	244.5	247.1	246.7	247.138	246.826	248.932	249.63	250.015	250.701
2022	253.184	252.358	255.324	256.792	257.169	*258.169*	*257.375*	*255.059*				
2023												

Note: BLS has not released data in months with the value "NA".

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General/Non-EPC Cost Index

Non-EPC Cost Index

Source:	Bureau of Economic Analysis: Gross Domestic Product Implicit Price Deflator, Index 2012 = 100.
Seasonal:	Seasonally Adjusted
Timing:	Quarterly
Table:	1.1.9
Table Location:	Line 1
Access:	https://apps.bea.gov/iTable/index_nipa.cfm

	Quarter			
Year	I	II	III	IV
2010	95.499	95.943	96.222	96.763
2011	97.283	97.922	98.553	98.703
2012	99.32	99.713	100.225	100.737
2013	101.139	101.431	101.918	102.517
2014	102.937	103.512	103.957	104.123
2015	104.031	104.596	104.926	104.937
2016	104.865	105.592	105.95	106.469
2017	107.01	107.34	107.872	108.598
2018	109.237	110.176	110.614	111.14
2019	111.514	112.152	112.517	112.978
2020	113.418	112.993	113.971	114.692
2021	116.12	117.922	119.712	121.708
2022	124.174	126.907		
2023				

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2023 - 2024 Composite Escalation Factors

- NYCA

		Construction Labor Cost	Materials Cost	Gas and Steam Turbine Cost	GDP Deflator
Base Year	[A]	107,893	253	239	113.0
Escalation Year	[B]	106,961	346	255	126.9
Growth Rate	[B]/[A]-1	-0.86%	36.39%	6.74%	12.31%
Weights (By Technology)		24%	19%	32%	25%
Escalation Factor:		24%*-0.86% + 19%*36.39% + 32%*6.74% + 25%*12.31% = **12.10%**			

- GHIJ, NYC, LI

		Construction Labor Cost	Materials Cost	Gas and Steam Turbine Cost	GDP Deflator
Base Year	[A]	107,893	253	239	113.0
Escalation Year	[B]	106,961	346	255	126.9
Growth Rate	[B]/[A]-1	-0.86%	36.39%	6.74%	12.31%
Weights (By Technology)		27%	23%	26%	24%
Escalation Factor:		27%*-0.86% + 23%*36.39% + 26%*6.74% + 24%*12.31% = **12.86%**			

Note: Values in the table for each index are rounded, while the calculation uses unrounded values. Different weighting factors apply to the NYCA ICAP Demand Curve due to its use of a different technology design (gas-only, GE 7HA.02 [15 ppm] without SCR emissions controls) compared to the technology design used for all other ICAP Demand Curves (dual-fuel, GE 7HA.02 [25 ppm] with SCR emissions controls)

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2023 - 2024 Gross CONE Values

	2021-2022 Gross CONE ($/kW-year)	2023-2024 Escalation Factor [1]	2023-2024 Gross CONE ($/kW-year)	2022-2023 Gross CONE ($/kW-year)[2]
NYCA	$107.07	12.10%	**$120.05**	$110.62
G-J	$139.63	12.86%	**$157.62**	$144.45
NYC	$188.53		**$212.83**	$195.05
LI	$148.97		**$168.16**	$154.11

1. *2023-2024 escalation factors are applied to the Gross CONE values underlying the 2021-2022 ICAP Demand Curves*
2. *Gross CONE values underlying the 2022-2023 ICAP Demand Curves (far right column) are shown for informational purposes.*

Note: Values in the table for each composite escalation factor are rounded, while the calculation uses unrounded values.

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Net Energy and Ancillary Services Revenue Offset

Net EAS Revenue Offset Update Process

- **Collect data from September 1, 2021 – August 31, 2022**
  - NYISO DAM and RTM LBMPs
  - NYISO DAM and RTM Time-Weighted Ancillary Services prices
  - NYISO Rate Schedule 1 charges
  - Fuel and emission costs
    - Natural gas fuel cost assumptions
      - NYCA [Load Zone C]: Niagara [December-March]; TGP Zone 4 (200 leg) [April-November]
      - GHIJ [Load Zone G (Rockland County)]: TETCO M3
      - NYC [Load Zone J]: Transco Zone 6 (NY)
      - LI [Load Zone K]: Iroquois Zone 2
    - NOx emissions cost data reflects implementation of Cross-State Air Pollution Rule (CASPR) NOx Ozone Season Group 3 beginning May 1, 2021
      - Annual update for 2022-2023 ICAP Demand Curves also reflected this change beginning May 1, 2021
- **Run Net EAS model with new data**
  - Model runs for three-year historical period (Sep 1, 2019 – Aug 31, 2022)
  - Detailed results in the Appendix of this presentation

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2023–2024 Net EAS Revenue Values

- **Increases in Net EAS revenues in NYCA, GHIJ, and NYC can be primarily attributed to higher LBMPs in January and February 2022.**
  - High LBMPs in January 2022 – early February 2022 can be attributed to extremely cold temperatures.
    - Data from 9/1/2018 - 8/31/2019 was rolled off for purposes of this annual update and replaced with data from 9/1/2021 - 8/31/2022
- **Increase in the Net EAS revenues in Long Island can be attributed to higher LBMPs in summer 2022 that were added to the historical dataset for purposes of this annual update.**

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Raw Net EAS Revenues

	2022 - 2023 Raw Net EAS Revenues ($/kW-year)	2023 - 2024 Raw Net EAS Revenues ($/kW-year)	Delta (2023 - 2024) – (2022 - 2023)
NYCA	$21.84	$38.83	$ 16.99
G-J	$27.15	$63.37	$ 36.22
NYC	$27.29	$49.85	$ 22.56
LI	$57.03	$88.68	$ 31.65

Note: "Raw" values do not include the $2.04/kW-year adder for estimated voltage support service (VSS) revenue and are not escalated to dollar values for the applicable Capability Year to which the ICAP Demand Curves are effective.
"Raw Net EAS Revenues" = annual average Net EAS revenues for the relevant historical 3-year period prior to: (1) addition of VSS adder; and (2) escalation

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Net EAS Escalation

- Net EAS revenues are escalated using the unweighted annual change in the general component (GDP Deflator) from the Gross CONE composite escalation factor over the three-year historical data period.
- The Net EAS escalation rate is the change in the GDP Deflator over the nominal period covered by the historical data, measured as the change from the oldest year (2020) to the most recent year (2022) of such period
  - Growth rate for the GDP Deflator is measured over the three-year historic data period in order to bring the average dollar value to a proxy measure for the upcoming Capability Year (see Slide 20 for historical GDP Deflator data)

$$\left[\frac{GDP\ Deflator\ (2022)}{GDP\ Deflator\ (2020)} - 1\right] = \left[\frac{126.907}{112.993} - 1\right] = 12.31\%$$

- The Net EAS escalation rate is 12.31%

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	2023-2024 Raw Net EAS Revenues ($/kW-year)	2023-2024 Net EAS Revenues (w/ VSS Adder $2.04)	EAS Escalation Rate	2023-2024 Final Net EAS Revenues ($/kW-year)
NYCA	$38.83	$40.87	12.31%	$45.90
G-J	$63.37	$65.41		$73.47
NYC	$49.84	$51.89		$58.27
LI	$88.67	$90.72		$101.89

Note: Values in the table for are rounded, while the calculation uses unrounded values.

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2023 -2024 ICAP Demand Curve Reference Points

ICAP Demand Curve Reference Points

	2022-2023 Final ICAP Ref. Point ($/kW-month)	2023-2024 Final ICAP Ref. Point ($/kW-month)	Delta (2023 - 2024) – (2022 - 2023)
NYCA	$8.87	$7.55	- $1.32
G-J	$14.72	$10.93	- $3.79
NYC	$22.77	$21.20	- $1.57
LI	$17.59	$13.08	- $4.51

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		Current Year (2023-2024)			
	Source	C - Central	G - Hudson Valley (Rockland)	J - New York City	K - Long Island
Gross Cost of New Entry ($/kW-Year)	[1]	$120.04	$157.61	$212.81	$168.15
Net EAS Revenue ($/kW-Year)	[2]	$45.90	$73.47	$58.27	$101.89
Annual ICAP Reference Value ($/kW-Year)	[3] = [1] - [2]	$74.13	$84.14	$154.53	$66.26
ICAP DMNC (MW)	[4]	326.7	347.0	348.8	348.8
Total Annual Reference Value	**[5] = [3] * [4]**	**$24,218,892**	**$29,196,060**	**$53,900,901**	**$23,110,023**
Level of Excess (%)	[6]	100.9%	102.5%	103.5%	106.5%
Ratio of Summer to Winter DMNCs	[7]	1.032	1.063	1.076	1.082
Summer DMNC (MW)	[8]	329.3	348.2	348.5	351.1
Winter DMNC (MW)	[9]	344.7	369.9	374.1	373.0
Assumed Capacity Prices at Tariff Prescribed Level of Excess Conditions					
Summer ($/kW-Month)	[10]	$7.02	$9.14	$17.07	$8.39
Winter ($/kW-Month)	[11]	$5.00	$4.55	$8.12	$2.43
Monthly Revenue (Summer)	[12] = [10]*[8]	$2,311,423	$3,182,966	$5,947,536	$2,944,921
Monthly Revenue (Winter)	[13] = [11]*[9]	$1,725,086	$1,683,045	$3,035,934	$906,726
Seasonal Revenue (Summer)	[14] = 6 * [12]	$13,868,535	$19,097,795	$35,685,215	$17,669,529
Seasonal Revenue (Winter)	[15] = 6 * [13]	$10,350,514	$10,098,270	$18,215,602	$5,440,354
Total Annual Reference Value	**[16] = [14]+[15]**	**$24,219,049**	**$29,196,065**	**$53,900,817**	**$23,109,883**
ICAP Demand Curve Parameters					
ICAP Monthly Reference Point Price ($/kW-Month)		**$7.55**	**$10.93**	**$21.20**	**$13.08**
ICAP Max Clearing Price ($/kW-Month)		$15.62	$21.46	$29.63	$24.21
Demand Curve Length		12%	15%	18%	18%

Note: Certain values in the table are rounded, while the underlying calculation uses unrounded values.

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Next Steps

Next Steps

- **Updated ICAP Demand Curve reference point values become effective for the 2023-2024 Capability Year (beginning May 1, 2023)**
- **Data and results posted on the NYISO website**
  - Available on the Installed Capacity Market (ICAP)" section of the NYISO public website at:
    - https://www.nyiso.com/installed-capacity-market
    - "Reference Documents" > "Demand Curve Reset Annual Updates" > "2023"

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Questions?

Our Mission & Vision

Mission

Ensure power system reliability and competitive markets for New York in a clean energy future

Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

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Appendix

Net EAS Revenue Update Summary

Load Zone		Fuel Type/ Emission Control	Annual Average Net EAS Revenues ($/kW-year)	Annual Average Run Hours	Annual Average Unit Starts	Annual Average Hours per Start
C	Upstate	Gas Only, tuned to 15ppm, without SCR	$40.87	694	52	13.4
G	G-J	Dual Fuel, tuned to 25ppm, with SCR	$65.41	1,663	76	21.9
J	NYC	Dual Fuel, tuned to 25ppm, with SCR	$51.89	1,767	107	16.5
K	Long Island	Dual Fuel, tuned to 25ppm, with SCR	$90.72	2,545	153	16.7

Note: Annual average revenue values include the $2.04/kW-year adder for estimated voltage support service (VSS) revenue

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Fuel Type by Year

September, 2019 - August, 2020								
			Run-Time Hours			Net Energy Revenues ($/kW-year)		
Load Zone		Fuel Type/ Emission Control	Gas	Oil	Total	Gas	Oil	Total
C	Upstate	Gas Only, tuned to 15ppm, without SCR	316	-	316	$3.12	-	$3.12
G	G-J	Dual Fuel, tuned to 25ppm, with SCR	443	-	443	$3.92	-	$3.92
J	NYC	Dual Fuel, tuned to 25ppm, with SCR	738	-	738	$6.98	-	$6.98
K	Long Island	Dual Fuel, tuned to 25ppm, with SCR	1,509	-	1,509	$22.96	-	$22.96

September, 2020 - August, 2021								
			Run-Time Hours			Net Energy Revenues ($/kW-year)		
Load Zone		Fuel Type/ Emission Control	Gas	Oil	Total	Gas	Oil	Total
C	Upstate	Gas Only, tuned to 15ppm, without SCR	706	-	706	$11.61	-	$11.61
G	G-J	Dual Fuel, tuned to 25ppm, with SCR	1,482	-	1,482	$23.27	-	$23.27
J	NYC	Dual Fuel, tuned to 25ppm, with SCR	1,500	-	1,500	$24.61	-	$24.61
K	Long Island	Dual Fuel, tuned to 25ppm, with SCR	3,064	-	3,064	$79.13	-	$79.13

September, 2021 - August, 2022								
			Run-Time Hours			Net Energy Revenues ($/kW-year)		
Load Zone		Fuel Type/ Emission Control	Gas	Oil	Total	Gas	Oil	Total
C	Upstate	Gas Only, tuned to 15ppm, without SCR	1,060	-	1,060	$64.99	-	$64.99
G	G-J	Dual Fuel, tuned to 25ppm, with SCR	3,064	-	3,064	$123.43	-	$123.43
J	NYC	Dual Fuel, tuned to 25ppm, with SCR	3,063	-	3,063	$82.12	-	$82.12
K	Long Island	Dual Fuel, tuned to 25ppm, with SCR	3,006	57	3,063	$114.67	$4.38	$119.05

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Net EAS Results by Year

Net EAS Revenues September, 2019- August, 2020 ($/kW-yr)															
Day-Ahead Commitment			Energy				Reserve				None				Total	Total with Adders (VSS, AS)
Real-Time Dispatch			Energy	Reserve	Buyout	Limited	Energy	Reserve	Buyout	Limited	Energy	Reserve	None	Limited		
C	Upstate	Gas Only, tuned to 15ppm, without SCR	$0.83	$0.00	$0.72	$0.00	$2.28	$0.11	$14.08	$0.00	$0.00	$0.00	$0.00	$0.00	$18.03	$20.07
G	G-J	Dual Fuel, tuned to 25ppm, with SCR	$2.19	$0.07	$0.21	$0.00	$1.71	$0.10	$10.20	$0.00	$0.02	$0.00	$0.00	$0.00	$14.50	$16.54
J	NYC	Dual Fuel, tuned to 25ppm, with SCR	$4.75	$0.00	$0.40	$0.00	$2.23	$0.22	$9.43	$0.00	$0.00	$0.00	$0.00	$0.00	$17.03	$19.07
K	Long Island	Dual Fuel, tuned to 25ppm, with SCR	$17.41	$0.00	$2.54	$0.00	$5.54	$0.04	$8.76	$0.00	$0.01	$0.00	$0.00	$0.00	$34.29	$36.33

Net EAS Revenues September, 2020 - August, 2021($/kW-yr)															
Day-Ahead Commitment			Energy				Reserve				None				Total	Total with Adders (VSS, AS)
Real-Time Dispatch			Energy	Reserve	Buyout	Limited	Energy	Reserve	Buyout	Limited	Energy	Reserve	None	Limited		
C	Upstate	Gas Only, tuned to 15ppm, without SCR	$7.12	$0.41	$2.85	$0.00	$4.38	$0.12	$9.68	$0.00	$0.11	$0.00	$0.00	$0.00	$24.67	$26.71
G	G-J	Dual Fuel, tuned to 25ppm, with SCR	$19.36	$1.37	$1.95	$0.00	$3.91	$0.17	$8.98	$0.00	$0.00	$0.00	$0.00	$0.00	$35.74	$37.78
J	NYC	Dual Fuel, tuned to 25ppm, with SCR	$21.61	$0.00	$0.81	$0.00	$3.00	$0.23	$9.06	$0.00	$0.00	$0.00	$0.00	$0.00	$34.70	$36.74
K	Long Island	Dual Fuel, tuned to 25ppm, with SCR	$70.10	$0.00	$4.06	$1.11	$8.98	$0.13	$6.48	$0.02	$0.05	$0.00	$0.00	$0.00	$90.93	$92.97

Net EAS Revenues September, 2021 - August, 2022 ($/kW-yr)															
Day-Ahead Commitment			Energy				Reserve				None				Total	Total with Adders (VSS, AS)
Real-Time Dispatch			Energy	Reserve	Buyout	Limited	Energy	Reserve	Buyout	Limited	Energy	Reserve	None	Limited		
C	Upstate	Gas Only, tuned to 15ppm, without SCR	$55.96	$0.63	$4.17	$0.97	$7.66	$0.02	$2.81	$0.12	$1.37	$0.07	$0.00	$0.00	$73.79	$75.83
G	G-J	Dual Fuel, tuned to 25ppm, with SCR	$117.63	$0.00	$5.15	$1.60	$5.80	$0.13	$9.54	$0.04	$0.00	$0.00	$0.00	$0.00	$139.88	$141.92
J	NYC	Dual Fuel, tuned to 25ppm, with SCR	$76.47	$0.00	$1.74	$0.07	$5.65	$0.56	$13.31	$0.01	$0.00	$0.00	$0.00	$0.00	$97.80	$99.84
K	Long Island	Dual Fuel, tuned to 25ppm, with SCR	$102.32	$0.76	$2.71	$2.84	$16.74	$0.54	$14.78	$0.14	$0.00	$0.00	$0.00	$0.00	$140.82	$142.86

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Run Hours by Year

Run Hours September, 2019 - August, 2020													
Day-Ahead Commitment		Energy				Reserve				None				Total
Real-Time Dispatch		Energy	Reserve	Buyout	Limited	Energy	Reserve	Buyout	Limited	Energy	Reserve	None	Limited	
C	Upstate	158	0	82	0	158	35	8,312	0	0	0	39	0	8,784
G	G-J	313	14	39	0	119	46	8,006	0	11	0	236	0	8,784
J	NYC	614	0	53	0	121	81	7,663	0	3	0	249	0	8,784
K	Long Island	1,303	0	200	0	204	22	6,876	0	2	0	177	0	8,784

Run Hours September, 2020 - August, 2021													
Day-Ahead Commitment		Energy				Reserve				None				Total
Real-Time Dispatch		Energy	Reserve	Buyout	Limited	Energy	Reserve	Buyout	Limited	Energy	Reserve	None	Limited	
C	Upstate	533	16	173	0	156	46	6,737	0	17	0	1,082	0	8,760
G	G-J	1,268	49	176	0	214	69	6,749	0	0	0	235	0	8,760
J	NYC	1,345	0	115	0	155	106	6,796	0	0	0	243	0	8,760
K	Long Island	2,808	0	251	694	251	44	4,547	14	5	0	146	0	8,760

Run Hours September, 2021 - August, 2022													
Day-Ahead Commitment		Energy				Reserve				None				Total
Real-Time Dispatch		Energy	Reserve	Buyout	Limited	Energy	Reserve	Buyout	Limited	Energy	Reserve	None	Limited	
C	Upstate	885	27	224	533	136	18	2,084	73	39	7	4,693	41	8,760
G	G-J	2,844	0	358	516	220	34	4,769	19	0	0	0	0	8,760
J	NYC	2,896	0	118	22	167	106	5,448	3	0	0	0	0	8,760
K	Long Island	2,794	46	172	901	269	67	4,478	33	0	0	0	0	8,760

New York ISO

2021-2025 DCR Reset: Remand Proceeding

- **IPPNY appealed FERC's decision in the 2021-2025 ICAP Demand Curve reset (DCR) proceeding to the U.S. Court of the Appeals for the District of Columbia Circuit (D.C. Circuit)**
  - IPPNY's appeal related to FERC's decision to require use of a 20-year amortization period rather than the 17-year period initially proposed by the NYISO
  - In compliance with FERC's directive, the NYISO has used a 20-year amortization period for all ICAP Spot Market Auctions since May 2021
  - The 2021-2025 reset period encompasses the ICAP Demand Curves that apply from May 1, 2021, through April 30, 2025
- **On August 9, 2022, the D.C. Circuit issued a decision granting IPPNY's appeal and determining that FERC had not adequately justified its decision to require use of a 20-year amortization period**
  - The court's decision became effective on October 4, 2022.
  - The D.C. Circuit decision requires FERC to further review its prior determination in response to the court's findings
  - The proceeding currently remains pending before FERC on remand
- **The NYISO informed stakeholders at the September 28, 2022, Management Committee meeting that, until the NYISO receives further direction from FERC on remand, it will continue to utilize a 20-year amortization as previously directed by FERC**
  - At that meeting, several stakeholders requested that the NYISO provide information regarding ICAP Demand Curve values that would apply if FERC were to ultimately reverse its prior decision and direct the NYISO to instead use a 17-year amortization period for the remainder of the 2021-2025 reset period

New York ISO

2021-2025 DCR Reset: Remand Proceeding Contd.

- **In response to prior stakeholder requests, the following slides are provided for informational purposes only and identify alternative ICAP Demand Curve values that would result from use of a 17-year amortization period instead of the current 20-year period used in establishing the ICAP Demand Curves utilized in the ICAP Spot Market Auctions**
  - The only change made in determining these alternative, informational values was to replace the current 20-year amortization period with a 17-year period
- **The determination regarding what, if any, modifications may be required for the current amortization period assumption in response to the D.C. Circuit decision remains pending before FERC**
  - As previously noted, the NYISO will continue use of the FERC-directed 20-year amortization period until directed otherwise by FERC

New York ISO

2023-2024 Demand Curves: 17-Year Amortization Period

		Current Year (2023-2024)			
	Source	C - Central	G - Hudson Valley (Rockland)	J - New York City	K - Long Island
Gross Cost of New Entry ($/kW-Year)	[1]	$128.65	$169.07	$221.70	$180.34
Net EAS Revenue ($/kW-Year)	[2]	$45.90	$73.47	$58.27	$101.89
Annual ICAP Reference Value ($/kW-Year)	[3] = [1] - [2]	$82.74	$95.60	$163.43	$78.45
ICAP DMNC (MW)	[4]	326.7	347.0	348.8	348.8
Total Annual Reference Value	**[5] = [3] * [4]**	**$27,032,693**	**$33,172,194**	**$57,002,884**	**$27,363,779**
Level of Excess (%)	[6]	100.9%	102.5%	103.5%	106.5%
Ratio of Summer to Winter DMNCs	[7]	1.032	1.063	1.076	1.082
Summer DMNC (MW)	[8]	329.3	348.2	348.5	351.1
Winter DMNC (MW)	[9]	344.7	369.9	374.1	373.0
Assumed Capacity Prices at Tariff Prescribed Level of Excess Conditions					
Summer ($/kW-Month)	[10]	$7.83	$10.39	$18.05	$9.93
Winter ($/kW-Month)	[11]	$5.59	$5.17	$8.58	$2.88
Monthly Revenue (Summer)	[12] = [10]*[8]	$2,579,967	$3,616,440	$6,289,833	$3,486,985
Monthly Revenue (Winter)	[13] = [11]*[9]	$1,925,494	$1,912,235	$3,210,676	$1,073,643
Seasonal Revenue (Summer)	[14] = 6 * [12]	$15,479,800	$21,698,640	$37,738,995	$20,921,909
Seasonal Revenue (Winter)	[15] = 6 * [13]	$11,552,965	$11,473,410	$19,264,055	$6,441,859
Total Annual Reference Value	**[16] = [14]+[15]**	**$27,032,765**	**$33,172,050**	**$57,003,050**	**$27,363,768**
ICAP Demand Curve Parameters					
ICAP Monthly Reference Point Price ($/kW-Month)		**$8.43**	**$12.42**	**$22.42**	**$15.48**
ICAP Max Clearing Price ($/kW-Month)		$16.74	$23.02	$30.87	$25.97
Demand Curve Length		12%	15%	18%	18%

New York ISO

2022-2023 Demand Curves: 17-Year Amortization Period

		Current Year (2022-2023)			
	Source	**C - Central**	**G - Hudson Valley (Rockland)**	**J - New York City**	**K - Long Island**
Gross Cost of New Entry ($/kW-Year)	[1]	$118.56	$154.96	$203.20	$165.29
Net EAS Revenue ($/kW-Year)	[2]	$25.00	$30.56	$30.71	$61.84
Annual ICAP Reference Value ($/kW-Year)	[3] = [1] - [2]	$93.57	$124.40	$172.49	$103.45
ICAP DMNC (MW)	[4]	326.7	347.0	348.8	348.8
Total Annual Reference Value	**[5] = [3] * [4]**	**$30,567,784**	**$43,166,002**	**$60,165,593**	**$36,084,511**
Level of Excess (%)	[6]	100.9%	102.5%	103.5%	106.5%
Ratio of Summer to Winter DMNCs	[7]	1.035	1.062	1.078	1.077
Summer DMNC (MW)	[8]	329.3	348.2	348.5	351.1
Winter DMNC (MW)	[9]	344.7	369.9	374.1	373.0
Assumed Capacity Prices at Tariff Prescribed Level of Excess Conditions					
Summer ($/kW-Month)	[10]	$9.00	$13.44	$19.24	$12.65
Winter ($/kW-Month)	[11]	$6.18	$6.80	$8.88	$4.21
Monthly Revenue (Summer)	[12] = [10]*[8]	$2,965,149	$4,680,052	$6,704,582	$4,442,047
Monthly Revenue (Winter)	[13] = [11]*[9]	$2,129,453	$2,514,284	$3,323,018	$1,572,046
Seasonal Revenue (Summer)	[14] = 6 * [12]	$17,790,894	$28,080,310	$40,227,494	$26,652,282
Seasonal Revenue (Winter)	[15] = 6 * [13]	$12,776,719	$15,085,706	$19,938,108	$9,432,275
Total Annual Reference Value	**[16] = [14]+[15]**	**$30,567,613**	**$43,166,016**	**$60,165,603**	**$36,084,557**
ICAP Demand Curve Parameters					
ICAP Monthly Reference Point Price ($/kW-Month)		**$9.69**	**$16.07**	**$23.90**	**$19.72**
ICAP Max Clearing Price ($/kW-Month)		$15.47	$21.08	$28.34	$23.69
Demand Curve Length		12%	15%	18%	18%

New York ISO