New York ISO
Independent System Operator

Economic Planning Process

2019 CARIS Phase 1 Report

Jason Frasier

Manager, Economic Planning

Public Information Session

August 13th, 2020

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

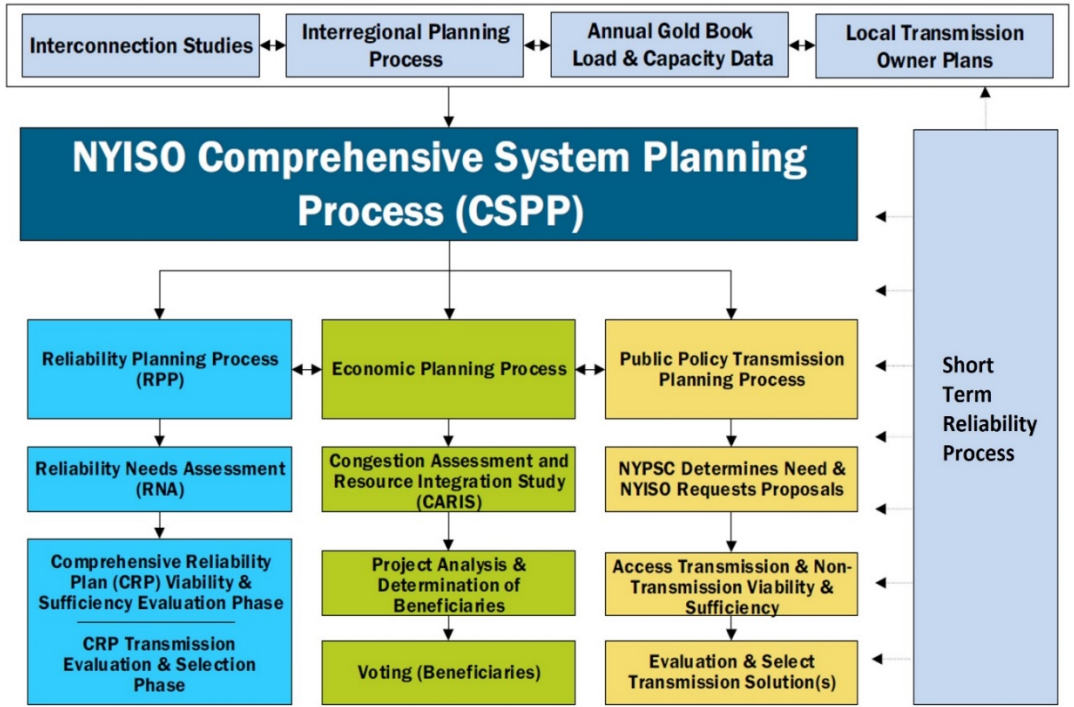
Agenda

- NYISO Economic Planning Process Overview
- CARIS Process Overview
- 2019 CARIS Phase 1
  - Base Case
  - “70x30” Scenario
- 2020 CARIS Phase 2

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Economic Planning Process



New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

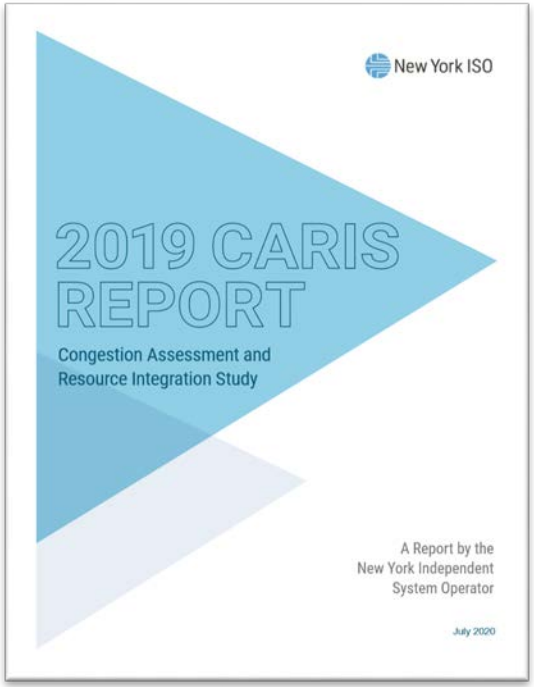
What is CARIS?

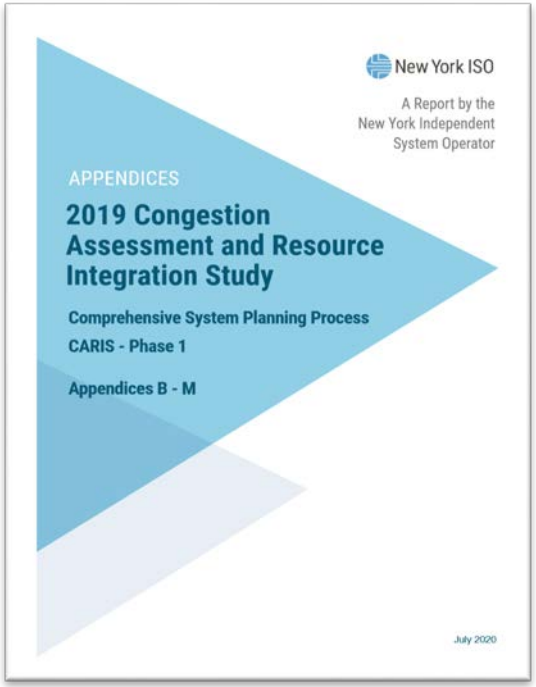
- Main Component of the Economic Planning Process
  - Congestion Assessment and Resource Integration Study
- In 2007, the Federal Energy Regulatory Commission (FERC) mandated via **Order 890** that all ISO/RTO's complete an economic planning study
- **NYISO OATT Attachment Y Section 31.3** establishes the CARIS to fulfill Order 890 requirements

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

2019 CARIS Phase 1 Report Links





(Click Report to Follow Hyperlink)

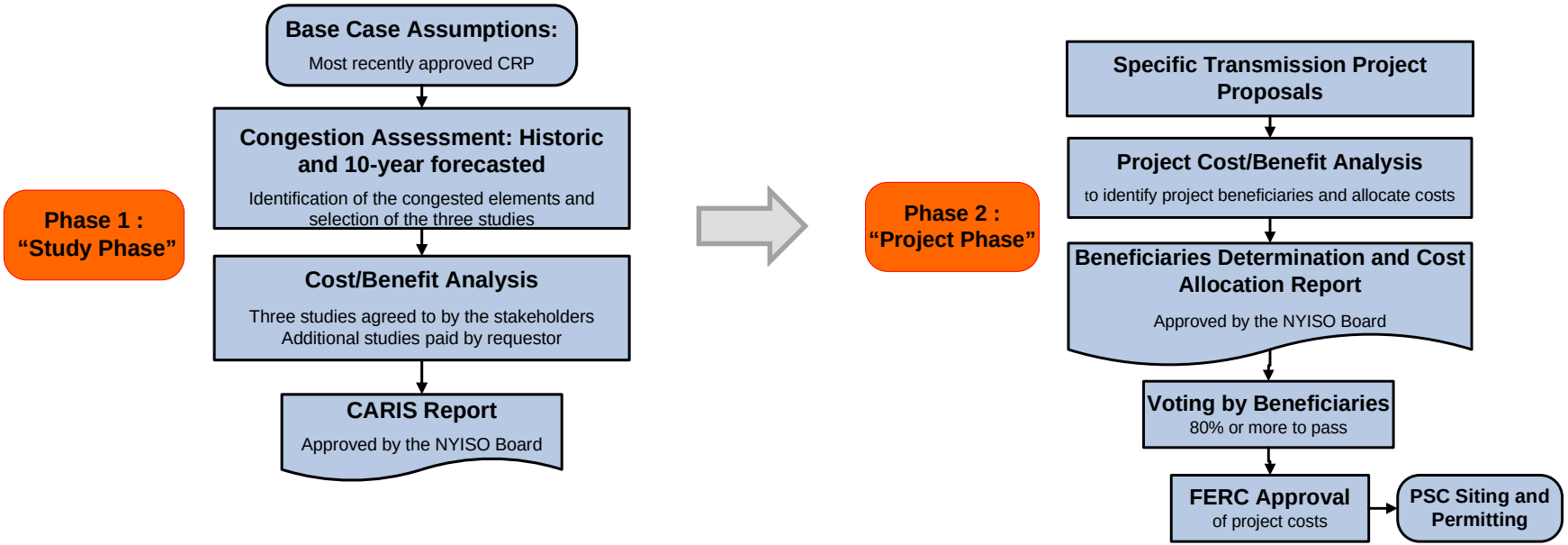
New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

CARIS Process Overview

© COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED.

CARIS Process



New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

CARIS Phase 1 Objectives

- **Identify and report transmission congestion**
  - 5-year “historic”
  - 10-year “projected”
- **Provide information to stakeholders, developers & other interested parties**
  - Select top congested transmission elements
  - Project benefits of relieving the most congested elements or groupings using generic solutions
  - Identify factors that produce or increase congestion

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

CARIS Phase 2 Objectives

- **Evaluate specific proposed projects for potential cost allocation and cost recovery through the NYISO tariff**
  - New York Control Area **production costs savings** must exceed project costs over first ten years of operation
  - Sum of LBMP savings (for zones with savings) over first ten years of operation must exceed project costs
  - Qualified transmission projects mus receive 80% vote of the identified beneficiaries
- **Perform additional CARIS studies for all interested parties and for all solution types**

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

2019 CARIS Phase 1 Base Case

© COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED.

Base Case Development

- All assumptions developed pursuant to CARIS procedures and in collaboration with stakeholders at ESPWG
- 10-Year Study Period (2019-2028)
- Based on 2019-2028 Comprehensive Reliability Plan (CRP)
- 2019 Gold Book Load and Capacity Forecasts
- Resource changes pursuant to base case inclusion screening rules
- Assumption lockdown date of August 1, 2019

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Base Case Key Assumptions

- **Fuel & Emission Price Forecasts as of 8/1/2019**
- **2019-2028 CRP transmission model with actual operating limits**
- **Transmission upgrades**
  - Empire State Line Project /Western New York Public Policy project (2022)
  - NYPA rebuild of Moses-Adirondack 230 kV circuits (2023)
  - AC Transmission Public Policy projects Segments A and B (2024)
  - Expanding monitoring and securing of lower voltage system consistent with NYISO operations
- **Resource Assumptions**
  - Cricket Valley Energy center modeled in-service (2020)
  - Indian Point 2 and 3 are retired (2020/2021)
  - Other generation projects that met inclusion rules

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Selection of Studies

- **Rank and group elements based on five-year historic and 10-year projected Demand$ Congestion**
  - Historic Demand$ Congestion data drawn from NYISO's posted congestion reports
  - Forecasted Demand$ Congestion estimated using General Electric's Multi-Area Production Simulation (MAPS) software
- **Select three study areas based on potential ten-year projected production cost savings**

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

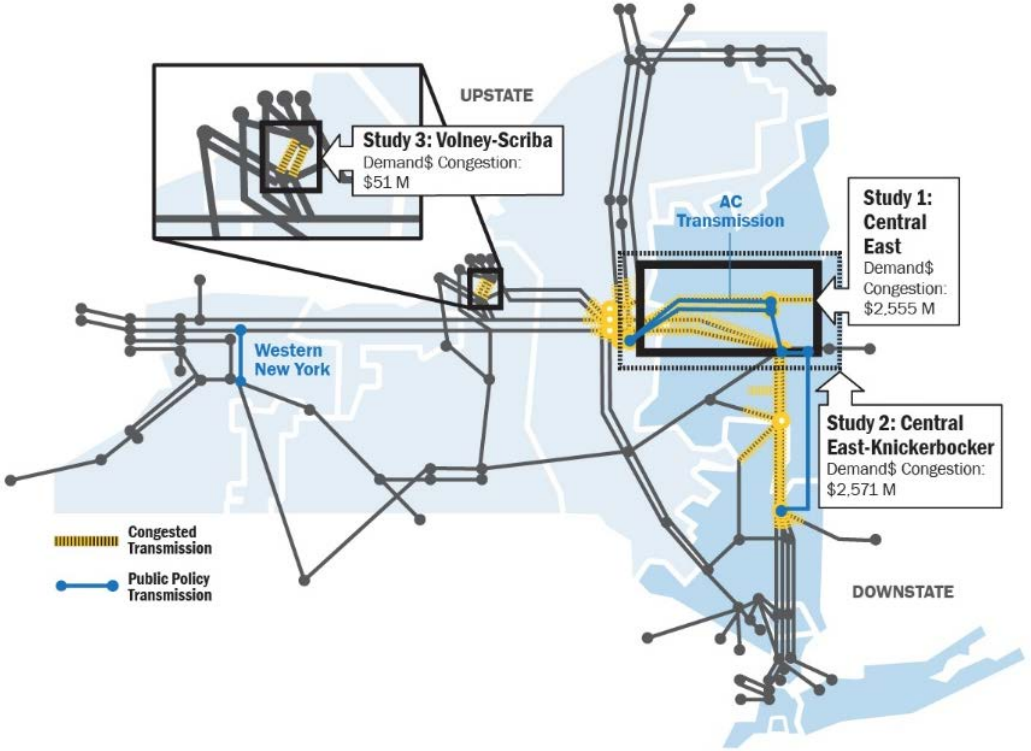
Historic and Projected Demand$ Congestion ($M)

Constraint Group (Nominal $M)	Historic					Projected									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
CENTRAL EAST	1,136	915	641	598	540	668	508	521	411	183	188	84	84	114	167
DUNWOODIE TO LONG ISLAND	155	138	164	88	133	41	36	28	25	25	31	25	26	25	28
LEEDS PLEASANT VALLEY	42	111	63	101	9	2	1	2	3	3	-	-	-	-	-
EDIC MARCY	7	0	32	125	107	-	-	-	-	-	-	-	-	-	-
DUNWOODIE MOTTHAVEN	40	2	2	30	65	8	9	10	7	5	14	13	14	18	15
CHESTR SHOEMAKR	-	-	-	-	-	9	34	79	68	52	-	-	-	-	-
GREENWOOD	13	19	31	18	62	12	10	6	6	6	8	8	10	11	10
PACKARD HUNTLEY	7	41	54	30	41	-	-	-	-	-	-	-	-	-	-
PACKARD 115 NIAGBLVD 115	-	-	-	-	-	85	53	29	0	0	0	-	-	-	0
NIAGARA PACKARD	18	22	44	12	9	19	16	10	0	-	0	-	-	-	-
EGRDNCTY 138 VALLYSTR 138 1	20	18	8	17	20	6	5	3	2	5	4	5	4	5	4
NEW SCOTLAND LEEDS	9	32	13	18	5	0	-	-	0	0	-	-	-	-	-
N.WAV115 LOUNS 115	-	-	-	-	-	2	2	3	4	4	13	10	13	12	11
VOLNEY SCRIBA	0	1	0	1	1	6	7	6	7	7	6	5	7	9	9
NORTHPORT PILGRIM	-	-	-	-	-	6	4	9	10	8	5	4	5	4	4

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

2019 CARIS Study Groupings



New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Project Benefits

- Implement transmission, generation, demand response and energy efficiency generic solutions
  - Feasibility of each solution is not evaluated
- Estimate the potential benefits associated with relieving congestion for each solution type using GE-MAPS production cost simulation software
- Per the NYISO's Tariff, benefits are limited to NYCA-wide production cost savings for the purpose of determining the eligibility of a project for cost allocation and recovery

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Generic Solutions

Generic Solutions			
Studies	**Central East (Study 1)**	**Central East-Knickerbocker (Study 2)**	**Volney-Scriba (Study 3)**
TRANSMISSION			
Transmission Path	Edic-New Scotland	Edic-New Scotland-Knickerbocker	Volney-Scriba
Voltage	345 kV	345 kV	345 kV
Miles	85	100	10
GENERATION			
Unit Siting	New Scotland	Pleasant Valley	Volney
Blocks	340 MW	340 MW	340 MW
DEMAND RESPONSE			
Blocks	Zone F : 100 MW Zone G : 100 MW Zone J : 200 MW	Zone F : 100 MW Zone G : 100 MW Zone J : 200 MW	Zone F : 100 MW Zone G : 100 MW
ENERGY EFFICIENCY			
Blocks	Zone F : 100 MW Zone G : 100 MW Zone J : 200 MW	Zone F : 100 MW Zone G : 100 MW Zone J : 200 MW	Zone F : 100 MW Zone G : 100 MW

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Generic Solution Cost Estimates

- **Low, mid, and high estimates for each solution type**
- **Cost Estimate Sources**
  - **Transmission:** NYSDPS's AC Transmission proceeding and other third-party sources
  - **Generation:** 2016 NYISO Demand Curve Reset study for combined cycle unit
  - **Energy Efficiency:** PSC Comprehensive Energy Efficiency Initiative (Case 18-M-0084)
  - **Demand Response:** PSC Proceeding on Motion of the Commission to Develop Dynamic Load Management Programs (Case 14-E-0423)

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Ten-Year Production Cost Savings for CARIS Studies ($2019M)

Study	Ten-Year Production Cost Savings ($2019M)			
	Transmission Solution	Generation Solution	Demand Response Solution	Energy Efficiency Solution
Study 1: Central East	115	103	17	1,061
Study 2: Central East-Knickerbocker	117	110	17	1,061
Study 3: Volney-Scriba	22	137	9	530

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Benefit/Cost Analysis

- **Benefit/Cost ratios are reported for each solution, based upon ten years of projected NYCA-wide Production Cost Savings (CARIS primary metric) compared to the estimated ten years of project costs**
  - 7.08% Discount Rate
  - 16% Capital Recovery Factor

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Generic Solution Benefit/Cost Results

Study	2019-2023			2024-2028		
Transmission Solution	**Low**	**Mid**	**High**	**Low**	**Mid**	**High**
Study 1: Central East	0.37	0.25	0.20	0.18	0.12	0.09
Study 2: Central East-Knickerbocker	0.37	0.25	0.20	0.16	0.11	0.09
Study 3: Volney-Scriba	0.44	0.30	0.24	0.52	0.35	0.28
Generaton Solution	**Low**	**Mid**	**High**	**Low**	**Mid**	**High**
Study 1: Central East	0.15	0.11	0.09	0.26	0.20	0.16
Study 2: Central East-Knickerbocker	0.15	0.11	0.09	0.24	0.18	0.15
Study 3: Volney-Scriba	0.20	0.15	0.12	0.44	0.33	0.26
Demand Response Solution	**Low**	**Mid**	**High**	**Low**	**Mid**	**High**
Study 1: Central East	0.08	0.06	0.05	0.11	0.08	0.06
Study 2: Central East-Knickerbocker	0.08	0.06	0.05	0.11	0.08	0.06
Study 3: Volney-Scriba	0.17	0.13	0.11	0.25	0.19	0.15
Energy Efficiency Solution	**Low**	**Mid**	**High**	**Low**	**Mid**	**High**
Study 1: Central East	0.32	0.24	0.19	0.43	0.32	0.26
Study 2: Central East-Knickerbocker	0.32	0.24	0.19	0.43	0.32	0.26
Study 3: Volney-Scriba	0.41	0.31	0.25	0.55	0.41	0.33

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Additional Benefit Metrics

- **Additional benefit metrics report the change between the generic solution-case value and the base case value over the ten–year study period**
  - For 2019 CARIS Phase 1, these include changes to generator payments, load payments, TCC payments, electric loss costs, ICAP costs and emissions
  - For information only

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Additional Benefit Metrics

10-Year NYCA Change*

Study	Solution	LOAD PAYMENT	NYCA LOAD PAYMENT	EXPORT PAYMENT	GENERATOR PAYMENT	NYCA GENERATOR PAYMENT	IMPORT PAYMENT	TCC PAYMENT	LOSSES COSTS
TRANSMISSION SOLUTIONS									
Study 1: Central East	Edic-New Scotland	$215	$112	$103	$233	$214	$20	($212)	($25)
Study 2: Central East-Knickerbocker	Edic-New Scotland-Knickerbocker	$264	$141	$123	$271	$251	$20	($206)	($16)
Study 3: Volney Scriba	Volney-Scriba	($54)	($72)	$18	$384	$398	($15)	($432)	$13
GENERATION SOLUTIONS									
Study 1: Central East	New Scotland	($117)	($176)	$59	($88)	($11)	($77)	($26)	$17
Study 2: Central East-Knickerbocker	Pleasant Valley	($109)	($163)	$55	($61)	$13	($74)	($38)	($17)
Study 3: Volney Scriba	Volney	($228)	($313)	$85	$122	$234	($111)	($319)	$55
DEMAND RESPONSE SOLUTIONS									
Study 1: Central East	F(100) G(100) J(200)	($69)	($70)	$1	($51)	($47)	($4)	($15)	($3)
Study 2: Central East-Knickerbocker	F(100) G(100) J(200)	($69)	($70)	$1	($51)	($47)	($4)	($15)	($3)
Study 3: Volney Scriba	F(100) G(100)	($29)	($30)	$1	($23)	($21)	($2)	($5)	($1)
ENERGY EFFICIENCY SOLUTIONS									
Study 1: Central East	F(100) G(100) J(200)	($1,316)	($1,497)	$182	($1,165)	($1,002)	($163)	($99)	($64)
Study 2: Central East-Knickerbocker	F(100) G(100) J(200)	($1,316)	($1,497)	$182	($1,165)	($1,002)	($163)	($99)	($64)
Study 3: Volney Scriba	F(100) G(100)	($612)	($715)	$103	($562)	($475)	($87)	($43)	($12)

*Values in red indicate a reduction or savings

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Additional Benefit Metrics

10-Year NYCA Emissions Change*

Study	Solution	SO_2		CO_2		NOx	
		Tons	Cost ($2019M)	1000 Tons	Cost ($2019M)	Tons	Cost ($2019M)
TRANSMISSION SOLUTIONS							
Study 1: Central East	Edic-New Scotland	2,071	$0	455	$3	381	($0)
Study 2: Central East-Knickerbocker	Edic-New Scotland-Knickerbocker	2,189	$0	650	$4	465	($0)
Study 3: Volney Scriba	Volney-Scriba	203	$0	163	$1	(387)	($0)
GENERATION SOLUTIONS							
Study 1: Central East	New Scotland	615	$0	1,319	$8	738	$0
Study 2: Central East-Knickerbocker	Pleasant Valley	563	$0	1,149	$7	462	$0
Study 3: Volney Scriba	Volney	(303)	($0)	1,718	$10	632	($0)
DEMAND RESPONSE SOLUTIONS							
Study 1: Central East	F(100) G(100) J(200)	6	$0	(173)	($1)	(221)	($0)
Study 2: Central East-Knickerbocker	F(100) G(100) J(200)	6	$0	(173)	($1)	(221)	($0)
Study 3: Volney Scriba	F(100) G(100)	(52)	($0)	(77)	($0)	(66)	($0)
ENERGY EFFICIENCY SOLUTIONS							
Study 1: Central East	F(100) G(100) J(200)	(153)	($0)	(11,177)	($61)	(4,043)	($0)
Study 2: Central East-Knickerbocker	F(100) G(100) J(200)	(153)	($0)	(11,177)	($61)	(4,043)	($0)
Study 3: Volney Scriba	F(100) G(100)	(14)	($0)	(5,234)	($29)	(1,567)	($0)

*Values in red indicate a reduction or savings

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Additional Benefit Metrics

Capacity Market Impacts

Study	Solution	MW Impact (MW)			
		J	G-J	K	NYCA
Study 1: Central East	Transmission	0	0	0	0
	Generation	54	81	29	220
	Energy Efficiency	142	212	77	574
	Demand Response	122	182	66	493
Study 2: Central East-Knickerbocker	Transmission	0	0	0	0
	Generation	54	81	29	220
	Energy Efficiency	142	212	77	574
	Demand Response	122	182	66	493
Study 3: Volney Scriba	Transmission	0	0	0	0
	Generation	54	81	29	220
	Energy Efficiency	36	54	19	145
	Demand Response	30	44	16	120

Study	Solution	ICAP Saving ($2019M)	
		V1	V2
Study 1: Central East	Transmission	0	0
	Generation	66	524
	Energy Efficiency	173	1,345
	Demand Response	149	1,158
Study 2: Central East-Knickerbocker	Transmission	0	0
	Generation	66	524
	Energy Efficiency	173	1,345
	Demand Response	149	1,158
Study 3: Volney Scriba	Transmission	0	0
	Generation	66	524
	Energy Efficiency	44	347
	Demand Response	36	288

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

2019 CARIS 1 Scenarios

Scenario	Description
High Load Forecast	Higher penetration of electric vehicles and electric heat pumps
Low Load Forecast	Higher energy efficiency levels achieved
Higher Natural Gas Prices	Derived from 2019 EIA Annual Energy Outlook High Forecast
Lower Natural Gas Prices	Derived from 2019 EIA Annual Energy Outlook Low Forecast

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Key Findings: Base Case

- Generic solutions offered a measure of congestion relief and production cost savings
- Transmission projects studied did not result in Benefit/Cost ratios in excess of 1.0, based on generic cost estimates and production cost savings only
- With the inclusion of the AC Transmission Public Policy Projects starting in year 2024, congestion levels decreased substantially compared with prior study years
- Central East is still, however, the most congested transmission corridor over the ten-year study period (2019-2028) because of high congestion during the five-year period preceding the AC Transmission projects (2019-2023)

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

2019 CARIS Phase 1 “70x30” Scenario

© COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED.

70x30 Scenario Description

- The Climate Leadership and Community Protection Act (CLCPA) mandates that 70% of New York's end-use energy consumption be served by renewable energy by 2030 ("70x30")
  - Distributed solar goal of 6,000 MW by 2025
  - Energy storage goal of 3,000 MW by 2030
  - Offshore wind goal of 9,000 MW by 2035
- The 70x30 Scenario is not intended as a roadmap for compliance with the mandates of the CLCPA, but does provide insights into renewable generation pockets that are likely to form due to limited transmission capability in the areas where wind and solar resources are likely to be constructed

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

70x30 Scenario Description

- The 70x30 Scenario models these targets through 2030 for two potential load forecasts and identifies system constraints, renewable generation curtailments, and other potential operational limitations
- Renewable capacity build-out assumptions were developed in collaboration with stakeholders utilizing the NYISO interconnection queue as a reference point

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

70x30 Scenario Key Assumptions

- All coal plants retired by 2021
- "Peaker" rule replacements corresponding to local Compensatory MW additions identified in 2019-2028 CRP
- Renewable resource modeling
  - Includes hydro, utility-scale solar, behind-the-meter solar, land-based wind, and offshore wind total capacity
  - Additional HQ import into NYC via HVDC
- Approximately 1,000 new transmission contingencies were added as identified in the MAPS/TARA contingency screening process

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Key Findings: 70x30 Scenario

Constrained Pockets

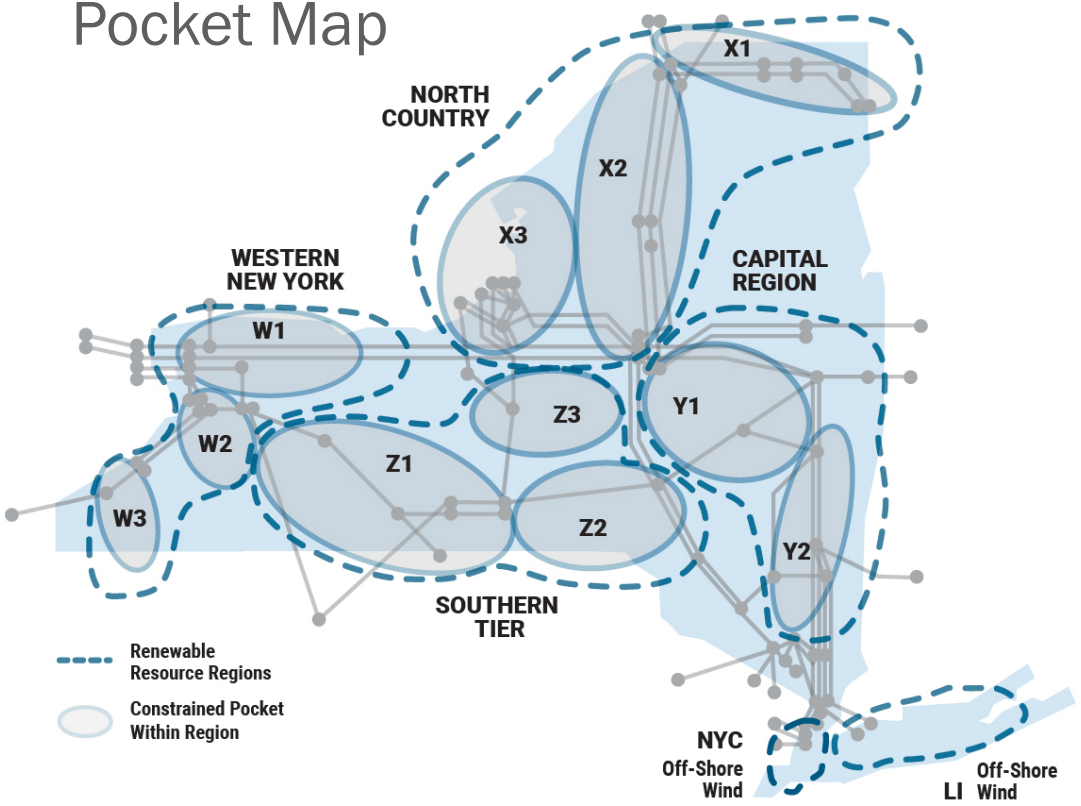
- Renewable generation pockets are likely to develop throughout the state as the existing transmission grid would be overwhelmed by the significant renewable capacity additions
- In each of the five major pockets observed, renewable generation is curtailed due to the lack of sufficient bulk and local transmission capability to deliver the power
  - 11% of annual renewable energy production curtailed
- Additional transmission expansion, at both bulk and local levels, will be necessary to efficiently deliver renewable power to New York consumers

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Key Findings: 70x30 Scenario

Pocket Map



- **Western New York (Pocket W)**
  - Mainly 115 kV in Buffalo and Rochester
  - Up to 18% Solar Curtailment
- **North Country (Pocket X)**
  - 115 kV & 230 kV in Northern NY
  - Up to 63% Wind Curtailment
- **Capital Region (Pocket Y)**
  - Mainly 115 kV in the Capital Region
  - Up to 54% Solar Curtailment
- **Southern Tier (Pocket Z)**
  - Mainly 115 kV in the Finger Lakes
  - Up to 37% Wind Curtailment
- **Offshore Wind**
  - New York City and Long Island
  - Up to 9% OSW Curtailment

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Key Findings: 70x30 Scenario

Load Impacts

- Two scenarios with varying energy forecasts and associated renewable build-outs were simulated
- The level of renewable generation investment necessary to achieve 70% renewable end-use energy by 2030 could vary greatly as energy efficiency and electrification adoption unfolds
  - Base Load - **37,600 MW** of renewable resources
  - Scenario Load - **31,000 MW** of renewable resources
- In both scenarios significant transmission constraints exist when adding the necessary volume of renewable generation to achieve the 70% target

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Key Findings: 70x30 Scenario

Fossil Fleet Impacts

- **The large amount of renewable energy additions to achieve the CLCPA goals would change the operations of the fossil fuel fleet**
  - Decrease in annual energy output of the fossil fleet
  - Flexible generators are dispatched more often while inflexible units are dispatched less or not at all
- **Sensitivity analysis indicates that if the statewide nuclear generation fleet retired, emissions from the fossil fuel fleet would likely increase; the degree of that impact is dependent on the timing of nuclear retirements and the pace of renewable resource additions**

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Key Findings: 70x30 Scenario

Energy Storage

- Sensitivity analysis performed including energy storage resources
- Results indicate that energy storage could decrease congestion, and when dispatched effectively, would help to increase the utilization of the renewable generation, particularly the solar generation tested
- The targeted analysis showed that energy storage likely cannot by itself completely resolve the transmission limitations in the pockets analyzed

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

2020 CARIS Phase 2

© COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED.

Next Steps

- **Study Kickoff**
  - August 20th ESPWG - Kickoff Presentation
- **Database Development**
  - September 24th ESPWG - Assumptions Review
- **Review of Results**
  - October 23rd ESPWG – Preliminary Results
  - November 19th ESPWG – Final Results
- **Final CARIS Phase 2 Database**
  - Presentation at BIC
  - "Additional CARIS Study" and "Specific Project" studies available to use 2020 CARIS Phase 2 database

*All stakeholder meeting dates are based on preliminary estimates and are subject to change

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Questions?

© COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED.

CARIS Data Catalog

Previously presented at ESPWG

September 11, 2019

- CARIS Preliminary 70 x 30 Scenario Development

October 4, 2019

- CARIS Scenario Load Forecast Development
- CARIS 1 70x30 Scenario ESR Modeling

October 23, 2019

- CARIS 70x30 Scenario Assumptions and Calculation

November 18, 2019

- Preliminary Scenario Results (High/Low Gas Prices and Loads)

February 27, 2020

- Review of Assumptions and Resource Mix

March 16, 2020

- Preliminary Scenario Load Constraint Modeling, Nuclear Sensitivity and Additional Results

April 6, 2020

- Preliminary Base Load Constraint Modeling, Nuclear Sensitivity and Additional Results

April 23, 2020

- Constraint Modeling, Energy Storage Sensitivity and Additional Case Results

May 4, 2020

- 2019 CARIS Draft Report - 70x30 Section

May 22, 2020

- CARIS Draft Report, Appendix, & Data Tutorial

Previously presented at ESPWG (cont.)

June 4, 2020

- CARIS Report and Appendix

June 24, 2020 (BIC)

- CARIS Report and Appendix

Posted to ESPWG Meeting Materials

March 16, 2020

- Monthly Case Energy Output MWh – Updated
- 70x30 Build Out Scenario Load

April 6, 2020

- Case Output By Type and By Zone
- Monthly Case Type Energy MWh
- 70x30 RE Buildout Base Load
- Preliminary 70x30 Scenario Pocket Map

April 23, 2020

- Case Output By Type and By Zone
- Case Output By Type and By Pocket
- Monthly Case Type Energy MWh
- Monthly Average Zonal LBMP
- Hourly Information By Pocket

May 22, 2020

- Hourly Wind Solar Curtailments By Pocket
- Hourly Zonal Net Load
- Fuel Forecast

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED

Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

New York ISO

©COPYRIGHT NYISO 2020. ALL RIGHTS RESERVED