



**Department of
Public Service**

Three Empire State Plaza, Albany, NY 12223-1350
www.dps.ny.gov

Public Service Commission

Rory M. Christian
Chair and
Chief Executive Officer

Diane X. Burman
James S. Alesi
Tracey A. Edwards
John B. Howard
David J. Valesky
John B. Maggiore
Commissioners

May 9, 2022

Hon. Michelle Phillips
Secretary to the Commission
New York State Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

Re: Case 20-E-0197 – Proceeding on Motion of the Commission to Implement
Transmission Planning Pursuant to the Accelerated Renewable Energy Growth
and Community Benefit Act.

Dear Secretary Phillips:

The presentations from the virtual technical conference held on March 14, 2022 are enclosed. A link to the presentations will be available on the Coordinated Grid Planning Working Group webpage: <https://on.ny.gov/3LOMzy5>.

Sincerely,

Jalila Aissi
Assistant Counsel

Utility Headroom Data Technical Conference

March 14, 2022



NYSERDA

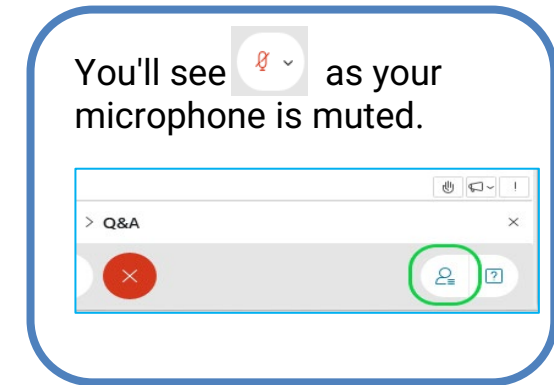
**Department
of Public Service**



**JOINT UTILITIES
OF NEW YORK**

Participation for Attendees:

- > Conference attendees are muted upon entry.
- > Questions and comments may be submitted in writing through the Q&A feature at any time during the event.
 - > Chat is disabled.
- > Today's materials will be posted to the Power Grid Study Public Service Commission Proceeding.
- > If technical problems arise, please contact Sal.Graven@nyserda.ny.gov.



Agenda

- Welcome & Logistics, Introduction of Presenters
- Purpose of Technical Conference
- Overview of Headroom Analysis and Results
 - Utility-Specific Detail
- Questions & Answers

Presenters/Panelists:

- **Abbey DeRocker**, NYSERDA Large-Scale Renewables
- **Liz Grisaru**, Department of Public Service
- **Leka Gjonaj**, Department of Public Service
- **Martin Paszek**, Con Edison Company of New York, Inc.
- **Bart Franey**, National Grid
- **Jeffery Maher**, National Grid
- **Chis Schramm**, AVANGRID NY (NYSEG and RG&E)
- **Ruby Chan**, Central Hudson Gas and Electric
- **Rollie Mangonon**, Orange and Rockland Utilities, Inc.
- **Nicholas Culpepper**, Long Island Power Authority

Accelerated Renewable Energy Growth and Community Benefit Act



[Case 20-E-0197](#)

State Power Grid Study and Program

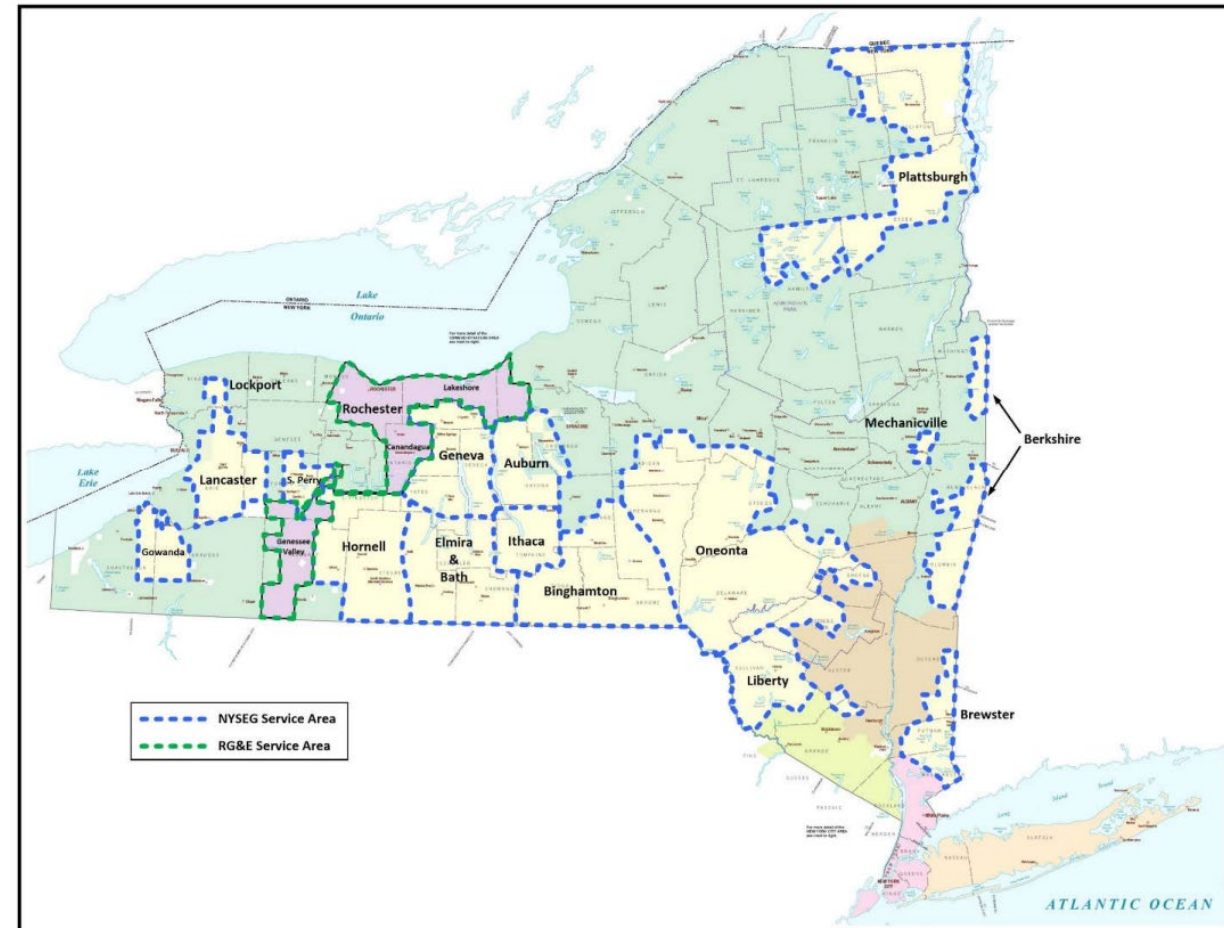
- New York Power Grid Study was established to identify distribution upgrades, local transmission upgrades, and bulk transmission investments that are necessary or appropriate for the power grid for the State of New York.
- **Jan. 2021:** Initial Report on the Power Grid Study published.
- **Feb. 2021:** Phase 1 transmission projects already included in rate filings approved by the PSC.
- **March 2021:** DPS files proposed improvements to headroom calculations.
- **Sept. 2021:** PSC directs utilities to refine Phase 2 project proposals, establishes Transmission Areas of Concern and Coordinated Grid Planning Process (CGPP).
- **Dec. 2021:** Proposed CGPP framework filed by utilities.
- **Feb. 2022:** Utilities file revised headroom data with aligned methodology.

Utility Headroom Data and Coordination with NYSERDA

Future Large-Scale Renewables Procurement

- Past solicitation evaluation has been based on proposed projects' expected energy deliverability potential and compatibility with today's grid and a 70% renewable 2030 grid, with the intent of minimizing curtailment on the state's renewable portfolio.
- Use of headroom data and screening of proposed projects with the affected utilities will be further developed in future procurements to ensure that awarded projects are interconnecting in feasible locations on the grid.
- Headroom data can act as a useful tool for developers to ascertain the feasibility of interconnecting in a region of the grid without causing adverse congestion and/or curtailment impacts to operating and under development renewable energy generators.

Map of Avangrid NY (NYSEG and RG&E) Sub-Utility Districts



Utilities' Revised Headroom Calculations (Feb. 1, 2022), p. 40

Utilities' Revised Headroom Calculations

National Grid

Central Hudson Gas and Electric

Con Edison Company of New York, Inc

Orange and Rockland Utilities, Inc.

AVANGRID NY (NYSEG & RG&E)

Long Island Power Authority (LIPA)

Headroom Study Methodology

- Headroom assessment was performed per the method(s) established in the Staff Straw Proposal for Conducting Headroom Assessments
 - Including directives from the “Addendum to the Straw Proposal”
- The Proposal has been adjusted per September 9, 2021, Order. The Commission:
 - accepted to use existing switching stations or other appropriate substations as potential interconnection locations for the headroom calculations,
 - concurred that calculations should be made for model years 2030, 2035, and 2040,
 - clarified that production cost modeling is not required as part of the energy headroom computation, and that
 - clarified that bulk system energy headroom studies by the Utilities would not be required.

Headroom Study Methodology

- Headroom assessment was performed per the method(s) established in the Staff Straw Proposal for Conducting Headroom Assessments
 - Including directives from the “Addendum to the Straw Proposal”
- The Proposal has been adjusted per September 9, 2021, Order. The Commission:
 - accepted to use existing switching stations or other appropriate substations as potential interconnection locations for the headroom calculations,
 - concurred that calculations should be made for model years 2030, 2035, and 2040,
 - clarified that production cost modeling is not required as part of the energy headroom computation, and that
 - clarified that bulk system energy headroom studies by the Utilities would not be required.

Headroom Study Assumptions

- Headroom Calculations are based on a common and unified set of planning models
 - 2021 NYISO FERC Form 715 filing database and the information provided within the 2021 NYISO Load and Capacity Data (“Gold Book”)
 - Year 2030, 2035, and 2040 base cases were established:
 - Summer Peak: per Gold Book Coincident Summer Peak Demand by Zone (Table I-3a)
 - Winter Peak: per Gold Book Coincident Winter Peak Demand by Zone (Table I-3b)
 - Shoulder or Light Load: % of Summer Peak (ex. 70% or 30% of peak)
 - Base cases were not altered for any additional generation resource additions nor additional transmission expansion projects

Headroom Study Calculations

- Calculation were performed utilizing PSS/E and TARA software packages
 - Source: Station under study
 - Sink: External to the station / remote part of New York
 - Under N-1 conditions
- The provided headroom is the remaining headroom at the point of injection
 - Calculations assumed existing generation to be at 100% of its nameplate output
 - Regardless of resource type

Headroom Study Disclaimers

- The provided headroom estimations are for the assumed study years and projected system topology
 - Should be treated as “directional”
- Physical feasibility and external (Bulk Power System) constraints to the local location may preclude achieving the identified headroom
 - Headroom calculations were simple thermal N-1 assessments
 - Thermal (N-1/-1), Voltage, Short Circuit and Stability assessments were not part of the Headroom Assessment
 - NYISO administered interconnection process will be required for a proposed project
- Certain substations were not evaluated due to lack of proximity to available property to allow for expansion

Examples of Headroom Calculations (Capacity)

Station	Assumed Local Generation (MW)	Millwood (MW)	Buchanan (MW)	Millwood + Buchanan (MW)
Summer Peak 2030	51.6	390	310	700
Winter Peak 2030/31	52.6	390	330	720
Shoulder 2030	52.6	370	320	690
LL 2030	52.6	330	280	610
Summer Peak 2035	51.6	380	310	690
Winter Peak 2035/36	52.6	410	330	740
Shoulder 2035	52.6	380	330	710
LL 2035	52.6	340	280	620
Summer Peak 2040	51.6	390	310	700
Winter Peak 2040/41	52.6	440	330	770
Shoulder 2040	52.6	380	330	710
LL 2040	52.6	340	290	630

Examples of Headroom Calculations (Energy)

Station	Optimal Transfer (MW)	Applicable Hours	GWh
Summer Peak 2030	700	900	630
Winter Peak 2030	720	900	640
Shoulder 2030	690	4460	3070
LL 2030	610	2500	1520
Total:			5860
Summer Peak 2035	690	900	620
Winter Peak 2035	740	900	660
Shoulder 2035	710	4460	3160
LL 2035	620	2500	1550
Total:			5990
Summer Peak 2040	700	900	630
Winter Peak 2040	770	900	690
Shoulder 2040	710	4460	3160
LL 2040	630	2500	1570
Total:			6050

Thank you !

Questions

Follow-up questions may be sent to ces@nyserda.ny.gov.

Utility headroom data, these slides, and related filings are available at the Department of Public Service Power Grid Study Proceeding, Case 20-E-0197:

<https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=20-E-0197>