

NYISO 2024 Draft Budget Overview

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September 27, 2023

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NYISO 2024 Draft Budget: Highlights

Budget Highlights

In Summary:

- NYISO's draft 2024 budget totals **\$194.8M**, allocated across a forecast of **152.1** million MWh, for a Rate Schedule 1 charge/MWh of **\$1.281**. Comparatively, the 2023 budget was **\$190.0M**, allocated across **156.7** million MWh for a Rate Schedule 1 charge/MWh of **\$1.213**
- NYISO's proposed 2024 Rate Schedule 1 Revenue Requirement is an increase of **\$4.8M**, which is **2.5%** as compared to the 2023 budget
- NYISO's projected 2024 MWh throughput is a decrease of **4.6** million MWh, which is **(2.9%)** as compared to the 2023 budget
- The resulting Rate Schedule 1 charge/MWh is an increase of **\$0.068**, which is **5.6%** as compared to the 2023 budget

Budget Highlights: Historical Budget Comparisons

(in millions, excluding RS1/MWh charges)	2020 Budget	2021 Budget	2022 Budget	2023 Budget	2024 Draft	2024 vs. 2023
RS1 Rev. Requirement (in \$\$)	\$168.0	\$167.4	\$169.2	\$190.0	\$194.8	\$4.8
Budgeted MWh	<u>154.3</u>	<u>147.3</u>	<u>150.0</u>	<u>156.7</u>	<u>152.1</u>	(4.6)
RS1 Rev. Requirement (\$/MWh)	\$1.089	\$1.137	\$1.128	\$1.213	\$1.281	\$0.068
RS1 Charge/MWh – Gross (before rebates from non-physical transactions):						
RS1 Charge/MWh: Purchasers @ 72%	\$0.784	\$0.819	\$0.812	\$0.873	\$0.922	
RS1 Charge/MWh: Sellers @ 28%	\$0.305	\$0.318	\$0.316	\$0.340	\$0.359	
RS1 Charge/MWh – Net (after estimated rebates from non-physical transactions):						
RS1 Charge/MWh: Purchasers @~68%	\$0.741	\$0.770	\$0.763	\$0.825	\$0.871	
RS1 Charge/MWh: Sellers @~26%	\$0.283	\$0.299	\$0.297	\$0.315	\$0.333	
RS1 Charge/MWh: Non-physical transactions @~6%	\$0.065	\$0.068	\$0.068	\$0.073	\$0.077	

Budget Highlights: 2024 vs. 2023 Revenue Requirement Changes

2024 Rate Schedule 1 Revenue Requirement	\$	194.8	
2023 Rate Schedule 1 Revenue Requirement	\$	190.0	
Increase in Rate Schedule 1 Revenue Requirement			\$ 4.8
Spending Decreases & Revenue Increases:			
Proceeds from Debt (<i>Increased from Prior Year</i>)			(10.0)
Debt Service			(1.3)
Capital			(0.9)
Miscellaneous Revenue (<i>Planning Studies & Interest Income</i>)			(0.4)
			<u>\$ (12.6)</u>
Budget Increases:			
Salaries & Benefits			7.4
Professional Fees			7.1
Computer Services			1.3
Other Expenses			0.6
Building Services			0.4
Insurance			0.2
Telecommunications			0.2
Interest on Current Year Budget Debt			0.2
			<u>\$ 17.4</u>

Budget Highlights: Key Drivers

Proceeds from Debt – Increase of \$10.0M

2023 is the final year of the NYISO's five-year Budget Facility, which expires on December 31, 2023. The NYISO has filed a petition with the New York State Public Service Commission requesting authorization to enter into a new five-year Budget Facility effective January 1, 2024.

While the NYISO has recently spent an average of \$28M on capital purchases and software development, that annual level can be impacted by certain large initiatives (e.g., EMS/BMS replacement, Distributed Energy Resources Participation project & Alternate Control Room Renovation project). The NYISO believes that the level of capital purchases and software development efforts will increase from an annual average of \$28M to approximately \$35M from 2024 through 2028. This assumption is primarily driven by various planned market design initiatives in support of the Grid in Transition and the imperative to continuously advance the NYISO's technology and infrastructure.

The increased level of annual financing available with the new Budget Facility is enabling a \$10.0M increase in Debt Proceeds to fund the increase in the 2024 project portfolio, mitigating a significant increase to the 2024 RS1 revenue requirement.

Budget Highlights: Key Drivers

Debt Service Cost – Early Repayment of Outstanding Debt

The NYISO is utilizing \$8.0M of funds remaining from the 2022 budget cycle to make early repayments on outstanding debt in 2023. These early repayments will have the effect of reducing the 2024 budgeted debt service costs and resulting RS1 surcharge by approximately five cents.

In the 2023 budget, NYISO reduced debt service cost utilizing funds remaining from the 2021 budget cycle, totaling \$5.7M.

The difference in amount of early repayments assumed in the 2023 budget vs. 2024 budget results in a decrease in debt service cost of \$3.3M, including interest expense savings, as compared to 2023.

This reduction is partially offset by principal payments commencing in 2024 on the 2023 budget facility draws.

Budget Highlights: Key Drivers

Miscellaneous Revenue – No Rate Schedule 1 (RS1) Carryover

In certain situations, the NYISO has included an assumption for a RS1 carryover from the current year into the proposed budget for the upcoming year. Any RS1 carryover has the direct effect of reducing the budgeted revenue requirement for the upcoming year. This carryover represents either an anticipated over-collection on RS1 revenues and/or anticipated under-spending vs. the approved budget for the current year.

The 2023 budget included a RS1 carryover of \$5.0M, which reduced the budgeted RS1 revenue requirement accordingly.

As of July 31, 2023, the NYISO is experiencing an under-collection on RS1 revenue of \$6.0M and the year-end projection is an under-collection of \$8.0M. A year-end spending under-run of \$9.0M is projected, which, if accurate, may offset the RS1 shortfall. Given these projections for 2023, any RS1 carryover to the 2024 budget does not appear feasible.

The elimination of a RS1 carryover in the 2024 budget results in a RS1 revenue requirement increase of \$5.0M relative to the 2023 budget.

Budget Highlights: Key Drivers

Miscellaneous Revenue – Interest Income & Reimbursable Planning Studies

Interest income on NYISO cash deposits is significantly higher in 2023 than what was estimated in the 2023 budget. As of July 31, 2023, interest income is \$2.8M higher than budgeted, due to higher interest rates than assumed in the budget. The 2023 year-end projection for interest income is \$4.7M, which is \$4.5M above budget.

The 2024 budget for interest income assumes a continuation of the interest rate levels experienced year-to-date in 2023, resulting in an increase in budgeted Miscellaneous Revenue of \$4.2M as compared to 2023.

Reimbursable Planning studies revenue is budgeted to increase by \$1.2M as compared to the 2023 budget. This revenue increase offsets the budget impact of the five additional Interconnection Studies engineers that are being proposed for 2024.

The increases in interest income and planning studies revenue offsets the budget impact of eliminating the \$5.0M RS1 carryover in 2024.

Budget Highlights: Key Drivers

Salaries & Benefits - Headcount & Resource Planning

The NYISO has developed a staffing resource plan in support of the 2024 project commitments, as well as the NYISO's other strategic initiatives and objectives. These staffing recommendations consider optimal use of existing headcount, alignment with current and future organizational priorities, and address areas of operational risk stemming from resource constraints.

The proposed new headcount requirements specifically consider the prospect of new resources entering the NYISO's markets, staffing required to support the continued advancement of Interconnection Projects and the NYISO's System Planning processes, resources required to accomplish prioritized project deliverables, and the need to ensure NYISO is well positioned to meet new and expanding responsibilities.

The 2024 headcount proposal includes the addition of nineteen positions, primarily in System & Resource Planning and Operations. Positions proposed for Interconnection Studies are 100% reimbursable and are, therefore, budget neutral.

Refer to slides 12 - 14 for additional details.

Budget Highlights: Key Drivers - Headcount

Department	New for 2024	Key Contributions from Positions
Interconnection Studies	5	<p>Engineer - Coordinate, perform, and review technical studies related to the interconnection of proposed new generation, transmission and load facilities to the New York State transmission system. Assist in coordinating with other Planning and NYISO departments as necessary to prepare various reports and filings as appropriate. The cost of these positions is funded by planning study revenues.</p>
Economic Planning	2	<p>Power System Planning Engineer - Perform a variety of techno-economic power system planning and operational studies as required in the NYISO tariff and in response to government, environmental, and market related study requirements pertaining to grid infrastructure and renewable energy target achievement.</p> <p>Engineer - Implement improvements in the System & Resource Outlook study and increase the number completed Requested Economic Planning Studies.</p> <p>The cost of these positions is partially funded by planning study revenues.</p>
System Modeling	1	<p>Planning Analyst - Provide transmission related engineering studies, models, and database information to stakeholders, including Market Participant committees, the New York State Department of Public Service, the North American Electric Reliability Corporation, Northeast Power Coordination Council, the New York State Reliability Council, and Eastern Interconnection Planning Collaborative.</p>
Transmission Planning	1	<p>Transmission Planning Technical Specialist - Assist in the development of long-term planning assessments and transmission integration, such as System & Resource Outlook, Public Policy Planning, and Coordinated Grid Planning Process.</p>

Budget Highlights: Key Drivers - Headcount

Department	New for 2024	Key Contributions from Positions
Grid Transition	2	<p>Project Manager –Work across Planning, Operations, Markets and IT to track progress of projects, identify dependencies, and coordinate initiatives that affect the integration of new resources. This role will take a holistic look at the deliverables of each project, identify the significant milestones that trigger downstream workstreams and help inform internal and external stakeholders of progress.</p> <p>Inverter-Based Resources (IBR) Engineer - Perform specialized engineering studies (EMTP and dynamic simulations) that will be required both in Planning and Operations as the penetration of IBR resources increase and additional standards are imposed.</p>
Operations Engineering	2	<p>Engineer - Perform detailed engineering analysis that is required to reliably integrate the significant number of new projects, as required by the Climate Leadership and Community Protection Act (CLCPA), into operations. This will help ensure the NYISO continues to effectively facilitate the Grid Transition objectives set forth by the CLCPA.</p>
Commitment Analysis	1	<p>Engineer -This position is needed to handle the increasing workload of ensuring the validity of energy market results that continues to grow with each energy market project implementation, including modeling, outage scheduling, and securing lower kV transmission facilities. This has resulted in significant increases in input data handling and validation, which is expected to expand as more energy storage resources and DER resources come on-line.</p>
Capacity Accreditation	1	<p>Engineer – Review the resource adequacy contribution of resources as the diversity and performance of the resource mix changes and must be accurately reflected in the Installed Capacity market and its processes. Properly valuing resources’ contribution to maintaining grid reliability, known as capacity accreditation, will provide the signals necessary to maintain a diverse resource mix.</p>

Budget Highlights: Key Drivers - Headcount

Department	New for 2024	Key Contributions from Positions
Energy Market Engineering	2	<p>Energy Market Integration Engineer - Work with Market Operations Commitment Analysis, Scheduling, Market Design, Project Management, IT, and Power Systems Application Engineering departments to facilitate the timely assessment, development, requirements gathering and the testing of new tools. These positions are critical for accelerating the development and integration of new technologies and for advancing the life cycles of existing NYISO technologies.</p>
Market Structures	1	<p>Project Manager - Manage the latest “Public Policy Transmission Need” PSC request as a project utilizing Product & Project Management practices, such as setting objectives, scheduling utilizing resource loaded project plans, coordinating work, facilitating meetings, reporting project status, and raising risks as appropriate. Assist the Planning department with Reliability and Economic Assessments.</p>
Finance	1	<p>Analyst - Assess and review credit portfolios of NYISO Market Participants. Assist in conducting credit and financial risk assessments to determine creditworthiness and financial health of Market Participants and new applicants in compliance with NYISO credit policy. Actively monitor Market Participant credit and risk positions and perform analysis.</p>

Budget Highlights: Key Drivers

Salaries & Benefits – Merit, Equity, Promotion Compensation

Historically, salary merit adjustments have been based upon factors that include:

- National surveys showing the median percentage for merit increases across the country
- The planned budget for compensation adjustments among our RTO/ISO peers
- The imperative that the NYISO continue to offer competitive salaries to attract and retain talent and address inequities between actual compensation and market compensation levels for certain positions
- The commitment to recognition of certain individuals that achieve significant milestones in their professional development and their subsequent contributions to the success of the NYISO

In developing the 2024 budget, NYISO continued to benchmark salaries considering the factors referenced above and proposes a merit pool of 4%, equity adjustment pool of 1.0% and a promotion pool of 0.5%.

Budget Highlights: Key Drivers

Salaries & Benefits – 2024 Benchmark Data

National surveys showing the median number for merit increases across the country:
Currently the following sources have released 2024 projections:

World At Work	4.0%
<i>The Conference Board</i>	<i>Not yet available</i>
Willis Towers Watson	4.0%
<i>Korn Ferry</i>	<i>Not yet available</i>
SHRM	3.8%

The NYISO's RTO/ISO peers have indicated planned salary increases of 5% - 8% for 2024.

Budget Highlights: Key Drivers

Professional Fees (Consulting):

2024 budgeted professional fee support is proposed to increase by \$7.1M. This is primarily due to an increase in consulting support of \$5.4M required to accomplish the 2024 project portfolio deliverables, which is 76% of the total 2024 professional fees increase.

Consulting in support of Markets Projects is proposed to increase by \$3.5M and consulting in support of Enterprise Projects is proposed to increase by \$1.9M in 2024.

Significant Markets Project drivers for 2024 include:

Demand Curve Reset - \$1.5M

Dynamic Reserves - \$0.7M

Balancing Intermittency - \$0.6M

Improve Duct-Firing Modeling - \$0.6M

2023 Budget Overview

(\$ in millions, except RS#1/MWh)	2023 Budget		
	Enterprise	Projects	Total
Capital	\$1.9	\$9.2	\$11.1
Salaries & Benefits	106.2	13.7	119.9
Professional Fees (including Legal)	19.4	8.5	27.9
Building Services	6.4	0.0	6.4
Computer Services	23.0	0.6	23.6
Insurance	3.7	0.0	3.7
Telecommunications	2.9	0.0	2.9
Other Expenses (BOD, Travel/Training, NPCC Fees)	<u>3.8</u>	<u>0.0</u>	<u>3.8</u>
Subtotal: Current Year Needs	\$167.3	\$32.0	\$199.3
Debt Service	30.5	0.0	30.5
Subtotal: Cash Budget	\$197.8	\$32.0	\$229.8
Less: Miscellaneous Revenues	(13.1)	0.0	(13.1)
Less: Proceeds from Current Year Budget Debt	(1.9)	(25.1)	(27.0)
Add: Interest on Current Year Budget Debt	<u>0.0</u>	<u>0.3</u>	<u>0.3</u>
Total: Rate Schedule #1 Revenue Requirement in \$\$	\$182.8	\$7.2	\$190.0
Budgeted MWh (in millions)			156.7
Rate Schedule #1 Revenue Requirement in \$/MWh (budget)			\$1.213

2024 Draft Budget Overview

	2024 Draft Budget		
(\$ in millions, except RS#1/MWh)	Enterprise	Projects	Total
Capital	\$1.3	\$8.9	\$10.2
Salaries & Benefits	109.3	18.0	127.3
Professional Fees (including Legal)	21.1	13.9	35.0
Building Services	6.8	-	6.8
Computer Services	24.1	0.8	24.9
Insurance	3.9	-	3.9
Telecommunications	3.1	-	3.1
Other Expenses (BOD, Travel/Training, NPCC Fees)	<u>4.4</u>	-	<u>4.4</u>
Subtotal: Current Year Needs	\$174.0	\$41.6	\$215.6
Debt Service	29.2	-	29.2
Subtotal: Cash Budget	\$203.2	\$41.6	\$244.8
Less: Miscellaneous Revenues	(13.5)	-	(13.5)
Less: Proceeds from Current Year Budget Debt	(1.4)	(35.6)	(37.0)
Add: Interest on Current Year Budget Debt	-	<u>0.5</u>	<u>0.5</u>
Total: Rate Schedule #1 Revenue Requirement in \$\$	\$188.3	\$6.5	\$194.8
Budgeted MWh (in millions)			152.1
Rate Schedule #1 Revenue Requirement in \$/MWh (budget)			\$1.281

Timeline for 2024 Budget Cycle

- **September 11:** NYISO presents 2024 draft budget to BPWG
- **September 18:** BOD meeting to review high level 2024 draft budget summary
- **September 27 :** BPWG Chair to present 2024 draft budget to Management Committee
- **September 27:** BPWG meeting
- **October 6:** BPWG meeting
- **October 16:** BOD meeting to review draft of 2024 budget
- **October 25:** Management Committee to vote on 2024 budget
- **November 14:** BOD approval of final 2024 budget

Appendix A

Key Priorities and Projects

for 2024

Key Priorities and Projects for 2024

Energy and Ancillary Services Market

Markets for the Future

- *Complete Market Design for Operating Reserves Performance*
- *Complete Market Design for Balancing Intermittency*
- *Develop Functional Requirements for Dynamic Reserves*
- *Deploy Emissions Transparency*

Improving Price Formation

- *Propose Market Design Concept for Long Island Reserve Constraint Pricing*
- *Develop Functional Requirements for Improving Duct-Firing Modeling*

Financial Instruments for Energy Markets

- *Deploy Bilateral Transactions*
- *Propose Market Design Concept for Market Purchase Hub Transactions*

Key Priorities and Projects for 2024

Capacity Market

Capacity Accreditation Measures

- *Deploy modeling improvements for Capacity Accreditation (SOM)*

Capacity Improvements to Support Reliability

- *Complete Study for Demand Curve Reset*
- *Complete Study for Evolving Resource Adequacy Model*
- *Issue Discovery for Granular Capacity Market Pricing*
- *Issue Discovery for Valuing Transmission Security*
- *Issue Discovery for Winter Reliability Capacity Enhancements*

Improving Market Processes

- *Deploy LCR Optimizer Enhancements*
- *Complete Development for CRIS Expiration Evaluation*

Key Priorities and Projects for 2024

New Resources and Technologies

Enabling New Resources and Capabilities

- *Deploy Hybrid Aggregation Model and Complete Development for Co-Located Steam and Storage*
- *Complete Functional Requirements for Internal Controllable Lines*
- *Complete Functional Requirements for FERC Order 2222 Compliance*
- *Complete Study for Integrating Champlain Hudson Power Express*
- *Propose Market Design Concept for Engaging the Demand Side*
- *Propose Market Design Concept for Storage as Transmission*

Improving Market Models

- *Propose Market Design Concept for Advanced Storage Modeling and Operation*
- *Propose Market Design Concept for 5 Minute Scheduling Transaction*

Planning Process Enhancements

- *Define Study for Coordinated Grid Planning Process*
- *Deploy Interconnection Process Enhancements*

Key Priorities and Projects for 2024

Technology Transformation and Infrastructure Investment

- *Complete Market Design for Sub Accounts*
- *Complete Study for 3rd Floor Data Center Migration*
- *Complete Study for Midrange and Storage Upgrade*
- *Deploy Block Storage Refresh*
- *Complete Network Infrastructure Upgrade*
- *Complete Building Management System Controls Upgrade*
- *Complete Server Refresh*
- *Complete Telemetry Tone Gear Upgrade*
- *Complete Office Mechanical System Upgrade*
- *Complete Windows Server Hardware Upgrade*
- *Complete Development for EMS/BMS Technologies Upgrade*

Appendix B

NYISO 2024 Draft Budget: Line Item Details

Line Item Details - Capital

(\$ in millions)	2024 Draft	2023 Budget	\$ Change
Facility Improvements	\$4.1	\$2.8	\$1.3
Replacement of Existing Hardware	\$5.2	8.3	(\$3.1)
Software & Software Licenses (capitalized)	<u>\$0.9</u>	=	<u>0.9</u>
Total Capital Costs	\$10.2	\$11.1	(\$0.9)

Facility Improvements:

Facility improvements included within the 2024 budget include \$2.0M to replace the office mechanical systems, \$1.0M to upgrade the Building Management System, \$0.6M to replace the electrical distribution panels, \$0.3M to refurbish elevators at Krey Blvd., and \$0.2M for security fence replacement.

Replacement of Existing Hardware:

Replacement of computer hardware fluctuates from year-to-year and is driven by technology refresh schedules, planned obsolescence by technology vendors, and the specific mix of new computer requirements identified in the current year project schedule. The 2024 budget includes \$5.1M of new hardware required for proposed projects, including \$1.9M for the Windows Server Upgrade, \$1.0M for the Block Storage Refresh, \$0.8M for the Server Refresh, \$0.5M for Network Infrastructure Replacement, \$0.5M for Optimization Solver Upgrade, and \$0.4M for Telemetry Tone Gen Upgrades.

Software and Software Licenses (capitalized):

Replacement of computer software and software licenses fluctuates from year-to-year and is driven by a change in the number of users as well as by software required as identified in the current year project schedule. Software requirements included in the 2024 budget are primarily for services related to hardware installations for Windows and servers, the Generator Data reporting system, and Planning software.

Line Item Details - Salaries & Benefits

(\$ in millions)	2024 Draft	2023 Budget	\$ Change
Base Salaries	\$87.3	\$83.4	\$3.9
Benefit Programs / At-Risk Compensation	33.6	30.2	3.4
Payroll Taxes	<u>6.4</u>	<u>6.3</u>	<u>0.3</u>
Total Salaries & Benefits	\$127.3	\$119.9	\$7.4

The 6% increase in Salaries & Benefits is primarily driven by:

- \$4.0M – 4.0% merit, 1.0% for compensation equity adjustments and 0.5% for promotion adjustments
- \$1.6M – Impact of higher base salaries and 19 additional FTEs on at-risk compensation and 401k plan contributions
- \$0.9M – 5% estimated increase in health insurance cost with no plan changes
- \$0.8M – 2024 estimated pension funding
- \$0.5M – Impact of attrition and 19 additional FTEs with prorated dates of hire
- (\$0.6M)– Decrease in recruitment and retention incentives

See additional details on Salaries & Benefits on the following slides

Line Item Details - Salaries & Benefits (cont.)

Headcount Summary		
Total Authorized FTE Positions for 2023	628	
Add: New Positions for 2024	<u>19</u>	Refer to details on slides 12 – 14
Total Authorized FTE Positions for 2024	647	
Less: Assumed Vacancies	<u>(39)</u>	Based on assumed vacancy rate of 6%
Equals: Total Budgeted FTE Positions	608	

Headcount Summary By Year			
	2024	2023	Change
Total Authorized FTE Positions	647	628	19
Less: Assumed Vacancies	<u>(39)</u>	<u>(38)</u>	<u>(1)</u>
Total Budgeted FTE Positions	608	590	18

Line Item Details - Professional Fees

(\$ in millions)	2024 Draft Budget	2023 Budget	\$ Change
Product Enhancement consultants (<i>several vendors</i>)	\$13.9	\$8.5	\$5.4
External legal fees	\$5.2	\$5.6	(\$0.4)
Market Monitoring	\$5.6	\$5.0	\$0.6
Security guards	\$2.0	\$1.8	\$0.2
Employee Benefits & Recruiting	\$2.0	\$1.6	\$0.4
Market design & related consulting	\$1.0	\$0.7	\$0.3
Reliability & Economic Planning	\$1.2	\$1.0	\$0.2
Misc. Professional Fees (all individually < \$250K)	\$1.1	\$1.3	(\$0.2)
Ranger support & enhancements	\$1.2	\$1.2	\$0.0
Information Technology & Facilities	\$1.0	\$0.5	\$0.5
External audits and Internal Audit co-sourcing	<u>\$0.8</u>	<u>\$0.7</u>	<u>\$0.1</u>
Total Professional Fees	\$35.0	\$27.9	\$7.1

Product Enhancement Consultants: The budgeted increase is primarily driven by the current mix of consulting support required by the 2024 proposed projects (See additional details on 2024 proposed product enhancements in a separate presentation posted for the 8/30/2023 BPWG meeting).

External Legal Fees - The budgeted decrease is due to the continued focus on maximizing utilization of in-house counsel.

Market Monitoring Fees - The budgeted increase is required to align the budget with actual historical cost experience.

Employee Benefits & Recruiting - The budgeted increase is due to recruiting support to compliment in-house recruiting and a comprehensive compensation benchmarking project for 2024 to ensure NYISO maintains competitive salary levels and structure.

Reliability & Economic Planning - The budgeted increase is driven by software support for system modeling tools and long-term wind and solar forecasting datasets.

Information Technology & Facilities - The budgeted increase is driven by software support for technology management software.

Line Item Details - Building Services

(\$ in millions)	2024 Draft	2023 Budget	\$ Change
Building Services	\$6.8	\$6.4	\$0.4

NYISO includes building service contracts, utilities, repairs and maintenance, and membership dues & subscriptions within this budget category.

The cost of Building Services is projected to increase by \$0.4M, primarily due to trending of current costs for utilities.

Line Item Details - Computer Services

(\$ in millions)	2024 Draft	2023 Budget	\$ Change
Computer Services Costs	\$24.9	\$23.6	\$1.3

NYISO includes hardware and software maintenance, software licenses (non-capitalized), computer supplies, and minor equipment purchases within this budget category. The continued addition of new cloud services, hardware, software, software licenses, and technology upgrades continues to drive increases in this budget category.

- \$0.9M – Existing services with additional features or usage such as cloud hosting usage for Planning software, DataMart and Intranet, maintenance for Network Infrastructure Upgrade hardware, and cyber security enhancements
- \$0.9M – Inflationary increase for various renewals without any service changes
- \$0.8M – Additional cloud-based services
- (\$1.3M) – Offset by reduced services including maintenance and support reduction tied to hardware and software retirements

Line Item Details - Insurance

(\$ in millions)	2024 Draft	2023 Budget	\$ Change
Insurance	\$3.9	\$3.7	\$0.2

The cost of insurance coverage is budgeted to increase by approximately 5% in 2024 due to the economic climate and insurance industry experience, driving up the cost of premiums with no coverage changes.

Line Item Details - Telecommunications

(\$ in millions)	2024 Draft	2023 Budget	\$ Change
Telecommunications	\$3.1	\$2.9	\$0.2

The 2024 Telecommunications budget is projected to increase by \$0.2M due to additional bandwidth for a dedicated circuit to the cloud services provider of \$0.1M and the addition of new substation and Transmission Owner sites to the telecommunications service provider of \$0.1M.

Line Item Details - Other Expenses

(\$ in millions)	2024 Draft	2023 Budget	\$ Change
Travel, Meetings & Training Costs	\$1.8	\$1.3	\$0.5
BOD Fees and Expenses	\$2.3	\$2.2	\$0.1
NPCC Fees	<u>\$0.3</u>	<u>\$0.3</u>	<u>\$ -</u>
Total Other Expenses	\$4.4	\$3.8	\$0.6

Travel, Meetings & Training costs are budgeted to increase by \$0.5M to more closely align these activities with pre-pandemic levels.

Line Item Details - Debt Service

Annual Principal and Interest Repayments ** (\$ in millions)

Debt Facility & Repayment Period	Borrowings	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2005 KCC Bldg Mortgage & Renov. (20 yrs)	\$24.8M	\$2.0	\$2.0	\$1.9	\$2.0	\$2.0	\$2.0	\$1.6	\$0.9	\$0.1	\$0.1
Infrastructure Master Plan Mortgage (19 yrs)	\$45.0M	\$4.1	\$3.9	\$3.8	\$3.2	\$3.4	\$3.3	\$3.2	\$3.1	\$3.0	\$3.0
2016 Budget Loan (3 yrs)	\$25.0M	\$4.2	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2017 Budget Loan (3 yrs)	\$24.7M	\$16.9	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2018 Budget Loan (3 yrs)	\$25.3M	\$9.0	\$8.8	\$8.5	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2016-2019 EMS/BMS System Upgrade	\$30.0M	\$11.6	\$5.6	\$5.6	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2019 Budget Loan (3 yrs)	\$26.0M	\$0.3	\$9.4	\$17.6	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2020 Budget Loan (3 yrs)	\$26.6M	\$-	\$0.4	\$9.6	\$14.9	\$3.0	\$-	\$-	\$-	\$-	\$-
2021 Budget Loan (3 yrs)	\$28.4M	\$-	\$-	\$0.3	\$10.2	\$17.9	\$1.5	\$-	\$-	\$-	\$-
2022 Budget Loan (3 yrs)	\$32.0M	\$-	\$-	\$-	\$0.5	\$11.7	\$11.3	\$10.9	\$-	\$-	\$-
2023 Budget Loan (3 yrs)	\$27.0M	\$-	\$-	\$-	\$-	\$0.4	\$10.5	\$10.2	\$9.9	\$-	\$-
2024 Budget Loan (3 yrs)	\$37.0M	\$-	\$-	\$-	\$-	\$-	\$0.5	\$13.4	\$12.9	\$12.4	\$-
2025 Budget Loan (3 yrs)	\$35.0M Est.	\$-	\$-	\$-	\$-	\$-	\$-	\$0.5	\$12.7	\$12.2	\$11.7
2026 Budget Loan (3 yrs)	\$35.0M Est.	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$0.5	\$12.7	\$12.2
2027 Budget Loan (3 yrs)	\$35.0M Est.	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$0.5	\$12.7
2028 Budget Loan (3 yrs)	\$35.0M Est.	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$0.5
Bank Fees	n/a	\$0.7	\$0.7	\$0.5	\$0.5	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6	\$0.6
Total Debt Service Payments		\$48.8	\$30.8	\$47.8	\$31.3	\$39.0	\$29.7	**	**	**	**

Approximately \$35M is expected to be borrowed on average each year during 2025 – 2028, representing the annual cost of implementing Projects, technology enhancements, and facility improvements. **Totals are not shown in 2025, 2026, 2027 and 2028 as the annual principal and interest repayments on the Budget Loan are not known at this time.**

Line Item Details - Debt Service (Cont.)

Principal Balance Outstanding at December 31 (\$ in millions)										
Debt Facility	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2005 KCC Bldg Mortgage & Renov.	\$10.6	\$9.2	\$7.6	\$6.0	\$4.3	\$2.5	\$0.9	\$0.1	\$-	\$-
Infrastructure Master Plan Mortgage	\$30.7	\$28.0	\$25.2	\$22.6	\$20.0	\$17.3	\$14.7	\$12.0	\$9.4	\$6.7
2017 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2018 Budget Loan	\$16.9	\$8.4	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2016-2019 EMS/BMS System Upgrade	\$10.9	\$5.6	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2019 Budget Loan	\$26.0	\$17.3	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2020 Budget Loan	\$-	\$26.6	\$17.6	\$3.0	\$-	\$-	\$-	\$-	\$-	\$-
2021 Budget Loan	\$-	\$-	\$28.4	\$18.9	\$9.5	\$-	\$-	\$-	\$-	\$-
2022 Budget Loan	\$-	\$-	\$-	\$32.0	\$21.3	\$10.7	\$-	\$-	\$-	\$-
2023 Budget Loan	\$-	\$-	\$-	\$-	\$27.0	\$18.0	\$9.0	\$-	\$-	\$-
2024 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$37.0	\$24.7	\$12.3	\$-	\$-
2025 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$-	\$35.0	\$23.3	\$11.7	\$-
2026 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$35.0	\$23.3	\$11.7
2027 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$35.0	\$23.3
2028 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$35.0
Total Principal Outstanding	\$95.1	\$95.1	\$78.8	\$82.5	\$82.1	\$85.5	**	**	**	**

**** Totals are not shown in 2025, 2026 and 2027 as the principal balance outstanding on the 2025, 2026 and 2027 Budget Loans are not known at this time.**

Line Item Details - Misc. Revenue

(\$ in millions)	2024 Draft	2023 Budget	\$ Change
Total Miscellaneous Revenues	(\$13.5)	(\$13.1)	\$0.4

Miscellaneous revenue is projected to increase by \$0.4M as compared to the 2023 budget due to the following:

- Interest income is projected to increase by \$4.2M due to the continuation of elevated interest rates;
- Reimbursable planning study revenues are projected to increase by \$1.2M

These increases are offset by the elimination of the \$5.0M in Rate Schedule 1 carryover funds utilized in the 2023 Budget.

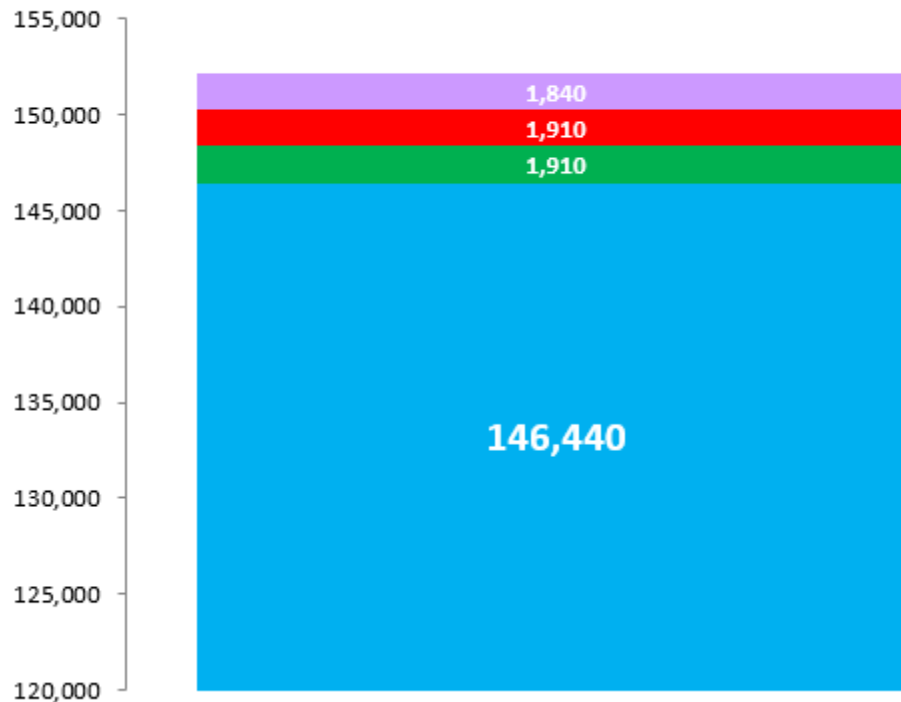
Appendix C

2024 - 2028 GWh Forecast

2024 RS-1 Budget Forecast

2024 RS-1 Budget Forecast: 152,100 GWh

■ Net Load :	146,440 GWh
■ Billable Exports :	1,910 GWh
■ Wheels :	1,910 GWh
■ Incremental Supply :	1,840 GWh
TOTAL : 152,100 GWh	
2023 RS-1 Budget Forecast : 156,700 GWh	



2024 RS-1 Budget Forecast Discussion

- The 2024 RS-1 budget forecast value is similar to the expected 2023 weather normalized RS-1 collections (after the 2023 projected collections are scaled up to normal weather conditions)
- Positive year-over-year (YoY) growth drivers include increasing impacts from interconnecting large loads, electric vehicles, heating electrification, and economic growth
- Negative YoY drivers include the continued load reductions due to policy-driven growth in energy efficiency and behind-the-meter Solar
- 2024 exports and wheels are projected to be similar to 2023 actuals
- Positive and negative growth drivers largely offset YoY, resulting in generally flat 2024 RS-1 forecast growth (relative to weather-adjusted 2023 collections)

RS-1 Budget Summary - GWh

Actual & Forecast RS-1 Components - GWh							WN Pct Growth		
Year	Load ¹	Supply ²	Exports ³	Wheels	RS-1 Total	W-Normal ⁴	Net Load ^a	RS-1 Tot ^b	Cumulative ^c
2017	152,040	1,820	2,300	2,400	158,560	158,940			
2018	156,860	2,410	2,250	1,810	163,330	160,650			
2019	151,560	3,030	2,080	1,370	158,040	158,060			
2020	146,240	3,240	1,680	1,370	152,530	152,640			
2021	148,210	2,120	1,720	2,310	154,360	154,530			
2022	149,110	1,630	3,510	2,550	156,800	156,180			
2023*	143,500	2,000	2,140	1,710	149,350	151,600	-1.85%	-2.93%	
2024	146,440	1,840	1,910	1,910	152,100	152,100	0.47%	0.33%	0.33%
2025	145,770	1,840	1,900	1,890	151,400	151,400	-0.46%	-0.46%	-0.13%
2026	145,920	1,840	1,800	1,840	151,400	151,400	0.10%	0.00%	-0.13%
2027	146,100	1,840	1,720	1,840	151,500	151,500	0.12%	0.07%	-0.07%
2028	146,670	1,840	1,680	1,810	152,000	152,000	0.39%	0.33%	0.26%

* 2023 Includes 8 months estimated actual & 4 months updated budget forecast

(1) - net load (excluding transmission system losses)

(2) - incremental supply of injections (relative to load) in support of non-billable exports and losses

(3) - billable exports (excludes exports to New England per the CTS agreement)

(4) - weather-normalized RS-1 collections

(a) - year-over-year percent change in weather-normalized net load

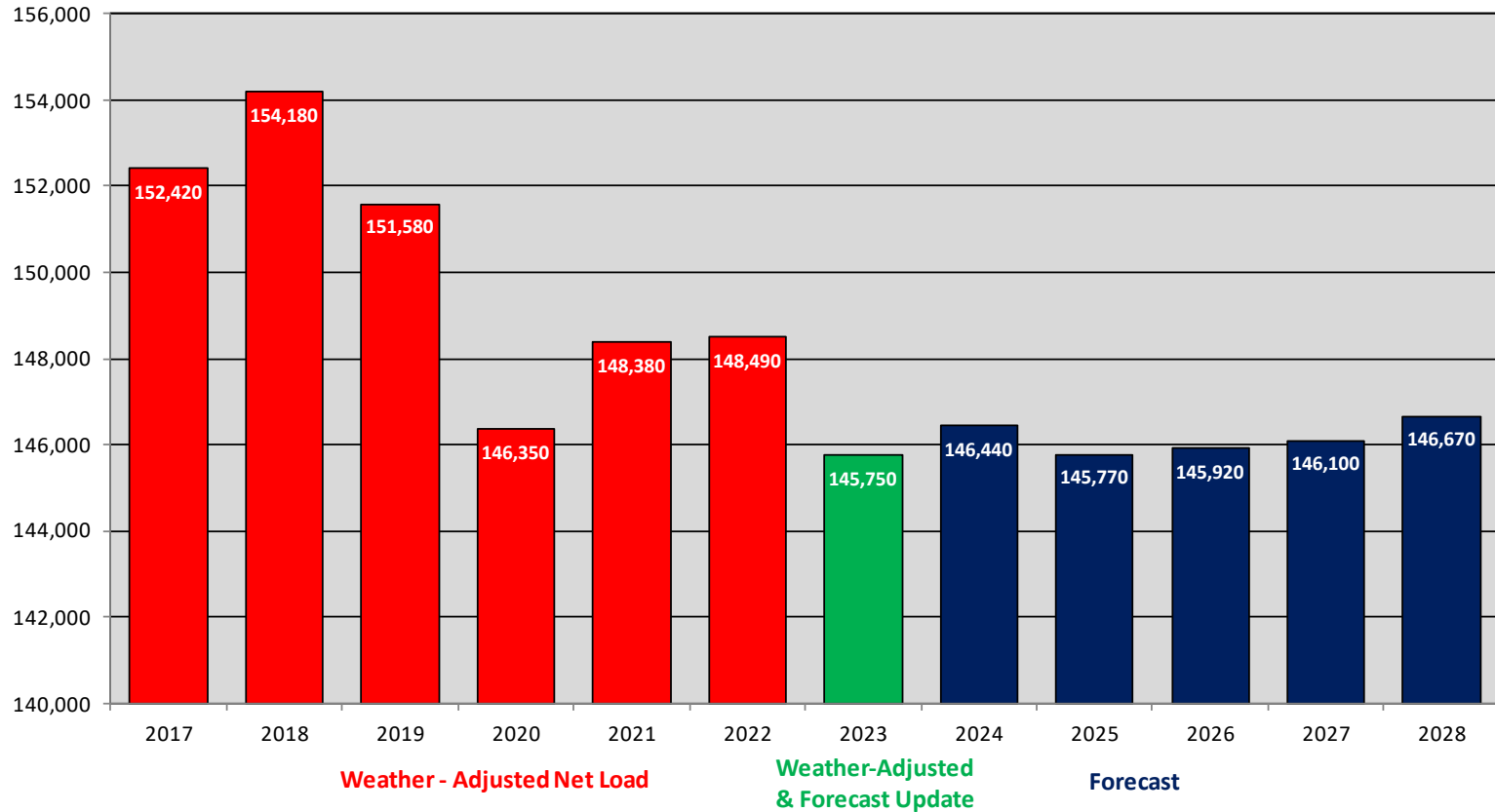
(b) - year-over-year percent change in weather-normalized RS-1 Budget forecast

(c) - cumulate percent change in weather-normalized RS-1 Budget forecast relative to 2023 projection

Net Load Forecast

- **Net load forecast models developed including the impacts of:**
 - **Economy** – models utilize the April 2023 Moody’s forecast
 - **Climate trends** – warmer weather in summer months and milder weather in winter months over time
 - **Energy efficiency and BTM solar** – continued load-reducing impacts driven by state policies
 - **Electrification** – load increasing impacts primarily due to electric vehicles and heating electrification
 - **Large Loads** – based on the most recent information, including from Transmission Owners

Net Load - GWh

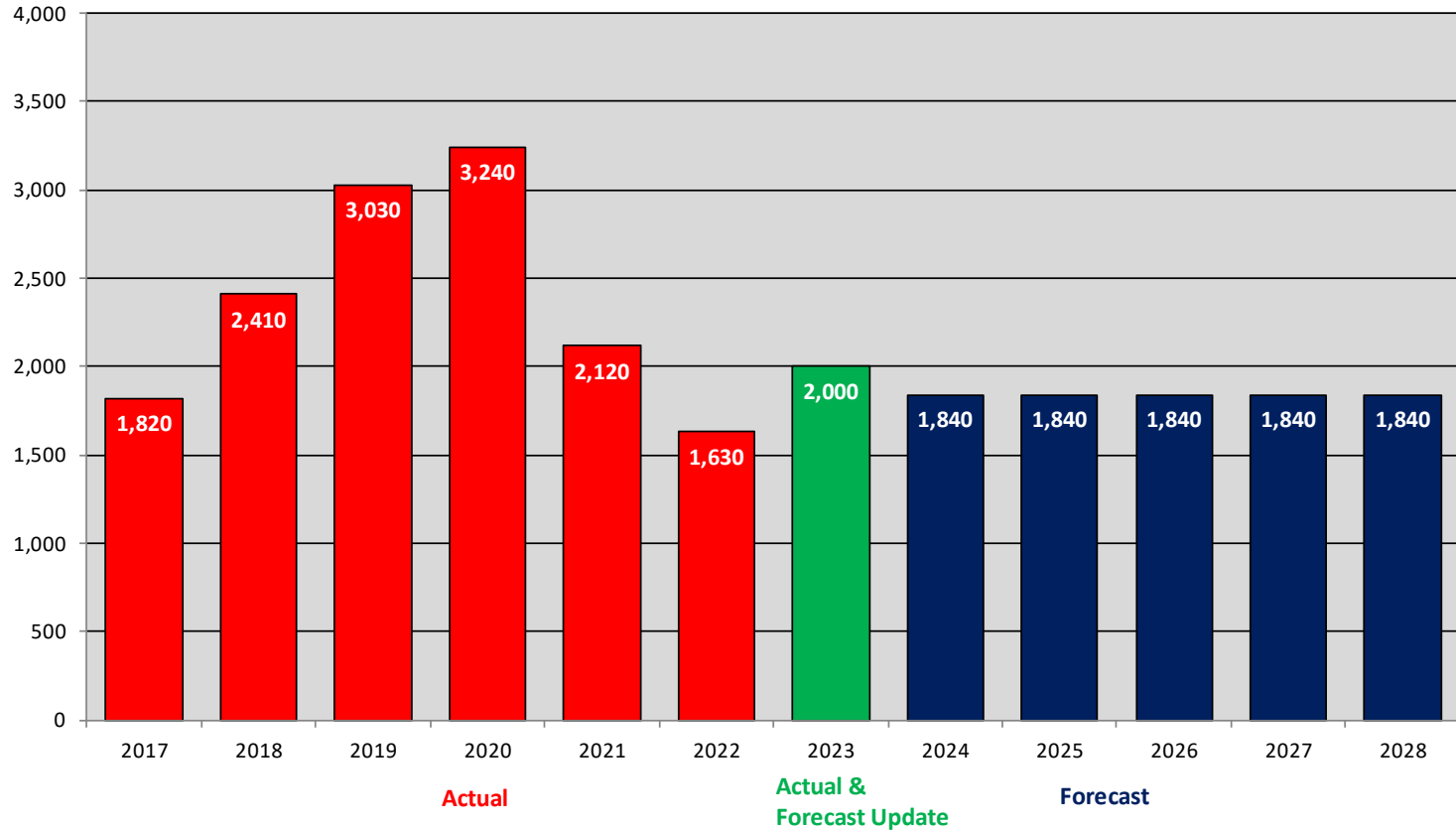


Note: 2023 includes 8 months estimated weather adjusted net load and 4 months updated budget forecast

Incremental Supply Forecast

- **Incremental supply quantifies the additional injections (relative to net load) needed to support transmission losses and RS-1 non-billable exports to New England**
- **Model-based forecast including:**
 - Monthly net load
 - Winter weather variable
 - Calendar and lag terms

Incremental Supply - GWh



Note: 2023 includes 8 months estimated actual and 4 months updated budget forecast

Transactions Forecasts

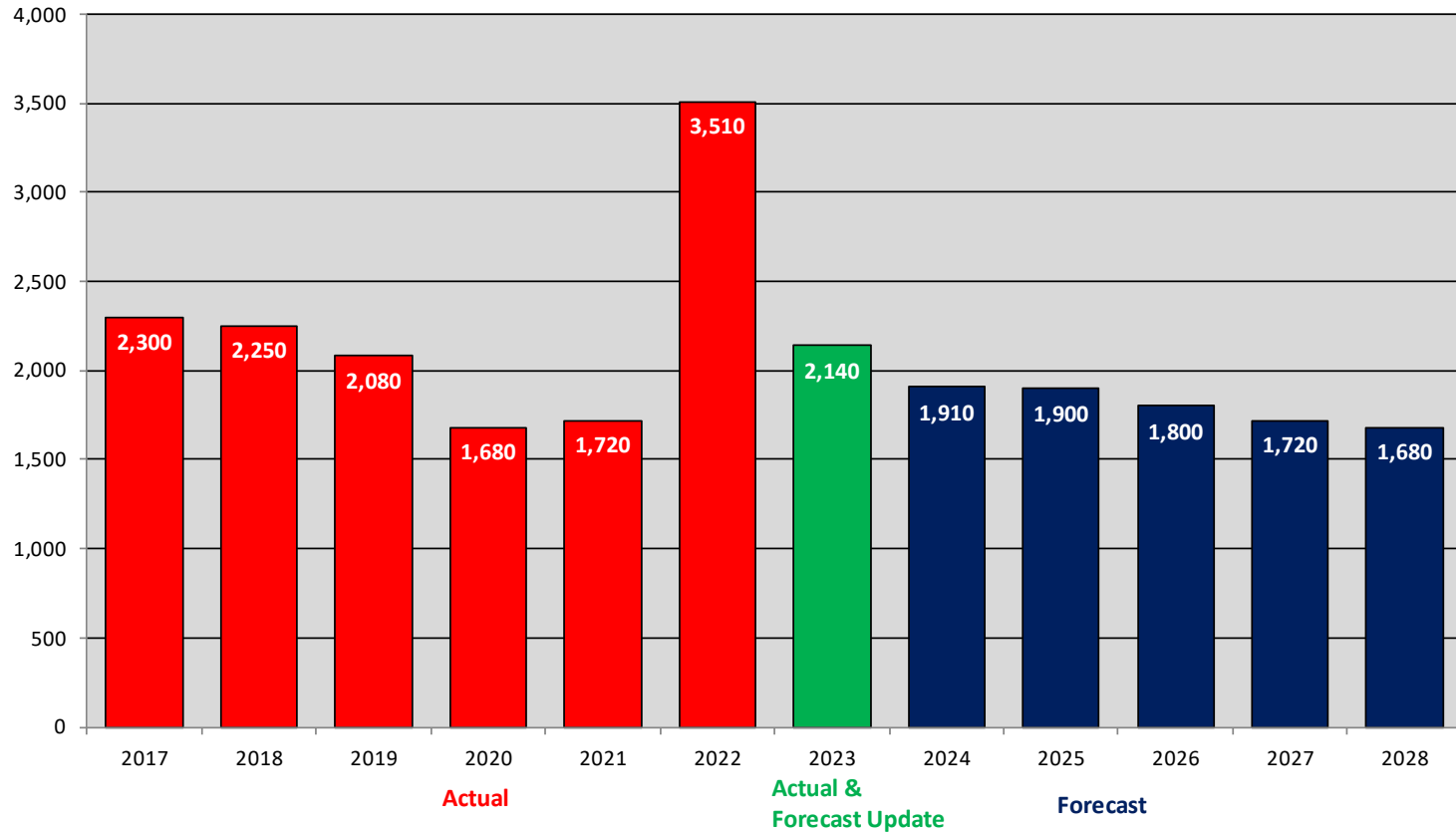
■ Billable Exports

- RS-1 billable exports exclude exports to New England per the CTS agreement implemented in 2016
- Forecast model including variables for natural gas price, winter weather, and a trend
- Uses Henry Hub natural gas monthly spot price (as a proxy for regional gas prices), including the 2024 monthly forecast from the EIA Short-Term Energy Outlook
- Exports are projected to remain near their typical long-term levels. Monthly exports peaked in early 2022 coincident with high natural gas prices, and have recently decreased along with the natural gas price

■ Wheels

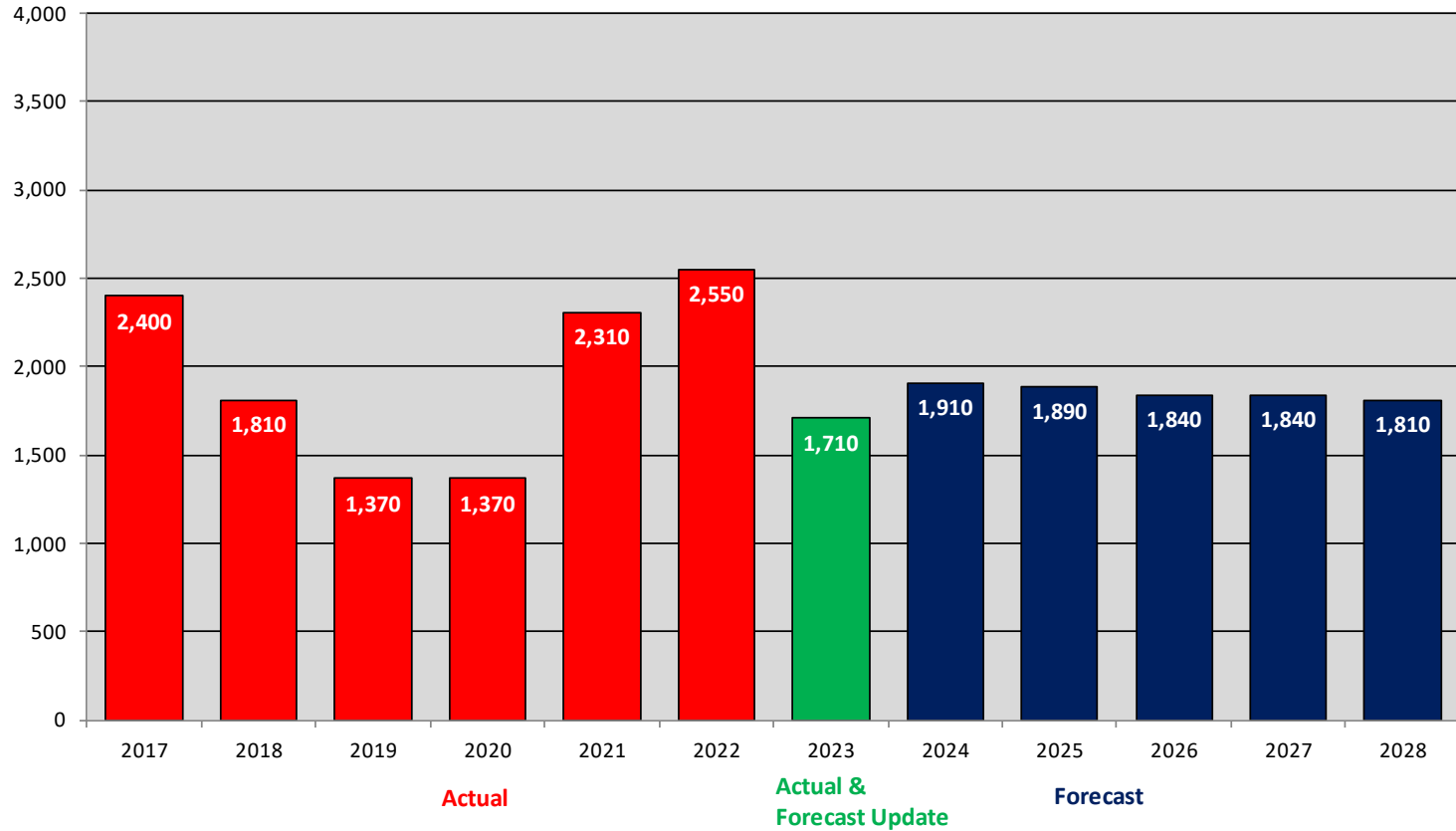
- Forecast model including variables for natural gas price, summer weather, calendar terms, and a trend

Billable Exports - GWh



Note: 2023 includes 8 months of estimated actual exports and 4 months of the updated budget forecast

Wheels - GWh



Note: 2023 includes 8 months of estimated actual wheels and 4 months of the updated budget forecast

Appendix D

2025 - 2028 Budget Projections

Rate Schedule 1 Summary

	BUDGET DRAFTS				
<i>(\$ in millions, except RS#1/MWH)</i>	2024 Draft	2025 Projection	2026 Projection	2027 Projection	2028 Projection
Total: Rate Schedule #1 Revenue Requirement in \$\$	\$194.8	\$222.4	\$232.5	\$244.6	\$254.2
Budgeted MWH Hours <i>(in millions)</i>	152.1	151.4	151.4	151.5	152.0
Rate Schedule #1 Revenue Requirement in \$/MWH	\$1.281	\$1.469	\$1.536	\$1.615	\$1.672

The 2025 - 2028 budget drafts presented above are advisory only. Actual budgets for these years will be developed and discussed with Market Participants annually.

Budget Projections By Category

	Budget Drafts				
(\$ in millions, except RS#1/MWh)	2024 Draft	2025 Projection	2026 Projection	2027 Projection	2028 Projection
Capital	\$10.2	\$12.6	\$12.8	\$13.1	\$12.7
Salaries & Benefits	127.3	137.8	145.9	154.7	164.0
Professional Fees (including Legal)	35.0	35.9	36.7	37.5	38.7
Building Services	6.8	7.1	7.3	7.5	7.8
Computer Services	24.9	25.3	25.7	26.5	26.2
Insurance	3.9	4.1	4.4	4.7	5.1
Telecommunications	3.1	3.2	3.3	3.4	3.4
Other Expenses (BOD, Travel/Training, NPCC Fees)	<u>4.4</u>	<u>4.7</u>	<u>4.8</u>	<u>5.0</u>	<u>5.1</u>
Subtotal: Current Year Needs	\$215.6	\$230.7	\$240.9	\$252.4	\$263.0
Debt Service	<u>29.2</u>	<u>39.9</u>	<u>40.1</u>	<u>40.9</u>	<u>40.2</u>
Subtotal: Cash Budget	\$244.8	\$270.6	\$281.0	\$293.3	\$303.2
Less: Miscellaneous Revenues	(13.5)	(13.7)	(14.0)	(14.2)	(14.5)
Less: Proceeds from Current Year Budget Debt	(37.0)	(35.0)	(35.0)	(35.0)	(35.0)
Add: Interest on Current Year Budget Debt	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>
Total: Rate Schedule #1 Revenue Requirement in \$\$	\$194.8	\$222.4	\$232.5	\$244.6	\$254.2
Budgeted MWh (in millions)	152.1	151.4	151.4	151.5	152.0
Rate Schedule #1 Revenue Requirement in \$/MWh (budget)	\$1.281	\$1.469	\$1.536	\$1.615	\$1.672

Major Assumptions

Cost Category	Major Assumptions for 2024 and 2025 - 2028
Capital	<ul style="list-style-type: none"> Purchases of Hardware and Software are estimated as follows: 2024 = \$6.1M 2025 = \$9.8M 2026 = \$9.8M 2027 = \$9.6M 2028 = \$9.7M Facility Improvements are estimated as follows: 2024 = \$4.1M 2025 = \$2.8M 2026 = \$3.2M 2027 = \$3.5M 2028 = \$3.0M
Salaries & Benefits	<ul style="list-style-type: none"> Total budgeted headcount is as follows: 647 FTEs for 2024, 653 FTEs for 2025, 659 FTEs for 2026, 666 FTEs for 2027, and 673 for 2028 Estimated vacancy factor is 6% in 2024 – 2028 Promotion adjustment increase of 0.5% and equity adjustment increase of 1.0% Average annual merit increase of 4% Assumes \$0.8M pension plan funding in 2024 - 2028 and a 5% annual increase in health insurance cost in 2024 – 2028
Professional Fees (including Legal)	<ul style="list-style-type: none"> Assumes average annual increase of ~3% in consulting support (2024 – 2028) ranging from \$35.0M in 2024 to \$38.7M in 2028
Building Services	<ul style="list-style-type: none"> Assumes annual cost increases with budgets ranging from \$6.8M in 2024 to \$7.8M in 2028
Computer Services	<ul style="list-style-type: none"> Assumes annual cost increases in 2024 - 2028 ranging from \$24.9M to \$26.2M
Insurance	<ul style="list-style-type: none"> Assumes ~7% increase with budgets ranging from \$3.9M in 2024 to \$5.1M in 2028
Telecommunications	<ul style="list-style-type: none"> Assumes ~3.0% increase with budgets ranging from \$3.1M in 2024 to \$3.4M in 2028
Other Expenses	<ul style="list-style-type: none"> Assumes annual increases with budgets ranging from \$4.4M in 2024 to \$5.1M in 2028
Misc. Revenue	<ul style="list-style-type: none"> Assumes annual increases in revenue primarily driven by Interconnection Study work and interest rates remaining at current levels, with budgets ranging from \$13.5M in 2024 to \$14.5M in 2028
Debt Service	<ul style="list-style-type: none"> Annual average borrowings (with 3-year repayment terms) to fund capital and product enhancements are anticipated to be \$35.0M for each year 2025 - 2028 No reductions for “early payments” on debt from potential savings on annual budget or RS1 overcollections have been included

2025 Budget Summary

■ In Summary

- NYISO's draft 2025 advisory budget totals \$222.4M, allocated across a forecast of 151.4 million MWh, for a Rate Schedule 1 charge/MWh of \$1.469. Comparatively, the draft 2024 budget totals \$194.8M, allocated across a forecast of 152.1 million MWh, for a Rate Schedule 1 charge/MWh of \$1.281
- NYISO's draft 2025 advisory budget represents an 14.2% increase in Revenue Requirement from the 2024 draft budget and a 0.5% decrease in projected MWh for an overall Rate Schedule 1 increase of 14.7%

■ Primary Drivers

- The primary drivers of a \$27.6M increase in the RS1 Revenue Requirement from 2024 to 2025 are as follows:
 - \$10.7M increase in Debt Service primarily due to no planned early repayments of outstanding debt and increased borrowings
 - \$10.5M increase in Salaries & Benefits driven primarily by 4.0% annual merit compensation, 1.0% equity and 0.5% promotion adjustments, the addition of 6 incremental FTEs and a 5% increase in health insurance costs
 - \$2.4M increase in Capital requirements
 - \$2.0M reduction in debt proceeds

2026 Budget Summary

■ In Summary

- NYISO's draft 2026 advisory budget totals \$232.5M, allocated across a forecast of 151.4 million MWh, for a Rate Schedule 1 charge/MWh of \$1.536. Comparatively, the draft 2025 advisory budget totals \$222.4M, allocated across a forecast of 151.4 million MWh, for a Rate Schedule 1 charge/MWh of \$1.469
- NYISO's draft 2026 advisory budget represents a 4.5% increase in Revenue Requirement from the 2025 draft advisory budget and no change in projected MWh for an overall Rate Schedule 1 increase of 4.5%

■ Primary Drivers

- The primary driver of a \$10.1M increase in the RS1 Revenue Requirement from 2025 to 2026 are as follows:
 - \$8.1M increase in Salaries & Benefits driven primarily by 4.0% annual merit compensation, 1.0% equity and 0.5% promotion adjustments, the addition of 6 incremental FTEs and a 5% increase in health insurance costs

2027 Budget Summary

■ In Summary

- NYISO's draft 2027 advisory budget totals \$244.6M, allocated across a forecast of 151.5 million MWh, for a Rate Schedule 1 charge/MWh of \$1.615. Comparatively, the draft 2026 advisory budget totals \$232.5M, allocated across a forecast of 151.4 million MWh, for a Rate Schedule 1 charge/MWh of \$1.536
- NYISO's draft 2027 advisory budget represents a 5.2% increase in Revenue Requirement from the 2026 draft advisory budget and a relatively flat projected MWh for an overall Rate Schedule 1 increase of 5.1%

■ Primary Drivers

- The primary drivers of a \$12.1M increase in the RS1 revenue requirement from 2026 to 2027 is as follows:
 - \$8.8M increase in Salaries & Benefits driven primarily by 4.0% annual merit compensation, 1.0% equity and 0.5% promotion adjustments, the addition of 7 incremental FTEs and a 5% increase in health insurance costs

2028 Budget Summary

■ In Summary

- NYISO's draft 2028 advisory budget totals \$254.2M, allocated across a forecast of 152.0 million MWh, for a Rate Schedule 1 charge/MWh of \$1.672. Comparatively, the 2027 advisory budget totals \$244.6M, allocated across a forecast of 151.5 million MWh, for a Rate Schedule 1 charge/MWh of \$1.615
- NYISO's draft 2028 advisory budget represents a 3.9% increase in Revenue Requirement from the 2027 draft budget and a 0.3% increase in projected MWh for an overall Rate Schedule 1 increase of 3.6%

■ Primary Drivers

- The primary drivers of a \$9.6M increase in the RS1 Revenue Requirement from 2027 to 2028 are as follows:
 - \$9.3M increase in Salaries & Benefits driven primarily by a 4.0% annual merit compensation, 1.0% equity and 0.5% promotion adjustments, the addition of 7 incremental FTEs and a 5% increase in health insurance costs

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

Questions?