

NYISO 2021 Budget Overview

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*Other than the revisions noted in **RED**, this presentation is unchanged from the materials posted for the September 9 BPWG meeting.*

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Agenda

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NYISO 2021 Budget: Highlights & Summary Information

Timeline for Budget Cycle

- **September 9:** NYISO presents draft of 2021 budget to BPWG
- **September 14:** BOD meeting to review high level draft budget summary
- **September 23:** BPWG Chair to present 2021 draft budget to Management Committee
- **September 23:** BPWG meeting
- **October 7:** BPWG meeting
- **October 19:** BOD meeting to review draft of 2021 budget
- **October 22:** BPWG meeting
- **October 28:** Management Committee to vote on 2021 budget
- **November 17:** BOD approval of final 2021 budget

Key Priorities and Projects for 2021

Grid Reliability and Resilience

- *Deployment of Reserves For Resource Flexibility*
- *Deployment of Large Scale Solar on Dispatch*
- *Issue Discovery - Climate Change & Grid in Transition*
- *Study Grid Services from Renewable Generators*

Efficient Markets for a Grid in Transition

- *Deployment of Ancillary Services Shortage Pricing*
- *Filing the BSM Renewables Exemption Study with FERC*
- *Deployment of the FERC approved curves from the Demand Curve Reset*
- *Deployment of Expanding Capacity Eligibility*
- *Deployment of Tailored Availability Metric*
- *Study Reserve Enhancements for Constrained Areas*
- *Market Design Concepts for Time Differentiated TCCs*
- *Market Design Concepts for Expanding Peak Hour Forecasts*

Key Priorities and Projects for 2021 (Cont.)

New Resource Integration

- *Distributed Energy Resources Participation Model*
- *Deployment of Hybrid Co-Located Model*
- *Market Design for Hybrid Aggregation Model*

Integration of Public Policy

- *Market Design for Comprehensive Mitigation Review*
- *Software Design Specifications for Carbon Pricing*
- *Market Design Concepts for CRIS Expiration Evaluation*
- *Deployment of NextEra Transmission Owner Integration*

Key Priorities and Projects for 2021 (Cont.)

Technology and Infrastructure Investment

- *Deployment of Windows System Upgrade*
- *Deployment of Database Upgrades & Platform Migrations*
- *Deployment of EMS/BMS Operational Enhancements*
- *Deployment of Enterprise Information Management – Customer Settlements Database*
- *Deployment of the Network Infrastructure Upgrade*
- *Development of Transmission & Generation Scheduling System*

Key Priorities and Projects for 2021 (Cont.)

Physical and Cyber Security

- *2021 NERC CIP Audit*
- *Threat and Vulnerability Management*
- *Supply Chain Security*
- *Information Sharing and Awareness*
- *Information Protection*
- *Security Operations Management*
- *Physical Security Management*
- *Resource and Talent Development*

Budget Highlights

In Summary:

- NYISO's draft 2021 budget totals **\$167.4M**, allocated across a forecast of **147.3** million MWh, for a Rate Schedule 1 charge/MWh of **\$1.137**. Comparatively, the 2020 budget was **\$168.0M**, allocated across **154.3** million MWh for a Rate Schedule 1 charge/MWh of **\$1.089**
- 2021 represents the second consecutive year the NYISO has proposed a decrease to the budgeted revenue requirement

Driver of 2021 Rate Schedule 1 Increase – Reduced MWh volumes:

- The reason for an increase in Rate Schedule 1 from 2020 to 2021 is the 7 million MWh (**4.7%**) decrease in forecasted MWh volume for 2021 from **154.3** million to **147.3** million

Budget Highlights: Historical Budget Comparisons

(in millions, excluding RS1/MWh charges)	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Draft	2021 vs. 2020
RS1 Rev. Requirement (in \$\$)	\$148.2	\$155.7	\$168.2	\$168.0	\$167.4	(\$0.6)
Budgeted MWh	<u>158.3</u>	<u>157.8</u>	<u>157.1</u>	<u>154.3</u>	<u>147.3</u>	(7.0)
RS1 Rev. Requirement (\$/MWh)	\$0.94	\$0.99	\$1.07	1.089	1.137	0.048
RS1 Charge/MWh – Gross (before rebates from non-physical transactions):						
RS1 Charge/MWh: Purchasers @ 72%	\$0.67	\$0.71	\$0.77	\$0.78	\$0.82	
RS1 Charge/MWh: Sellers @ 28%	\$0.26	\$0.28	\$0.30	\$0.31	\$0.32	
RS1 Charge/MWh – Net (after estimated rebates from non-physical transactions):						
RS1 Charge/MWh: Purchasers @~ 68%	\$0.64	\$0.67	\$0.73	\$0.74	\$0.77	
RS1 Charge/MWh: Sellers @~26%	\$0.24	\$0.26	\$0.28	\$0.28	\$0.30	
RS1 Charge/MWh: Non-physical transactions @~6%	\$0.06	\$0.06	\$0.06	\$0.07	\$0.07	

Budget Highlights - Summary of Revenue Requirement Changes

2021 Rate Schedule 1 Revenue Requirement	\$	167.4	
2020 Rate Schedule 1 Revenue Requirement	\$	168.0	
Decrease in Rate Schedule 1 Revenue Requirement			\$ (0.6)
Spending Reductions/Containment & Revenue Increases:			
Professional Fees (Consultants)			(4.6)
Capital			(2.1)
Miscellaneous Revenue (Planning Studies & Interest Income)			(1.2)
Other Expenses (BOD, Travel & Training)			(0.9)
Debt Service Proceeds			(0.8)
Building Services			(0.2)
Interest Expense on Current Year Debt Proceeds			(0.1)
Telecommunications			-
External Legal Fees			-
			<u>\$ (9.9)</u>
Budget Increases			
Debt Service Costs			6.4
Computer Services			1.7
Salaries and Benefits			0.9
Corporate Insurance			0.3
			<u>\$ 9.3</u>

Budget Highlights

2020 to 2021 Comparison:

- NYISO's proposed Rate Schedule 1 revenue requirement is a decrease of \$0.6M from 2020 to 2021
- In the 2021 draft budget, every line item, except Computer Services cost (in support of Projects) and Corporate Insurance, reflects a decrease in spending from the 2021 projections made during the 2020 budget cycle
- Many of NYISO's budget line items are reflecting decreases or no increase in spending from 2020 to 2021. The line items reflecting increases impacting NYISO's 2021 budget are primarily based on economic/external factors or are based on previous input from Market Participants, as detailed on the following slide.

Budget Highlights

2020 to 2021 Comparison – Budget Line Item Increases:

- **Debt Service Cost - \$6.4M:** Rather than make early repayments on outstanding debt, after consultation with Market Participants, NYISO utilized funds remaining from the 2019 budget cycle, totaling \$6.4M, to offset a significant shortfall in RS1 revenues due to the impact of COVID-19 on NYISO energy demand
- **Computer Services - \$1.7M:** Primarily driven by the 2021 proposed project portfolio. NYISO baseline infrastructure costs have been held flat to 2020 levels
- **Salaries & Benefits - \$0.9M:** Primarily driven by NYISO pension plan funding requirement
- **Board of Directors Fees - \$0.4M:** Alignment of the 2021 budget with 2020 actual experience
- **Corporate Insurance - \$0.3M:** Driven by insurance industry trends, which has increased renewal premium costs. This budget had been held flat for four years since 2017 at \$2.8M

Budget Highlights

Economic Climate:

- NYISO recognizes that the current economic conditions present various challenges to the operations of all Market Participants
- NYISO continues to focus its spending on initiatives and investments that are responsive to Market Participant feedback and that improve the overall infrastructure and operations of the NYISO
- NYISO has been proactively taking many steps to reduce expenses, particularly in light of recent economic conditions brought about by the COVID-19 pandemic
- In preparing the 2021 budget, there were various spending requests deferred to future years or eliminated entirely to minimize the impact on the 2021 Rate Schedule 1. Examples are listed on the following Budget Highlights slides.

Budget Highlights - Spending Reductions

Professional Fees – Decrease of \$4.6M from 2020

The decrease is primarily driven by a reduction in Product Enhancement consultants and System and Resource Planning Consulting, accomplished utilizing a combination of strategies:

- Implementation of reduced cost solutions
 - *Transmission and Generation Scheduling System as a cloud based service (\$1.0M)*
- Refined cost estimates
 - *EMS/BMS Enhancements (\$0.8M)*
 - *System and Resource Planning (\$0.8M)*
- Projects deferred to a future budget year
 - *Various Enterprise projects (\$1.0M)*
 - *ACC Control Renovation Project (\$0.6M)*

Virtually all other consulting costs have been reduced or held flat as compared to 2020 levels.

Refer to slide 33 for additional details

Budget Highlights - Spending Reductions

Capital – Decrease of \$2.1M from 2020:

The following actions have resulted in Capital spending reductions in 2021:

Planned initiatives deferred to a future budget year:

- ACC Control Room Renovations - \$5.0M
- Cooling Tower Replacement- \$0.4M
- Infrastructure and Operations - \$1.6M
 - Storage expansion for Historical Archive Database
 - Software licenses and servers to provide High-Availability Network Performance Monitoring at Carman Rd.
 - Krey Conference Center capacity expansion
- Security – \$0.5M
 - Carman Rd. security fence and motion detection
 - Supply chain risk management system

Budget Highlights - Spending Reductions

Miscellaneous Revenue – Increase of \$1.2M from 2020

Miscellaneous revenue resulting from interconnection and transmission project study work is projected to increase in 2021 by \$1.6M, primarily due to anticipated increases in billable internal labor hours.

Miscellaneous revenue from interest income is projected to decrease in 2021 by \$0.4M, primarily due to the expectation of lower interest earnings on cash deposits resulting from the depressed economic climate.

Increases in Miscellaneous Revenue decreases NYISO's overall revenue requirement.

Budget Highlights - Spending Reductions

Other Expenses (BOD, Travel & Training – Decrease of \$0.9M from 2020

Employee meetings and travel costs are projected to decrease by \$1.3M, due to the assumption that these activities will continue to be limited in 2021 as a result of the COVID-19 pandemic.

Board of Director Fees are being increased by \$0.4M in order to better align the 2021 budget with actual 2020 experience.

Budget Highlights - Spending Reductions

Building Services – Decrease of \$0.2M from 2020

The cost of Building Services is projected to decrease primarily due to reductions in membership dues, corporate printer/copier support and supplies and anticipated negotiated contract reductions on the cost of utilities.

Budget Highlights - Spending Reductions

Interest Expense on 2021 Debt Proceeds – Decrease of \$0.1M from 2020

Interest expense on 2021 budgeted Debt Proceeds is projected to decrease, primarily due to the assumption of continued low interest rates, driven by the depressed economic climate.

Budget Highlights - Cost Containment

Telecommunications – No Increase from 2020

The 2021 Telecommunications budget is being held flat to 2020 as a result of anticipated contract renewal negotiations.

Since 2015, the Telecommunications budget has decreased by 26% (\$3.8M in 2015 vs. \$2.8M in 2021).

Budget Highlights - Cost Containment

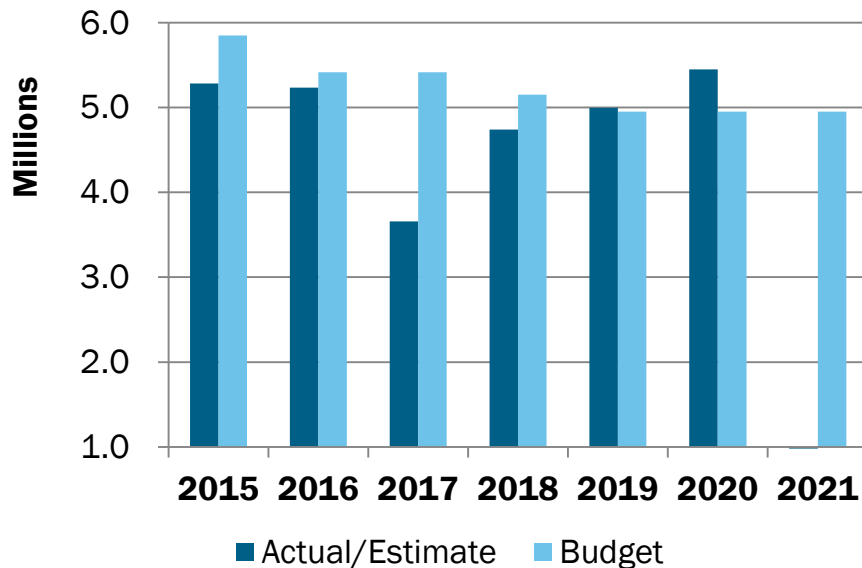
External Legal Fees – No increase from 2020

NYISO continues to implement measures and develop internal staff to enable reduced reliance on outside counsel as much as possible. While the use of outside counsel may vary due to increases in litigation and legal support required for new initiatives, NYISO is proposing to hold the 2021 budget flat to 2020.

The following chart provides historical trends from 2015 to 2021.

2020 includes \$0.5M of COVID - 19 related fees

Historical External Legal Fee Comparison



Budget Highlights - Cost Avoidance

Debt Service Proceeds – Increase of \$0.8M from 2020

This five year (2019-2023) Budget Facility is dedicated to funding capital investments, software development projects and other strategic initiatives. This Capital funding mechanism avoids potential budget increases driven by expanding project and infrastructure requirements.

2021 Debt Service Proceeds have been increased to \$28.4M in support of the proposed project portfolio and infrastructure capital investments.

Budget Highlights - Cost Avoidance

Computer Services – Increase of \$1.7M from 2020:

The following actions have mitigated or avoided additional cost increases in 2021:

- Hardware maintenance reductions associated with replacement equipment under warranty - \$0.5M
- Hardware maintenance reductions resulting from support contract consolidation - \$0.2M
- Negotiated savings from longer term support contract commitments - \$0.1M

Budget Highlights - Cost Avoidance

Salaries & Benefits – Increase of \$0.9M from 2020:

The following actions have mitigated or avoided additional cost increases in 2021:

- Total authorized positions for 2021 are being held flat to 2020 levels. 2021 represents the second consecutive year with no headcount additions. Any new position requirements will be sourced from existing vacancies or from re-allocation of existing staff resources.
- No proposed merit increase for employee compensation
- NYISO's 2020 budgeted vacancy rate is 6% (36 open positions), however, the 2020 average actual vacancy rate is approximately 5.0% through August 2020. In 2021, NYISO is proposing to hold the budgeted vacancy rate at 6%. By not reducing the budgeted vacancy rate in line with actual experience, NYISO will avoid an increase to the Salary & Benefit budget of approximately \$1.0M.
- The NYISO has implemented a temporary hold on external hiring to assist in bringing the actual vacancy rate in line with the 2021 budget assumption of 6%

2021 Budget Overview

	2021 Draft Budget		
(\$ in millions, except RS#1/MWh)	Enterprise	Projects	Total
Capital	\$1.4	\$3.5	\$4.9
Salaries & Benefits	84.6	11.5	96.1
Professional Fees (including Legal)	17.1	9.0	26.1
Building Services	6.4	-	6.4
Computer Services	18.7	2.4	21.1
Insurance	3.2	-	3.2
Telecommunications	2.8	-	2.8
Other Expenses (BOD, Travel/Training, NPCC Fees)	3.0	-	3.0
Subtotal: Current Year Needs	\$137.2	\$26.4	\$163.6
Debt Service	38.3	-	38.3
Subtotal: Cash Budget	\$175.5	\$26.4	\$201.9
Less: Miscellaneous Revenues	(6.4)	-	(6.4)
Less: Proceeds from Current Year Budget Debt	(1.4)	(27.0)	(28.4)
Add: Interest on Current Year Budget Debt	0.0	0.3	0.3
Total: Rate Schedule #1 Revenue Requirement in \$\$	\$167.7	\$(0.3)	\$167.4
Budgeted MWh (in millions)			147.3
Rate Schedule #1 Revenue Requirement in \$/MWh (budget)			\$1.137

2020 Budget Overview

(\$ in millions, except RS#1/MWh)	2020 Budget		
	Enterprise	Projects	Total
Capital	\$2.6	\$4.4	\$7.0
Salaries & Benefits	82.0	13.2	95.2
Professional Fees (including Legal)	18.0	12.7	30.7
Building Services	6.6	-	6.6
Computer Services	18.7	0.7	19.4
Insurance	2.9	-	2.9
Telecommunications	2.8	-	2.8
Other Expenses (BOD, Travel/Training, NPCC Fees)	<u>3.9</u>	-	<u>3.9</u>
Subtotal: Current Year Needs	\$137.5	\$31.0	\$168.5
Debt Service	31.9	-	31.9
Subtotal: Cash Budget	\$169.4	\$31.0	\$200.4
Less: Miscellaneous Revenues	(5.2)	-	(5.2)
Less: Proceeds from Current Year Budget Debt	(2.6)	(25.0)	(27.6)
Add: Interest on Current Year Budget Debt	<u>0.1</u>	<u>0.3</u>	<u>0.4</u>
Total: Rate Schedule #1 Revenue Requirement in \$\$	\$161.7	\$6.3	\$168.0
Budgeted MWh (in millions)			154.3
Rate Schedule #1 Revenue Requirement in \$/MWh (budget)			\$1.089

NYISO 2021 Budget: Detailed Line Item Information

Line Item Details - Capital

(\$ in millions)	2021 Draft	2020 Budget	\$ Change
Facility Improvements	\$0.2	\$0.8	(\$0.6)
Replacement of Existing Hardware	4.2	4.9	(0.7)
Software & Software Licenses (capitalized)	<u>0.5</u>	<u>1.3</u>	<u>(0.8)</u>
Total Capital Costs	\$4.9	\$7.0	(\$2.1)

Facility Improvements:

Facility improvements included within the 2021 budget include \$0.1M to replace air handling units and upgrade the building management system and \$0.1M to update the cafeteria serving line (in response to COVID-19).

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 2021 budget includes \$4.2M of new hardware required for proposed projects including \$2.7M for the Network Infrastructure Upgrade, \$0.3M for the GUROBI upgrade, \$0.3M for the Linux and Storage Infrastructure Refresh, \$0.3M for QRadar hardware, \$0.3M for audio/visual replacements in the Operations Center and \$0.2M for Chart Recorder replacement.

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. The 2021 budget includes \$0.1M of new software required for proposed projects, \$0.2M for infrastructure upgrades, \$0.1M for monitoring software and \$0.1M of new software required for storage expansion.

Line Item Details - Salaries & Benefits

(\$ in millions)	2021 Draft	2020 Budget	\$ Change
Base Salaries	\$66.2	\$66.1	\$0.1
Benefit Programs / At-Risk Compensation	24.8	24.0	0.8
Payroll Taxes	<u>5.1</u>	<u>5.1</u>	<u>0.0</u>
Total Salaries & Benefits	\$96.1	\$95.2	\$0.9

The ~0.9% increase in Salaries & Benefits is primarily driven by:

- \$0.8M - NYISO pension plan 2021 estimated funding requirement
- \$0.1M – 0.5% for Promotion Adjustments and 0.5% for Compensation Equity Adjustments

See additional details on Salaries & Benefits on the following slides

Line Item Details - Salaries & Benefits (cont.)

Headcount Summary		
Total Authorized FTE Positions for 2020	594	
Add: New Positions for 2021	0	There is no incremental headcount proposed for 2021.
Total Authorized FTE Positions for 2021	594	
Less: Assumed Vacancies	36	Based on assumed vacancy rate of 6%
Equals: Total Budgeted FTE Positions	558	

Headcount Summary By Year			
	2021	2020	Change
Total Authorized FTE Positions	594	594	-
Less: Assumed Vacancies	(36)	(36)	-
Total Budgeted FTE Positions	558	558	-

Line Item Details - Salaries & Benefits (Cont.)

Promotion & Equity Adjustments:

NYISO's 2021 draft budget includes no merit increase to employee compensation.

A Promotion Adjustment budget of 0.5% and a Compensation Equity Adjustment budget of 0.5% is proposed based upon factors that include:

- 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
- The imperative that the NYISO continue to offer competitive salaries in order to retain talent by addressing inequities between actual compensation and market compensation levels for certain positions

Line Item Details - Professional Fees

(\$ in millions)	2021 Draft	2020 Budget	\$ Change
Product Enhancement consultants (<i>several vendors</i>)	\$9.0	\$12.7	(\$3.7)
External legal fees	\$5.0	\$5.0	-
Market Monitoring	\$4.7	\$4.7	-
Misc. Professional Fees (all individually < \$250K)	\$1.5	\$1.4	\$0.1
Security guards	\$1.7	\$1.7	-
Reliability & Economic Planning	\$0.5	\$1.2	(\$0.7)
Information Technology & Facilities	\$0.3	\$0.6	(\$0.3)
Market design & related consulting	\$0.5	\$0.5	-
Ranger support & enhancements	\$1.1	\$1.1	-
Employee Benefits & Recruiting	\$1.1	\$1.1	-
External audits and Internal Audit co-sourcing	<u>\$0.7</u>	<u>\$0.7</u>	-
Total Professional Fees	\$26.1	\$30.7	(\$4.6)
Product Enhancement Consultants: The expected decrease is primarily driven by the current mix of consulting support required by the 2021 proposed projects (See additional details on 2021 proposed product enhancements in a separate presentation posted for the 9/9/2021 BPWG meeting).			
Reliability & Economic Planning: The decrease of \$0.7M is primarily due to the elimination of consulting support budgeted in 2020 to facilitate planning studies.			

Line Item Details - Building Services

(\$ in millions)	2021 Draft	2020 Budget	\$ Change
Building Services	\$6.4	\$6.6	(\$0.2)

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

The cost of Building Services is projected to decrease primarily due to reductions in membership dues, corporate printer/copier support and supplies and anticipated negotiated contract reductions on the cost of utilities.

Line Item Details - Computer Services

(\$ in millions)	2021 Draft	2020 Budget	\$ Change
Computer Services Costs	\$21.1	\$19.4	\$1.7

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 hardware, software, software licenses, and technology upgrades continues to drive increases in this budget category as follows:

- **\$1.6M** – Due to implementation fee associated with cloud based software for the **Transmission and Generation Scheduling System**. *(With the implementation of a cloud based product, there will be future savings with reduced hardware costs.)*
- **\$0.2M** - Due to Amazon Web Services infrastructure/service growth associated with 2021 projects

Line Item Details - Insurance

(\$ in millions)	2021 Draft	2020 Budget	\$ Change
Insurance	\$3.2	\$2.9	\$0.3

Based on the current economic environment, the NYISO is experiencing a 10% increase in policy renewal premiums. This is after 4 consecutive years of a flat budget for insurance premiums (2017 – 2020).

Line Item Details - Telecommunications

(\$ in millions)	2021 Draft	2020 Budget	\$ Change
Telecommunications	\$2.8	\$2.8	-

The 2021 Telecommunications budget is being held flat to 2020 as a result of anticipated contract renewal negotiations.

Since 2015, the Telecommunications budget has decreased by 26% (\$3.8M in 2015 vs. \$2.8M in 2021).

Line Item Details - Other Expenses

(\$ in millions)	2021 Draft	2020 Budget	\$ Change
Travel, Meetings, Training Costs	\$0.7	\$2.0	(\$1.3)
BOD Fees and Expenses	\$2.0	\$1.6	\$0.4
NPCC Fees	<u>\$0.3</u>	<u>\$0.3</u>	<u>\$0.0</u>
Total Other Expenses	\$3.0	\$3.9	(\$0.9)

Employee meeting and travel costs are projected to decrease due to the assumption that travel will continue to be limited in 2021 as a result of the COVID-19 pandemic.

Board of Directors Fees is being increased to align the 2021 budget with 2020 actual experience.

Line Item Details - Debt Service

Annual Principal and Interest Repayments ** (\$ in millions)										
Debt Facility & Repayment Period	Borrowings	2017	2018	2019	2020	2021	2022	2023	2024	2025
2005 KCC Bldg Mortgage & Renov. (20 yrs)	\$24.8M	\$2.10	\$2.10	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$1.60
Infrastructure Master Plan Mortgage (19 yrs)	\$45.0M	\$4.30	\$4.20	\$4.10	\$3.90	\$3.80	\$3.70	\$3.60	\$3.50	\$3.40
2014 Budget Loan (3 yrs)	\$25.0M	\$0.60	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015 Budget Loan (3 yrs)	\$25.0M	\$15.90	\$1.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016 Budget Loan (3 yrs)	\$25.0M	\$8.90	\$12.90	\$4.20	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017 Budget Loan (3 yrs)	\$24.7M	\$0.40	\$9.00	\$16.90	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018 Budget Loan (3 yrs)	\$25.3M	\$ -	\$0.30	\$9.00	\$8.80	\$8.50	\$ -	\$ -	\$ -	\$ -
2016-2019 EMS/BMS System Upgrade	\$30.0M	\$2.40	\$6.10	\$11.60	\$5.60	\$4.50	\$1.20	\$ -	\$ -	\$ -
2019 Budget Loan (3 yrs)	\$26.0M	\$ -	\$ -	\$0.30	\$9.40	\$9.10	\$8.80	\$ -	\$ -	\$ -
2020 Budget Loan (3 yrs)	\$27.6M Est.	\$ -	\$ -	\$ -	\$0.40	\$9.90	\$9.70	\$9.40	\$ -	\$ -
2021 Budget Loan (3 yrs)	\$28.4M Est.	\$ -	\$ -	\$ -	\$ -	\$0.30	\$10.20	\$9.90	\$9.50	\$0.00
2022 Budget Loan (3 yrs)	\$30.0M Est.	\$ -	\$ -	\$ -	\$ -	\$ -	\$0.40	\$10.80	\$10.50	\$10.20
2023 Budget Loan (3 yrs)	\$28.0M Est.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0.40	\$10.10	\$9.80
2024 Budget Loan (3 yrs)	\$30.0M Est.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0.50	\$10.90
2025 Budget Loan (3 yrs)	\$30.0M Est.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0.50
Bank Fees	n/a	\$0.40	\$0.40	\$0.70	\$0.70	\$0.50	\$0.60	\$0.60	\$0.60	\$0.60
Total Debt Service Payments		\$35.00	\$36.00	\$48.80	\$30.80	\$38.60	\$36.60	\$36.70	**	**

Approximately \$27M - \$30M is expected to be borrowed on average each year during 2020 – 2023, representing the annual cost of implementing Projects, technology enhancements, and facility improvements. **Totals are not shown in 2024 and 2025 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	2017	2018	2019	2020	2021	2022	2023	2024	2025
2005 KCC Bldg Mortgage & Renov.	\$13.20	\$11.90	\$10.60	\$9.20	\$7.60	\$6.00	\$4.30	\$2.50	\$0.90
Infrastructure Master Plan Mortgage	\$35.90	\$33.30	\$30.70	\$28.00	\$25.40	\$22.70	\$20.00	\$17.40	\$14.80
2015 Budget Loan	\$1.00	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2016 Budget Loan	\$16.70	\$4.20	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2017 Budget Loan	\$24.70	\$16.50	\$-	\$-	\$-	\$-	\$-	\$-	\$-
2018 Budget Loan	\$-	\$25.30	\$16.90	\$8.40	\$-	\$-	\$-	\$-	\$-
2016-2019 EMS/BMS System Upgrade	\$14.60	\$18.60	\$10.90	\$5.60	\$1.20	\$-	\$-	\$-	\$-
2019 Budget Loan	\$-	\$-	\$26.00	\$17.30	\$8.70	\$-	\$-	\$-	\$-
2020 Budget Loan	\$-	\$-	\$-	\$27.60	\$18.40	\$9.20	\$-	\$-	\$-
2021 Budget Loan	\$-	\$-	\$-	\$-	\$28.40	\$18.90	\$9.50	\$-	\$-
2022 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$30.00	\$20.00	\$10.00	\$-
2023 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$-	\$28.00	\$18.70	\$9.30
2024 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$30.00	\$20.00
2025 Budget Loan	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$30.00
Total Principal Outstanding	\$106.10	\$109.80	\$95.10	\$96.10	\$89.70	\$86.80	\$81.80	**	**
<i>** Totals are not shown in 2024 and 2025 as the principal balance outstanding on the 2024 and 2025 Budget Loans are not known at this time.</i>									

Line Item Details - Misc. Revenue

(\$ in millions)	2021 Draft	2020 Budget	\$ Change
Total Miscellaneous Revenues	(\$6.4)	(\$5.2)	(\$1.2)

Miscellaneous revenue resulting from Interconnection and transmission project study work is projected to increase in 2021 by \$1.6M, primarily due to an anticipated increase in billable internal labor hours.

Miscellaneous revenue from interest income is projected to decrease in 2021 by \$0.4M, primarily due to the expectation of lower interest earnings on cash deposits resulting from the depressed economic environment.

2022 - 2025 Draft Budget: Projections

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Rate Schedule 1 Summary

(\$ in millions, except RS#1/MWh)	Budget Drafts				
	2021 Draft	2022 Projection	2023 Projection	2024 Projection	2025 Projection
Total: Rate Schedule #1 Revenue Requirement (in \$\$)	\$167.4	\$175.4	\$181.0	\$187.1	\$192.7
Budgeted MWh (in millions)	147.3	149.0	147.7	147.0	146.1
Rate Schedule #1 Revenue Requirement in (\$/MWh)	\$1.137	\$1.177	\$1.226	\$1.273	\$1.319

The 2022-2025 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)	2021 Draft	2022 Projection	2023 Projection	2024 Projection	2025 Projection
Capital	\$4.9	\$8.0	\$5.9	\$8.0	\$7.9
Salaries & Benefits	96.1	99.6	103.9	108.6	113.4
Professional Fees (including Legal)	26.1	28.2	28.0	28.2	28.4
Building Services	6.4	6.8	7.0	7.1	7.2
Computer Services	21.1	19.9	21.0	21.5	21.8
Insurance	3.2	3.4	3.5	3.7	3.9
Telecommunications	2.8	2.8	2.9	2.9	3.0
Other Expenses (BOD, Travel/Training, NPCC Fees)	<u>3.0</u>	<u>4.8</u>	<u>4.8</u>	<u>4.9</u>	<u>4.8</u>
Subtotal: Current Year Needs	\$163.6	\$173.5	\$177.0	\$184.9	\$190.4
Debt Service	<u>38.3</u>	<u>36.2</u>	<u>36.3</u>	<u>36.4</u>	<u>36.5</u>
Subtotal: Cash Budget	\$201.9	\$209.7	\$213.3	\$221.3	\$226.9
Less: Miscellaneous Revenues	(6.4)	(4.7)	(4.7)	(4.7)	(4.7)
Less: Proceeds from Current Year Budget Debt	(28.4)	(30.0)	(28.0)	(30.0)	(30.0)
Add: Interest on Current Year Budget Debt	<u>0.3</u>	<u>0.4</u>	<u>0.4</u>	<u>0.5</u>	<u>0.5</u>
Total: Rate Schedule #1 Revenue Requirement in \$\$	\$167.4	\$175.4	\$181.0	\$187.1	\$192.7
Budgeted MWh (in millions)	147.3	149.0	147.7	147.0	146.1
Rate Schedule #1 Revenue Requirement in \$/MWh (budget)	\$1.137	\$1.177	\$1.226	\$1.273	\$1.319

Major Assumptions

Cost Category	Major Assumptions for 2021 and 2022 - 2025
Capital	<ul style="list-style-type: none"> Purchases of Hardware and Software are estimated as follows: 2021 = \$4.7M 2022 = \$6.4M 2023 = \$1.6M 2024 = \$5.0M 2025 = \$4.6M Facility Improvements are estimated as follows: 2021 = \$0.2M 2022 = \$1.6M 2023 = \$4.3M 2024 = \$3.0M 2025 = \$3.3M
Salaries & Benefits	<ul style="list-style-type: none"> Total budgeted headcount is as follows: 594 FTEs for 2021, 600 FTEs for 2022, 606 FTEs for 2023, 613 FTEs for 2024, and 620 for 2025 Estimated vacancy factor is 6% in 2021 – 2025 Promotion adjustment increase of 0.5% and equity adjustment increase of 0.5% in 2021 Average annual salary increase of 3% and annual promotion adjustment increase of 0.5% in 2022 - 2025 Assumes \$0.8M pension plan funding in 2021 - 2025 and a 5% annual increase in health insurance cost in 2022 - 2025
Professional Fees (including Legal)	<ul style="list-style-type: none"> Assumes annual increases in consulting support ranging from \$26.1M in 2021 to \$28.4M in 2025 Assumes no increase in external legal fees in 2021 Assumes \$0.1M increase in external legal fees in 2022 and no increase from 2023 – 2025
Building Services	<ul style="list-style-type: none"> Assumes a decrease of \$0.2M in 2021 and assumes minor annual cost increases with budgets ranging from \$6.8M in 2022 to \$7.2M in 2025
Computer Services	<ul style="list-style-type: none"> Assumes an increase of \$1.7M in 2021 primarily due to implementation fees associated with cloud based software for the Transmission and Generation Scheduling System and Amazon Web Services infrastructure/service growth associated with 2021 projects Assumes a decrease in 2022 of \$1.2M primarily due to elimination of Transmission & Generation Scheduling System implementation costs Assumes an increase in 2023 of \$1.1M primarily due to new security software agreements and anticipated maintenance cost increases
Insurance	<ul style="list-style-type: none"> Assumes 10% increase in 2021 and assumes 5% annual cost increases with budgets ranging from \$3.4M in 2022 to \$3.9M in 2025
Telecommunications	<ul style="list-style-type: none"> Assumes no increase in 2021 and assumes minor annual cost increases with budgets ranging from \$2.8M in 2022 to \$3.0M in 2025
Other Expenses	<ul style="list-style-type: none"> Assumes a decrease of \$0.9M in 2021 primarily driven by the assumption of limited travel due to COVID-19. 2022 assumes a resumption of travel and assumes a relatively flat budget from 2022 – 2025 of \$4.8M
Debt Service	<ul style="list-style-type: none"> Annual borrowings (with 3-year repayment terms) to fund capital and product enhancements are anticipated to be \$28.4M for 2021, \$30.0M for 2022, \$28.0M for 2023, \$30.0M for 2024 and \$30.0M for 2025 (Assumes replacement Budget Facility effective January 1, 2024) Interest rates for most borrowings expected to be between 2.0% – 6.0% No reductions for “early payments” on debt from potential savings on annual budget or RS1 overcollections have been included

2022 Budget Summary

■ In Summary

- NYISO’s draft 2022 advisory budget totals \$175.4M, allocated across a forecast of 149.0 million MWh, for a Rate Schedule 1 charge/MWh of \$1.177. Comparatively, the draft 2021 budget totals \$167.4M, allocated across a forecast of 147.3 million MWh, for a Rate Schedule 1 charge/MWh of \$1.137
- NYISO’s draft 2022 advisory budget represents a 4.8% increase in Revenue Requirement from the 2021 draft budget and a 1.2% increase in projected MWh for an overall Rate Schedule 1 increase of 3.6%

■ Primary Drivers

- The primary drivers of a \$8.0M increase in the RS1 Revenue Requirement from 2021 to 2022 are as follows:
 - \$3.5M increase in Salaries & Benefits driven primarily by 3.5% annual merit compensation and promotion adjustments, the addition of 6 incremental FTEs and a 5% increase in health insurance costs
 - \$1.8 increase in Travel, Training and Meetings due to resumption of business travel and meetings in 2022
 - \$1.7M decrease in Miscellaneous Revenue primarily due to completion of 2021 Interconnection Project study work
 - \$1.5M increase in net Capital not funded by budgeted Debt Proceeds
 - \$2.1M increase in Professional Fees primarily due to security, recruitment, market monitoring & planning consulting
 - (\$2.1M) decrease in Debt Service primarily due to reduced payments on lower prior year debt funding
 - (\$1.2M) decrease in computer services primarily due to elimination of Transmission & Generation Scheduling System implementation costs

2023 Budget Summary

■ In Summary

- NYISO’s draft 2023 advisory budget totals \$181.0M, allocated across a forecast of 147.7 million MWh, for a Rate Schedule 1 charge/MWh of \$1.226. Comparatively, the draft 2022 advisory budget totals \$175.4M, allocated across a forecast of 149.0 million MWh, for a Rate Schedule 1 charge/MWh of \$1.177
- NYISO’s draft 2023 advisory budget represents a 3.2% increase in Revenue Requirement from the 2022 draft advisory budget and a 0.9% decrease in projected MWh for an overall Rate Schedule 1 increase of 4.1%

■ Primary Drivers

- The primary drivers of a \$5.6M increase in the RS1 Revenue Requirement from 2022 to 2023 are as follows:
 - \$4.3M increase in Salaries & Benefits driven primarily by 3.5% annual merit compensation and promotion adjustments, the addition of 6 incremental FTEs and a 5% increase in health insurance costs
 - \$1.1M increase in Computer Services primarily due to continued transition to cloud based computing solutions, new software agreements and anticipated maintenance cost increases

2024 Budget Summary

■ In Summary

- NYISO’s draft 2024 advisory budget totals \$187.1M, allocated across a forecast of 147.0 million MWh, for a Rate Schedule 1 charge/MWh of \$1.273. Comparatively, the draft 2023 advisory budget totals \$181.0M, allocated across a forecast of 147.7 million MWh, for a Rate Schedule 1 charge/MWh of \$1.226
- NYISO’s draft 2024 advisory budget represents a 3.4% increase in Revenue Requirement from the 2023 draft advisory budget and a 0.5% decrease in projected MWh for an overall Rate Schedule 1 increase of 3.9%

■ Primary Drivers

- The primary drivers of a \$6.1M increase in the RS1 revenue requirement from 2023 to 2024 are as follows:
 - \$4.7M increase in Salaries & Benefits driven primarily by 3.5% annual merit compensation and promotion adjustments, the addition of 7 incremental FTEs and a 5% increase in health insurance costs
 - \$0.5M increase in Computer Services primarily due to continued transition to cloud based computing solutions, new software agreements and anticipated maintenance cost increases

2025 Budget Summary

■ In Summary

- NYISO’s draft 2025 advisory budget totals \$192.7M, allocated across a forecast of 146.1 million MWh, for a Rate Schedule 1 charge/MWh of \$1.319. Comparatively, the 2024 draft budget totals \$187.1M, allocated across a forecast of 147.0 million MWh, for a Rate Schedule 1 charge/MWh of \$1.273
- NYISO’s draft 2025 advisory budget represents a 3.1% increase in Revenue Requirement from the 2024 draft budget and a 0.6% decrease in projected MWh for an overall Rate Schedule 1 increase of 3.7%

■ Primary Drivers

- The primary drivers of a \$5.6M increase in the RS1 Revenue Requirement from 2024 to 2025 are as follows:
 - \$4.8M increase in Salaries & Benefits driven primarily by a 3.5% annual merit compensation and promotion adjustments, the addition of 6 incremental FTEs, 5% increase in health insurance costs
 - \$0.3M increase in Computer Services primarily due to continued transition to cloud based computing solutions, new software agreements and anticipated maintenance cost increases

APPENDIX

PEER COMPARISON

(\$ in millions)					
	Revenue Requirement *			Other Information *	
ISO/RTO	2021 Revenue Req. (In \$)	Estimated 2021 MWh throughput (In millions of MWh)	2021 revenue req. (In \$/MWh)	Debt outstanding at 12/31/21	Authorized FTEs at 12/31/21
MISO	Not Yet Available				
PJM	\$305.0M	802.0	\$0.380	\$10.8M	755
ERCOT	\$229.3M	413.1	\$0.555	\$43.0M	771
CAISO	Not Yet Available				
ISO-NE	\$205.1M	147.4	\$1.390	\$93.1M	583.5
IESO	\$137.0M	159.9	\$0.086	\$95.0M	784
NYISO	\$167.4M	147.3	\$1.137	\$89.7M	594
*All amounts are DRAFT, and may be subject to change as each ISO/RTO completes its 2021 budget approval process					

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



Questions?