

FINAL AGENDA

1. To approve the draft minutes of the July 21, 2021 morning meeting and the August 5, 2021 meeting of the Participants Committee. The draft preliminary minutes of those meetings, marked to show changes from the draft circulated with the initial notice, are included with this supplemental notice and posted with the meeting materials.
2. To adopt and approve the actions recommended by the Technical Committees set forth on the Consent Agenda included with this supplemental notice and posted with the meeting materials.
3. To receive an ISO Chief Executive Officer report. The September CEO report will be circulated and posted in advance of the meeting.
4. To receive an ISO Chief Operating Officer report. The September COO report will be circulated and posted in advance of the meeting.
5. To receive a report on the following proposed budgets:
 - a. 2022 ISO-NE Operating and Capital Budgets; and
 - b. 2022 NESCOE Budget.

Background materials are included with this supplemental notice and posted with the meeting materials.

6. To consider and take action, as appropriate, on a request by Stored Solar J&WE, LLC for a waiver of the relevant provisions of the GIS Operating Rules and the GIS Agreement between NEPOOL and APX to allow for an adjustment to information on active Stored Solar Certificates. Background materials and draft resolutions are included with this supplemental notice and posted with the meeting materials.
7. To receive a report on current contested matters before the FERC and the Federal Courts. The litigation report will be circulated and posted in advance of the meeting.
8. To receive reports from Committees, Subcommittees and other working groups:
 - Markets Committee
 - Reliability Committee
 - Transmission Committee
 - Budget & Finance Subcommittee
 - Membership Subcommittee
 - Others
9. Administrative matters.
10. To transact such other business as may properly come before the meeting.

PRELIMINARY

Pursuant to notice duly given, a special meeting of the NEPOOL Participants Committee was held via teleconference on Wednesday morning, July 21, 2021, beginning at 10:00 a.m., for the sole purpose of acting on the recommendation of the Joint Nominating Committee (JNC) for a four-person slate to be elected to the ISO Board in 2021. A quorum determined in accordance with the Second Restated NEPOOL Agreement was present and acting throughout the meeting. Attachment 1 identifies the members, alternates and temporary alternates who participated in the special meeting.

Mr. David Cavanaugh, Chair, presided and Mr. David Doot, Secretary, recorded.

CONFIDENTIAL VOTE ON SLATE OF CANDIDATES FOR ISO BOARD

Mr. David Cavanaugh referred to and summarized the public materials that had been circulated and posted in advance of the meeting and provided an overview of the confidential materials that had also been circulated. He thanked members for their input throughout the process followed by the JNC's unanimous recommendation of a slate for Participants Committee consideration. He reminded the Committee that the identities of the candidates on the proposed slate must remain confidential until the ISO Board takes its final vote on the slate on September 23. Acknowledging that some non-members had been invited to assist in presenting the slate, he identified the following people who had joined the meeting: Phil Shapiro, who had chaired the JNC; Matt Nelson, Chair of the Massachusetts Department of Public Utilities, who had been designated by the States to be their JNC representative that year; ISO General Counsel Maria Gulluni, who had co-authored the memorandum from counsel describing the legal processes that could be followed to act on a four-person slate; and Meredith Hatfield, the Executive Director of the New England Conference of Public Utility Commissioners (NECPUC). Mr. Cavanaugh then

proposed that the Committee discuss the recommended slate entirely in executive session, and that proposal was accepted without objection.

EXECUTIVE SESSION

Mr. Cavanaugh recognized Phil Shapiro who referred to his confidential memo to the Committee and commented on the JNC process and the proposed slate. He thanked the JNC members, who had all been identified in his memo, for their participation in the process and identified each of the candidates on the slate and the expertise each would bring to the ~~board~~Board. He explained the reasons the JNC decided to propose a four-person slate given the exceptional quality of the candidates and the large turnover in ~~board~~Board membership over the next several years, both of which made the effort of choosing just three new candidates extraordinarily challenging for the JNC. He noted with appreciation the active support from NPC members for the JNC process through their candidate referrals, noting that 3 of the 23 potential candidates identified in the process, 19 were referred by members.

Mr. Cavanaugh then recognized Chairman Nelson, who thanked members for the opportunity to participate in the nomination process and expressed his appreciation for the collaborative way the JNC members worked through that process. Chairman Nelson noted his appreciation for the unique and unprecedented circumstances that resulted in a recommended four-person slate, and expressed his view that the slate would contribute to the strength of the Board going forward. He reported that slate had been reviewed confidentially with designated officials from each of the New England States and that he had not received any objections to the JNC proposal.

Mr. Cavanaugh then reminded members of the various presentations made to the Participants Committee throughout the selection process to improve the transparency of ~~the~~

~~nomination~~that process, and expressed his appreciation for the thoughtful and candid input from members throughout the process.

A number of members commended the ~~committee~~JNC and expressed their appreciation and support for the enhancements to the JNC process from the process followed in prior years. Some made clear that they supported the recommendation but only because of the highly unique circumstances that the region faced this year, which had been reviewed previously. On behalf of the ISO, Ms. Gulluni assured members that the ISO also saw the circumstances as highly unique, with the proposal to address the circumstances intentionally tailored to be narrow and limited in duration.

The four non-member guests were thanked for their participation and left the meeting. The Committee then proceeded to discuss the recommended slate and the process for acting on that recommendation. Following that discussion, a motion to endorse the slate as presented was duly made and seconded. The meeting was paused to permit the vote on that motion to be accomplished by secret written ballot, per prior agreement of the Participants Committee. The Secretary confirmed that the motion had been approved by more than the 70% Vote required for NEPOOL endorsement.

The following resolutions were then duly made, voted together without objection, and ~~were~~ unanimously approved:

RESOLVED, that the Participants Committee approves the temporary waivers of relevant parts of the Participants Agreement, as set forth in the Waiver Agreement circulated to this Committee with the July 14 Supplemental Notice and posted with the materials for this meeting, in order to allow the four-person slate of candidates recommended by the JNC as circulated confidentially and presented to the Participants Committee in executive session at this meeting to be seated as board members if endorsed by the Participants Committee and elected by the ISO Board, subject to confirmation of such approval through the balloting process set forth in Section 17.2.3 of the Participant Agreement for amendments to the Agreement.

RESOLVED, that the Balloting Agent (as defined in the Second Restated NEPOOL Agreement) is authorized and directed to circulate ballots for written approval of the Waiver Agreement, to each Participant for execution by its voting member or alternate on this Committee or such Participant's duly authorized officer.

RESOLVED, that the Participants Committee Chair is authorized to execute the Waiver Agreement on behalf of NEPOOL and NEPOOL Counsel is directed and authorized to make any filing(s) as it deems reasonably necessary to implement the Waiver Agreement if approved.

There being no further business, the morning meeting adjourned at 11:20 a.m., with Mr. Cavanaugh reminding ~~the~~ members of the Future Pathways working session that would convene later that day at 1:00 p.m.

Respectfully submitted,

David Doot, Secretary

**PARTICIPANTS COMMITTEE MEMBERS AND ALTERNATES
PARTICIPATING IN THE JULY 21, 2021 AM TELECONFERENCE MEETING**

PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Advanced Energy Economy	Fuels Industry Part.	Caitlin Marquis		
AR Large Renewable Generation (RG) Group Member	AR-RG	Alex Worsley		
AR Small Load Response (LR) Group Member	AR-LR	Brad Swalwell		
AR Small Renewable Generation Group Member	AR-RG	Erik Abend		
Ashburnham Municipal Light Plant	Publicly Owned		Brian Thomson	
AVANGRID: CMP/UI	Transmission	Alan Trotta		
Belmont Municipal Light Department	Publicly Owned		Dave Cavanaugh	
Block Island Utility District	Publicly Owned	Dave Cavanaugh		
Borrego Solar Systems, Inc.	AR-DG	Liz Delaney		
Boylston Municipal Light Department	Publicly Owned		Brian Thomson	
BP Energy Company	Supplier			José Rotger
Braintree Electric Light Department	Publicly Owned			Dave Cavanaugh
Calpine Energy Services, LP	Supplier	Brett Kruse		Bill Fowler
Castleton Commodities Merchant Trading	Supplier			Bob Stein
Chester Municipal Light Department	Publicly Owned		Dave Cavanaugh	
Chicopee Municipal Lighting Plant	Publicly Owned		Brian Thomson	
Clearway Power Marketing LLC	Supplier			Pete Fuller
Concord Municipal Light Plant	Publicly Owned		Dave Cavanaugh	
Connecticut Municipal Electric Energy Coop.	Publicly Owned	Brian Forshaw		
Conservation Law Foundation (CLF)	End User	Phelps Turner		
CPV Towantic, LLC	Generation	Joel Gordon		
Cross-Sound Cable Company (CSC)	Supplier		José Rotger	
Danvers Electric Division	Publicly Owned		Dave Cavanaugh	
DC Energy, LLC	Supplier	Bruce Bleiweis		
DTE Energy Trading, Inc.	Supplier			José Rotger
Dynergy Marketing and Trade, LLC	Supplier	Andy Weinstein		Bill Fowler
Emera Energy Services	Supplier			Bill Fowler
Environmental Defense Fund	End User	Jolette Westbrook		
Eversource Energy	Transmission	James Daly	Dave Burnham	
Exelon Generation Company	Supplier		Bill Fowler	
FirstLight Power Management, LLC	Generation	Tom Kaslow		
Galt Power, Inc.	Supplier	José Rotger		
Generation Group Member	Generation	Dennis Duffy		
Georgetown Municipal Light Department	Publicly Owned		Dave Cavanaugh	
Great River Hydro	AR-RG			Bill Fowler
Groton Electric Light Department	Publicly Owned		Brian Thomson	
Groveland Electric Light Department	Publicly Owned		Dave Cavanaugh	
H.Q. Energy Services (U.S.) Inc.	Supplier	Louis Guibault	Bob Stein	
High Liner Foods (USA) Incorporated	End User		William P. Short III	
Hingham Municipal Lighting Plant	Publicly Owned		Dave Cavanaugh	
Holden Municipal Light Department	Publicly Owned		Brian Thomson	
Holyoke Gas & Electric Department	Publicly Owned		Brian Thomson	
Hull Municipal Lighting Plant	Publicly Owned		Brian Thomson	
Industrial Energy Consumer Group (IECG)	End User	Alan Topalian		
Ipswich Municipal Light Department	Publicly Owned		Brian Thomson	
Jericho Power LLC (Jericho)	AR-RG	Mark Spencer	Nancy Chafetz	
Littleton (MA) Electric Light and Water Department	Publicly Owned		Dave Cavanaugh	
Long Island Power Authority (LIPA)	Supplier		Bill Killgoar	
Maine Power LLC	Supplier	Jeff Jones		

**PARTICIPANTS COMMITTEE MEMBERS AND ALTERNATES
PARTICIPATING IN THE JULY 21, 2021 AM TELECONFERENCE MEETING**

PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Maine Public Advocate's Office	End User	Andrew Landry		Erin Camp
Maine Skiing, Inc.	End User	Alan Topalian		
Mansfield Municipal Electric Department	Publicly Owned		Brian Thomson	
Maple Energy LLC	AR-LR			Doug Hurley
Marblehead Municipal Light Department	Publicly Owned		Brian Thomson	
Mass. Attorney General's Office (MA AG)	End User	Christina Belew	Ben Griffiths	
Mass. Bay Transportation Authority	Publicly Owned		Dave Cavanaugh	
Mass. Municipal Wholesale Electric Company	Publicly Owned	Brian Thomson		
Mercuria Energy America, Inc.	Supplier			José Rotger
Merrimac Municipal Light Department	Publicly Owned		Dave Cavanaugh	
Michael Kuser	End User		Jason York	
Middleborough Gas & Electric Department	Publicly Owned		Dave Cavanaugh	
Middleton Municipal Electric Department	Publicly Owned		Dave Cavanaugh	
National Grid	Transmission	Tim Brennan	Tim Martin	
Natural Resources Defense Council	End User	Bruce Ho		
Nautilus Power, LLC	Generation		Bill Fowler	
New England Power Generators Association (NEPGA)	Fuels Industry Part	Bruce Anderson	Dan Dolan	
New Hampshire Electric Cooperative	Publicly Owned			Brian Forshaw
NextEra Energy Resources, LLC	Generation	Michelle Gardner		
North Attleborough Electric Department	Publicly Owned		Dave Cavanaugh	
Norwood Municipal Light Department	Publicly Owned		Dave Cavanaugh	
NRG Power Marketing LLC	Generation		Pete Fuller	
Pascoag Utility District	Publicly Owned		Dave Cavanaugh	
Paxton Municipal Light Department	Publicly Owned		Brian Thomson	
Peabody Municipal Light Department	Publicly Owned		Brian Thomson	
Princeton Municipal Light Department	Publicly Owned		Brian Thomson	
PSEG Energy Resources & Trade LLC	Supplier	Eric Stallings		
Reading Municipal Light Department	Publicly Owned		Dave Cavanaugh	
Rowley Municipal Lighting Plant	Publicly Owned		Dave Cavanaugh	
Russell Municipal Light Dept.	Publicly Owned		Brian Thomson	
Shrewsbury Electric & Cable Operations	Publicly Owned		Brian Thomson	
South Hadley Electric Light Department	Publicly Owned		Brian Thomson	
Sterling Municipal Electric Light Department	Publicly Owned		Brian Thomson	
Stowe Electric Department	Publicly Owned		Dave Cavanaugh	
Sunrun Inc.	AR-DG			Pete Fuller
Taunton Municipal Lighting Plant	Publicly Owned		Dave Cavanaugh	
Templeton Municipal Lighting Plant	Publicly Owned		Brian Thomson	
The Energy Consortium	End User	Bob Espindola	Mary Smith	
Vermont Electric Power Company	Transmission	Frank Ettori		
Vermont Energy Investment Corp (VEIC)	AR-LR		Doug Hurley	
Vermont Public Power Supply Authority	Publicly Owned			Brian Forshaw
Versant Power	Transmission	Lisa Martin		
Village of Hyde Park (VT) Electric Department	Publicly Owned		Dave Cavanaugh	
Vitol Inc.	Supplier	Joe Wadsworth		
Wakefield Municipal Gas & Light Department	Publicly Owned		Brian Thomson	
Wallingford DPU Electric Division	Publicly Owned		Dave Cavanaugh	
Wellesley Municipal Light Plant	Publicly Owned		Dave Cavanaugh	
West Boylston Municipal Lighting Plant	Publicly Owned		Brian Thomson	
Westfield Gas & Electric Department	Publicly Owned		Dave Cavanaugh	
Wheelabrator North Andover, Inc.	AR-RG		Bill Fowler	

PRELIMINARY

Pursuant to notice duly given, a meeting of the NEPOOL Participants Committee was held via teleconference beginning at 10:00 a.m. on Thursday, August 5, 2021. A quorum, determined in accordance with the Second Restated NEPOOL Agreement, was present and acting throughout the meeting. Attachment 1 identifies the members, alternates and temporary alternates who participated in the teleconference meeting.

Mr. David Cavanaugh, Chair, presided and Mr. David Doot, Secretary, recorded.

APPROVAL OF JUNE 24, 2021 MEETING MINUTES

Mr. Cavanaugh referred the Committee to the preliminary minutes of the June 24, 2021 meeting, as circulated and posted in advance of the meeting. Following motion duly made and seconded, the preliminary minutes of that meeting were unanimously approved as circulated, with an abstention by Mr. Michael Kuser's alternate noted.

CONSENT AGENDA

Mr. Cavanaugh referred the Committee to the Consent Agenda that was circulated and posted in advance of the meeting. Following motion duly made and seconded, the Consent Agenda was unanimously approved as circulated, with an abstention on behalf of Mr. Kuser's alternate recorded.

ISO CEO REPORT

Mr. Gordon van Welie, ISO Chief Executive Officer (CEO), referred the Committee to the summaries of the ISO Board and Board Committee meetings that had occurred since the June

24, 2021 Participants Committee meeting, which had been circulated and posted in advance of the meeting. There were no questions or comments on the summaries.

ISO COO REPORT

July Report (June data) Update

Dr. Vamsi Chadalavada, ISO Chief Operating Officer (COO), began by briefly highlighting a few items from his report circulated in early July, which covered the full month of June. He reported that load forecasting was impacted by two heatwaves in June. The first heatwave, which ran from June 5 to June 9, had a 15 to 17 degrees Fahrenheit (°F) departure from mean temperatures. During this time, the load forecasts were reasonably accurate except on June 9, when the peak temperature was under-forecasted by approximately 5°F. The second heatwave, which resulted in even higher temperatures, took place from June 28 to June 30. During this time temperatures again ran 15 to 17°F higher than the mean. The weather forecasts during this time were more accurate, resulting in a more accurate load forecasts. Dr. Chadalavada then clarified the peak load numbers for June reflected in the July report. He explained that peak load was initially reported as 25,159 MW, but was subsequently increased to 25,726 MWs to reflect data from revenue quality meters settlement-only generation. Reflecting on reported uplift, he noted that higher uplift occurred when insufficient generation in the east cleared during time of high loads and/or gas prices, resulting in out-of-merit dispatch and costs. Finally, he reported that the aggregate show of interest for FCA16 totaled 16,200 MWs (5,800 MW of supply, 9,900 MW of imports, and 530 MW of demand resources), just 1,000 MW shy of the show of interest for FCA15.

August Report (July data)

Referring the Committee to his August report, which had been circulated and posted in advance of the meeting, Dr. Chadalavada noted that the data in the report was through July 28, 2021, unless otherwise noted. The report highlighted the following: (i) Energy Market value for July 2021 was \$427 million, down \$51 million from the updated June 2021 value of \$478 million and up \$100 million from July 2020; (ii) July 2021 average natural gas prices were 14% higher than June average prices; (iii) average Real-Time Hub Locational Marginal Prices (LMPs) for July (\$36.04/MWh) were 0.6% higher than June averages; (iv) average July 2021 natural gas prices and Real-Time Hub LMPs over the period were up 99% and 60%, respectively, from July 2020 average prices; (v) average Day-Ahead cleared physical energy during peak hours as percent of forecasted load was 100.6% during July (up from 99.1% in June), with the minimum value for the month (96.2%) on July 4; and (vi) Daily Net Commitment Period Compensation (NCPC) payments for July totaled \$2.7 million, which was down \$1.2 million from June 2021 and up \$0.9 million from July 2020. July NCPC payments, which were 0.6% of total Energy Market value, were comprised of: (a) \$2.1 million in first contingency payments (down \$0.6 million from June); (b) \$331,000 in second contingency payments (down \$850,000 from June), and (c) \$276,000 in distribution payments (up \$245K from June).

Dr. Chadalavada noted that Future Grid Reliability Study results were presented at the July Planning Advisory Committee (PAC) meeting, and the remaining results ~~are~~[were](#) expected to be presented in September.

Responding to questions about upcoming transmission outages, Dr. Chadalavada noted potential outages later in the year on lines 312/393 and 354, both of which were expected to impact the New England/New York interface limits and result in uplift charges. The requests for

both outages were being analyzed and ~~he~~[Dr. Chadalavada](#) committed to provide an update at the September meeting.

LITIGATION REPORT

Mr. Doot referred the Committee to the August 3 Litigation Report that had been circulated and posted in advance of the meeting. He highlighted the following:

(i) three FERC administrative and rulemaking proceedings addressing, respectively, resource adequacy, hybrid resources and transmission interconnection and planning. He noted that the advanced notice of proposed rulemaking (ANOPR) on transmission interconnection and planning (Transmission ANOPR) had generated a fair amount of questions and would be discussed at the next Transmission Committee meeting; and

(ii) activity in the proceeding initiated by the filing concerning treatment in Regional Network Load of behind-the-meter generation that had been submitted jointly on July 1 by the ISO and the Participating Transmission Owners Administrative Committee.

COMMITTEE REPORTS

Markets Committee (MC). Mr. William Fowler, the MC Vice-Chair, reported that a three-day meeting would be held August 10-12, with a potential fourth day on August 31. Discussion would focus on the region's response to Order 2222 and Minimum Offer Price Rule (MOPR) reform issues.

Reliability Committee (RC). Mr. Robert Stein, the RC Chair, reported that the scheduled August 17 RC meeting would include discussion on FCA16 ~~retirement and de-list bids~~[Retirement and De-List Bids](#) and certain Order 2222 issues.

Transmission Committee (TC). Mr. José Rotger, the TC Vice-Chair, reported that the scheduled August 24 TC meeting would include: (i) continued discussion on a stakeholder proposal to eliminate from Schedule 11 of the Tariff operating and maintenance (O&M) charges for network upgrades associated with generation interconnections; (ii) information on ISO-proposed changes to Attachment K, which would include changes to the regional system planning process and changes relative to lessons learned from the Order 1000 transmission request for proposals (RFP) process, and (iii) an overview by NEPOOL counsel of the Transmission ANOPR and consideration of any NEPOOL response thereto.

Budget & Finance Subcommittee. Mr. Thomas Kaslow, the Subcommittee Chair, announced that the Subcommittee would hold two meetings in August, one on August 9 to review the preliminary 2022 ISO and NESCOE budgets, and one on August 26 to take up ongoing issues before the Subcommittee, including nodal clearing of FTRs.

Membership Subcommittee. Ms. Sarah Bresolin, the Subcommittee Chair, announced that the next meeting of the Subcommittee, which was scheduled for August 16, would include consideration and discussion of potential changes to the characterization of the Fuels Industry Participant membership category (which had expanded to include a few trade association members). Ms. Bresolin reminded Participants that Subcommittee materials, including an expected straw proposal with respect to the Fuels Industry Participant arrangements, would be available on the Subcommittee's NEPOOL website page. She welcomed Participants with any questions or concerns about the straw proposal or other Subcommittee ~~matter~~[matters](#) to forward those to her or to NEPOOL counsel.

ADMINISTRATIVE MATTERS

Mr. Cavanaugh noted that the Pathways Study meeting scheduled for August 23 had been cancelled, with a next meeting tentatively scheduled for September 23 (date and time to be subsequently confirmed). In addition, the October NPC meeting was tentatively being planned as an in-person meeting. He said that all Participants would receive a questionnaire to support meeting planning and logistics and to receive feedback for restoring in-person NEPOOL meetings.

Finally, he referred to the notice from NEPOOL counsel that balloting of the Waiver Agreement, which allows for the temporary Participants Agreement waivers required to seat the four-person slate of candidates for election to the ISO Board of Directors endorsed by the Participants Committee at its July 21 meeting, was successfully completed and the Agreement was unanimously approved. He said that notice of that Agreement would be filed with the FERC. A final vote by the ISO Board of Directors to approve the Waiver Agreement and elect the slate was expected to be taken at the Board's meeting in September.

NESCOE ADVANCING THE VISION REPORT

After a brief recess, Mr. Cavanaugh introduced Ms. Heather Hunt, NESCOE Executive Director, along with Mr. Phil Bartlett, Chair, Maine Public Utilities Commission; Mr. Matt Nelson, Chair, Massachusetts (MA) Department of Public Utilities; Ms. June Tierney, Commissioner, Vermont Department of Public Service (VT DPS); and Mr. Patrick Woodcock, MA Commissioner and Undersecretary of Energy.

Ms. Hunt began by referring to the ["Report to the Governors: Advancing the Vision"](#) (Report), which had been circulated and posted in advance of the meeting. The Report followed

the October 2020 issuance of both the New England States' Vision Statement and the Statement on Electricity System Reform issued by five of the six governors (the New Hampshire governor was not a signatory to the latter Statement, reflecting primarily differences in clean energy mandates between New Hampshire and the other New England states). She summarized the process undertaken prior to the Report, including a number of issue-specific technical sessions that were held in early 2021, expressing thanks to all those who participated in those sessions.

Ms. Hunt first highlighted the Report's market design recommendations, which included moving a forward clean energy market (FCEM)-style construct to the next level of detail to help the States further inform their thinking, as well as continuing work on the elimination of the MOPR and other market adjustments such as energy and ancillary services. The Commissioners in follow up reflected on the importance of taking a holistic approach to ensuring clean energy resources can be integrated into the clean energy transition effectively. Also stressed was the importance of market-based goals and other market elements, including energy and ancillary services. Members noted the FERC's initiative to define a grid services framework through Order 2222 and otherwise.

Ms. Hunt next highlighted the recommendation focused on conducting transmission analysis over a long-term horizon consistent with the Vision Statement and in furtherance of state policies or mandates. In Fall 2020, based on this recommendation, the ISO agreed to conduct a 2050 transmission study, which was expected to be brought to stakeholders for comment in the near term. Further, Ms. Hunt highlighted the importance of an associated timely reform to the ISO's transmission planning tariff to make proactive, long-term scenario-based analysis of state mandates and policies a routine planning practice. She noted that the FERC's recently-released Transmission ANOPR incorporated many of the objectives included in the

~~vision statement~~Vision Statement. She also highlighted the FERC's establishment of the joint federal-state task force on electric transmission which, as noted in the Litigation Report, included the nominations of New England Commissioners Riley Allen (VT PUC) and ~~Chair~~Chairman Nelson, with work likely to begin in the late Fall. Commissioners noted the challenges, but nevertheless the need, to produce analysis of transmission infrastructure to meet long-term goals and mandates on a low-cost basis.

Turning to the Report's third area of recommendations, highlighting ISO governance and the assessment of governance practices used by other regional transmission operators, Ms. Hunt noted that the Report offered a list of recommendations that would enhance the ISO's transparency and accountability. Commissioners augmented that summary, noting the importance of the ISO's governance changing in order to be more responsive to rapidly evolving state mandates and energy policy changes. The ~~states~~States sought more collaborative partnering with the ISO to achieve common goals.

Turning to equity and environmental justice, Ms. Hunt shared the recommendation to create an Ad Hoc State Work Group on Equity and Environmental Justice in Energy Infrastructure, comprised of New England state officials with policy, permitting, siting, and regulatory authorities and regional partners, and included ISO and NEPOOL Sector representatives. The Commissioners recognized that equity and environmental justice was a new and evolving initiative that required a fundamental shift in how challenges were defined and addressed and that needed to be tackled together with the ISO and stakeholders.

Members were invited then to ask questions and comment on the Report, beginning with the theme of equity and environmental justice. That discussion highlighted the importance of including such considerations in all planning discussions and finding new ways to provide

transparency for such discussions and to facilitate input on environmental and social equity issues from those who are historically under-represented. The Commissioners said that the region had an imperative to ensure that environmental and equity issues become part and parcel of engineering and economic thinking going forward. Continuing, the Commissioners expressed the view that the process for considering such issues needed to ensure communities would be engaged and to provide clear understanding of when, where and how to provide meaningful input. There was acknowledgement that the changes to the current legal frameworks for considering such issues that most directly impact environmental justice and equity were under development at both the state and federal levels, and those frameworks also need to be incorporated into regional processes.

On the topic of governance, Ms. Hunt noted the ISO's report that the governance recommendations had been referred to the ISO's Nominations and Governance Committee and were reportedly to be taken up by that Committee and the Board in August. The States expected the Board would issue a response thereafter but did not know whether the ISO Board would need additional time beyond its August meeting. Thus, the next steps by the States on the governance initiative would follow the ISO Board response.

As to the discussion on the other topics, the Committee was referred to ongoing discussions in the Technical Committees of the States' recommendations.

IMM 2020 ANNUAL MARKETS REPORT

Dr. Jeffrey McDonald, the ISO's Internal Market Monitor (IMM) and Vice President of Market Monitoring, was introduced to summarize the IMM's 2020 Annual Markets Report. Dr. McDonald began by providing an overview of the [New England](#) markets' performance in light of

the record low natural gas prices, the impact of the COVID-19 pandemic on electricity demand, and the region's mild 2020 winter. As referenced in his presentation, Dr. McDonald reported that New England saw record low energy prices, as well as wholesale costs that decreased by more than \$1 billion from 2019. He also reported that the system was relatively incident free in 2020, experiencing no shortage events and a few instances of operator intervention.

Dr. McDonald referred to a chart in his presentation that showed prices during the past year were insufficient to support new investment. The IMM's analysis, which was updated from prior reports to include Regional Greenhouse Gas Initiative (RGGI) prices, showed that the wholesale markets were not providing enough revenues to make it profitable enough to build the hypothetical CONE (Cost of New Entry) reference unit. Dr. McDonald clarified, in response to a question, that such results did not show that markets were not working. Rather, it reflected that, during the current times of surplus, new investment was not encouraged by the markets. He added that there could be a problem if this situation persisted over the long-term when supply and demand were more balanced.

Dr. McDonald presented on how CO₂ costs for certain resources increased their production costs. Specifically, RGGI increased costs by \$2.88/MWh and the Massachusetts Global Warming Solutions Act produced a \$3.08/MWh increase. In response to stakeholders' requests, Dr. McDonald committed to report on how the Massachusetts program impacted dispatch order. He also noted the IMM's findings about the impact on demand due to the increase of energy efficiency and behind-the-meter photovoltaic solar resources, observing that energy efficiency had the most pronounced load reducing impact.

Dr. McDonald concluded his presentation by offering the IMM's analysis of the competitiveness of the markets, which included a summary of mitigation measures taken in

2020. He highlighted the low occurrences of market power, as well as the low mitigation instances resulting from the potential for market power. Dr. McDonald also noted that, although the system as a whole was competitive in FCA15, there were a large number of pivotal suppliers (with potential market power), as determined by the pivotal supplier test, in the Southeast New England zone. In response to this observation, Dr. McDonald engaged stakeholders in a dialogue concerning the pivotal supplier test as it is used in the descending clock auction, as well as a brief conversation on changing the auction to a sealed-bid auction.

Upon completing his presentation, the Committee requested that Dr. McDonald provide his opinions on the removal of the MOPR from the ISO Tariff. Dr. McDonald and the Committee, with input from the Markets Committee officers and numerous stakeholders scheduled to present at the August 10–12, 2021 Markets Committee meeting, agreed to find time for that discussion at ~~the upcoming Markets Committee~~[that August](#) meeting.

Briefly summarizing his views at the request of a member, Dr. McDonald noted that the proposal from Potomac Economics had interesting features that, when combined with Effective Load Carrying Capability (ELCC), could maintain price formation even though public funds would be allowed to compete with private investment. Thus, in retaining price formation, the Potomac Economics proposal and ELCC could help coordinate entry and exit of resources, which, according to Dr. McDonald, was a key desired function of capacity markets. Dr. McDonald, however, was clear that he needed more time to review the Potomac Economics proposal before offering any opinion as to whether he supports it. He stated that he would be more fully prepared to discuss that proposal at the upcoming Markets Committee meeting.

There being no other business, the meeting adjourned at 2:20 p.m.

Respectfully submitted,

David Doot, Secretary

**PARTICIPANTS COMMITTEE MEMBERS AND ALTERNATES
PARTICIPATING IN THE AUG 5, 2021 TELECONFERENCE MEETING**

PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Advanced Energy Economy	Fuels Industry Participant	Caitlin Marquis		
American Petroleum Institute	Fuels Industry Participant	Paul Powers		
Ampersand Energy Partners LLC	Supplier			Julia Frayer
AR Large Renewable Generation (RG) Group Member	AR-RG	Alex Worsley		
AR Small Load Response (LR) Group Member	AR-LR			Doug Hurley
Ashburnham Municipal Light Plant	Publicly Owned Entity		Brian Thomson	
Associated Industries of Massachusetts (AIM)	End User			Mary Smith
AVANGRID: CMP/UI	Transmission		Alan Trotta	
Belmont Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Block Island Utility District	Publicly Owned Entity	Dave Cavanaugh		
Borrego Solar Systems Inc.	AR-DG	Liz Delaney		
Boylston Municipal Light Department	Publicly Owned Entity		Brian Thomson	
BP Energy Company	Supplier			José Rotger
Braintree Electric Light Department	Publicly Owned Entity			Dave Cavanaugh
Brooks, Dick	End User	Dick Brooks		
Calpine Energy Services, LP	Supplier	Brett Kruse		Bill Fowler
Castleton Commodities Merchant Trading	Supplier			Bob Stein
Central Rivers Power	AR-RG		Dan Allegretti	
Chester Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Chicopee Municipal Lighting Plant	Publicly Owned Entity		Brian Thomson	
CLEAResult Consulting, Inc.	AR-DG	Tamera Oldfield		
Concord Municipal Light Plant	Publicly Owned Entity		Dave Cavanaugh	
Connecticut Municipal Electric Energy Coop.	Publicly Owned Entity	Brian Forshaw		
Conservation Law Foundation (CLF)	End User	Phelps Turner		
CPV Towantic, LLC (CPV)	Generation	Joel Gordon		
Cross-Sound Cable Company (CSC)	Supplier		José Rotger	
Danvers Electric Division	Publicly Owned Entity		Dave Cavanaugh	
Dominion Energy Generation Marketing	Generation	Mike Purdie	Weezie Nuara	
DTE Energy Trading, Inc.	Supplier			José Rotger
Dynergy Marketing and Trade, LLC	Supplier			Bill Fowler
Emera Energy Services	Supplier			Bill Fowler
ENGIE Energy Marketing NA, Inc.	AR-RG	Sarah Bresolin		
Environmental Defense Fund	End User	Jollette Westbrook		
Eversource Energy	Transmission	James Daly	Dave Burnham	Vandan Divatia
Excelerate Energy LP	Fuels Industry Participant	Gary Ritter		
Exelon Generation Company	Supplier	Steve Kirk	Bill Fowler	
FirstLight Power Management, LLC	Generation	Tom Kaslow		
Galt Power, Inc.	Supplier	José Rotger		
Generation Group Member	Generation	Dennis Duffy	Abby Krich	
Georgetown Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Great River Hydro	AR-RG			Bill Fowler
Groton Electric Light Department	Publicly Owned Entity		Brian Thomson	
Groveland Electric Light Department	Publicly Owned Entity		Dave Cavanaugh	
H.Q. Energy Services (U.S.) Inc. (HQUS)	Supplier		Bob Stein	
High Liner Foods (USA) Incorporated	End User		William P. Short III	
Hingham Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Holden Municipal Light Department	Publicly Owned Entity		Brian Thomson	
Holyoke Gas & Electric Department	Publicly Owned Entity		Brian Thomson	
Hull Municipal Lighting Plant	Publicly Owned Entity		Brian Thomson	
Industrial Energy Consumer Group	End User	Alan Topalian		
Ipswich Municipal Light Department	Publicly Owned Entity		Brian Thomson	
Jericho Power LLC (Jericho)	AR-RG	Mark Spencer	Nancy Chafetz	
Littleton (MA) Electric Light and Water Department	Publicly Owned Entity		Dave Cavanaugh	

**PARTICIPANTS COMMITTEE MEMBERS AND ALTERNATES
PARTICIPATING IN THE AUG 5, 2021 TELECONFERENCE MEETING**

PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Littleton (NH) Water & Light Department	Publicly Owned Entity		Craig Kieny	
Long Island Power Authority (LIPA)	Supplier		Bill Killgoar	
Maine Power LLC	Supplier	Jeff Jones		
Maine Public Advocate's Office	End User	Drew Landry		
Maine Skiing, Inc.	End User	Alan Topalian		
Mansfield Municipal Electric Department	Publicly Owned Entity		Brian Thomson	
Maple Energy LLC	AR-LR		Luke Fishback	Doug Hurley
Marblehead Municipal Light Department	Publicly Owned Entity		Brian Thomson	
Mass. Attorney General's Office (MA AG)	End User	Tina Belew	Ben Griffiths	
Mass. Bay Transportation Authority	Publicly Owned Entity		Dave Cavanaugh	
Mass. Municipal Wholesale Electric Company	Publicly Owned Entity	Brian Thomson		
Mercuria Energy America, LLC	Supplier			José Rotger
Merrimac Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Michael Kuser	End User		Jason York	
Middleborough Gas & Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Middleton Municipal Electric Department	Publicly Owned Entity		Dave Cavanaugh	
National Grid	Transmission	Tim Brennan	Tim Martin	
Nautilus Power, LLC	Generation	Dan Pierpont	Bill Fowler	
New Hampshire Electric Cooperative	Publicly Owned Entity	Steve Kaminski		Brian. Forshaw; Dave Cavanaugh; Brian Thomson
New England Power Generators Association (NEPGA)	Fuels Industry Participant	Bruce Anderson	Dan Dolan	
NextEra Energy Resources, LLC	Generation	Michelle Gardner		Gabe Hollis
North Attleborough Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Norwood Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Pascoag Utility District	Publicly Owned Entity		Dave Cavanaugh	
Paxton Municipal Light Department	Publicly Owned Entity		Brian Thomson	
Peabody Municipal Light Department	Publicly Owned Entity		Brian Thomson	
Princeton Municipal Light Department	Publicly Owned Entity		Brian Thomson	
PSEG Energy Resources & Trade LLC (PSEG)	Supplier		Eric Stallings	
Reading Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Rowley Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Russell Municipal Light Dept.	Publicly Owned Entity		Brian Thomson	
Shrewsbury Electric & Cable Operations	Publicly Owned Entity		Brian Thomson	
Small RG Group Member	AR-RG	Erik Abend		
South Hadley Electric Light Department	Publicly Owned Entity		Brian Thomson	
Sterling Municipal Electric Light Department	Publicly Owned Entity		Brian Thomson	
Stowe Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Taunton Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Templeton Municipal Lighting Plant	Publicly Owned Entity		Brian Thomson	
The Energy Consortium	End User	Bob Espindola	Mary Smith	
Vermont Electric Cooperative	Publicly Owned Entity	Craig Kieny		
Vermont Electric Power Company (VELCO)	Transmission	Frank Etori		
Vermont Energy Investment Corp (VEIC)	AR-LR		Doug Hurley	
Vermont Public Power Supply Authority	Publicly Owned Entity			Brian Forshaw
Village of Hyde Park (VT) Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Wakefield Municipal Gas & Light Department	Publicly Owned Entity		Brian Thomson	
Wallingford DPU Electric Division	Publicly Owned Entity		Dave Cavanaugh	
Wellesley Municipal Light Plant	Publicly Owned Entity		Dave Cavanaugh	
West Boylston Municipal Lighting Plant	Publicly Owned Entity		Brian Thomson	
Westfield Gas & Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Wheelabrator North Andover Inc.	AR-RG		Bill Fowler	

CONSENT AGENDA

Reliability Committee (RC)

From the previously-circulated notice of actions of the RC's August 17, 2021 meeting, dated August 17, 2021.¹

1. Changes to OP-24 (Adoption of RAS Terminology; Reference Updates; NRA language Removal; Changes to Section VI (Relay Characteristics Provided to the ISO))

Support revisions to ISO New England Operating Procedure (OP) No. 24 (Protection Outages, Settings and Coordination), which include revisions to adopt Remedial Action Schemes (RAS) terminology, to update References, to remove Non Reclosing Assurance (NRA) language, and to the section on "Relay Characteristics Provided to the ISO", as recommended by the RC at its August 17, 2021 meeting, together with such further non-material changes as the Chair and Vice-Chair of the RC may approve.

The motion to recommend Participants Committee support was unanimously approved.

2. Changes to Appendix B to OP-14 (OP-14B) (Periodic Review Changes)

Support revisions to OP-14B (Generator and Asset Related Demand Reactive Data Explanation of Terms and Instructions for Data Preparation for ISO Form NX-12D), including clarifications to data values determinations, updates to voltage schedule and control data values, and updates to grammar and current terminology usage, as recommended by the RC at its August 17, 2021 meeting, together with such further non-material changes as the Chair and Vice-Chair of the RC may approve.

The motion to recommend Participants Committee support was unanimously approved.

¹ RC Notices of Actions are posted on the ISO-NE website at: [https://www.iso-ne.com/committees/reliability/reliability-committee/?document-type=Committee Actions](https://www.iso-ne.com/committees/reliability/reliability-committee/?document-type=Committee%20Actions).



memo

To: NEPOOL Participants Committee Members and Alternates
From: Robert C. Ludlow, VP & CF/CO
Date: September 2, 2021
Subject: ISO New England Inc. ("ISO") 2022 Operating and Capital Budgets

Budget Process

This memo provides an update to the NEPOOL Participants on the 2022 Budgets process. At its August 9, 2021 meeting, the NEPOOL Budget & Finance Subcommittee ("B&F") reviewed the ISO's proposed 2022 operating and capital budgets (collectively, the "Budgets"). Included with this memorandum is a presentation of the Budgets. The more detailed presentation provided to B&F can be found on the ISO's website at https://www.iso-ne.com/static-assets/documents/2021/07/6_isonene_2022_proposed_op_cap_budget.pdf. The presentation included with this memorandum includes updates to the following slides, from the equivalent page in the more detailed B&F presentation: Slide 18 for 2021 Forecast Load value and mathematical calculation updates; Slides 23 and 24 to add capital project estimated completion dates; and slide 29 to add ERCOT 2020 financial data that just recently became available. The ISO has also presented the Budgets to the New England state agencies; following that presentation the state agencies submitted questions. The questions and the ISO's answers can be found on the ISO's website at https://www.iso-ne.com/static-assets/documents/2021/08/6_states_2022_budget_questions_08_2021.pdf.

For both meetings, the discussions covered the ISO's vision, strategic goals, and initiatives; key drivers of the proposed cost increase; the allocated resources in the 2022 budget to achieve the related objectives; and the 2022 budget risks. Additionally, we outlined factors contributing to the increase in the capital budget over the next several years and the estimated impact to our debt structure and borrowing needs. A few clarifying questions were asked during the B&F call, including the timing of headcount additions in 2022 and 2023, the status of the extreme weather events analysis, and whether the ISO has been subject to a ransomware attack.

In the discussion with the states questions were focused on metrics (i.e., how the ISO allocates resources, prioritizes work, and assesses the effectiveness of the markets). In response we explained that the ISO measures objectives on a per project basis (i.e., whether projects met cost, scope, and milestone goals) and, with respect to operations, by reviewing reliability and compliance requirements. We also referenced the Internal Market Monitor and External Market Monitor assessments regarding the effectiveness of the markets. Additionally, we noted that the ISO allocates resources and prioritizes work based on Commission requirements, stakeholder discussions, and business needs (e.g., the need to keep current on technology for cyber security and vendor support).

The Participants Committee will be asked to vote on the proposed budgets at the October 7, 2021 meeting.

Proposed 2022 Budgets

The Budget assumptions, key drivers, and operating budget before depreciation remain consistent with the preliminary budgets presented to NEPOOL in June; however, the depreciation budget is \$1.2 million higher than amounts in the preliminary budget due to refinement of timing and amounts of capital budget spending. The 2022 operating budget year-over-year increase before depreciation is \$10.6 million or 5.9%; the increase, including depreciation is \$10.3 million or 5.0%.

The budget reflects the resourcing needed to continue to make progress with the highest priority initiatives, as identified in the ISO work plan. Included in our corporate goals, and reflected in our budget, is the ISO's continued focus on innovation in support of the region's effort to transition to high levels of renewable and distributed resources while ensuring that the power system is reliable through the transition and preserving the ability of the market to attract new entry. The budget includes funding for: the integration of increasing levels of clean energy and distributed resources; efforts to address evolving cyber security threats given the ISO's high level of reliance on information technology; and attracting and retaining the talent to carry out this critical work and the ISO's mission.

Assessing resourcing needs, the ISO anticipates the need for approximately 21 full-time equivalent ("FTE") additions between 2022 and 2023. The 2022 budget includes the recruitment of 14 additional positions, with funding for 9 FTEs with onboarding expected to occur throughout the year. In 2023 the funding for a full year of all 14 of the 2022 positions plus the addition of 7 positions for 2023 is expected, bringing the two year total to 21. The additional 2022 positions include those for Market Development, System Planning, Information Technology Cyber Security and Power System Modeling, Legal, Advanced Technology Solutions, and Finance.

The capital budget is \$32 million. Between 2022 and 2027 the capital budget is expected to increase by up to \$7M over the \$28M budget that has been in place for several years. The increased capital budget need is being driven by 4 primary drivers as follows: nGEM platform (which replaces the current market system); Major market and reliability related efforts; Cyber security; IT asset and infrastructure replacement.

I will be available during the meeting for any questions regarding the 2022 Budgets. Please also feel free to reach out to me after today with any additional comments or questions regarding the 2022 Budgets.

ISO New England Proposed 2022 Operating and Capital Budgets

NEPOOL Participants Committee Meeting



Robert Ludlow

VP, CHIEF FINANCIAL & COMPLIANCE OFFICER



Contents of Presentation

- The presentation includes:
 - 2022 Budget Introduction and Overview (Slides 3-6)
 - Strategic Planning Process Overview (Slides 7-12)
 - 2022 Budget Overview (Slides 13-16)
 - Summary 2022 Budget Information (Slides 17-19)
 - 2022 Operating Budget Risks (Slides 20-21)
 - Capital Budget Summary (Slides 22-25)
- The following appendices are also included for reference:
 - Appendix 1: Cyber Security and CIP Compliance History and Costs
 - Appendix 2: ISO/RTO Financial Comparison
 - Appendix 3: New England Wholesale Electricity Costs and Retail Electricity Rates



2022 BUDGET INTRODUCTION AND OVERVIEW



2022 Budget Review Process

- At both the June 1, 2021 meeting with the New England Conference of Public Utilities Commissioners (NECPUC), and the June 24, 2021 NEPOOL Participants Committee meeting, management presented and reviewed the preliminary operating and capital budgets for 2022
 - The 2022 operating budget, before depreciation, is consistent with amounts included in the preliminary budget presented in June, while the depreciation budget is \$1,220,300 higher than amounts in the 2022 preliminary budget due to the refinement of timing and amounts of capital budget spending
- The budget reflects the resourcing needed to continue to make progress with the highest priority initiatives, as identified in the ISO work plan
- Included in our corporate goals, and reflected in our budget, is the ISO's continued focus on innovation in support of the region's effort to transition to high levels of renewable and distributed resources while ensuring that the power system is reliable through the transition and preserving the ability of the market to attract new entry
- The integration of increasing levels of clean energy and distributed resources; efforts to address evolving cyber security threats given the ISO's high level of reliance on information technology; and attracting and retaining the talent to carry out this critical work and the ISO's mission is reflected in the budget

2021 Budget Review Process *(cont.)*

- The ISO reviewed the 2022 proposed Operating and Capital Budgets:
 - With the NEPOOL Budget & Finance Subcommittee on August 9th; for further detail on ISO-NE's 2022 budget, please see the presentation provided to the NEPOOL Budget & Finance Subcommittee at the August 9, 2021 meeting; the presentation can be found at:
https://www.iso-ne.com/static-assets/documents/2021/07/6_isonet2022_proposed_op_cap_budget.pdf
 - With the State Agencies on August 6th
 - State Agencies submitted questions on ISO-NE's proposed budget on August 13th
 - ISO-NE responded to State Agencies' questions on August 20th; the State Agencies questions and ISO-NE's responses can be found at:
https://www.iso-ne.com/static-assets/documents/2021/08/6_states_2022_budget_questions_08_2021.pdf
 - State Agencies may submit comments regarding the proposed budget by September 10th
 - The ISO Board of Directors will review the budgets, stakeholder feedback, and State Agencies comments on September 22nd
 - ISO-NE responses to State Agencies' comments are due on or about September 29th
- The ISO will conduct additional meetings as requested

2021 Budget Review Process *(cont.)*

- The NEPOOL Participants Committee (NPC) will vote on the ISO-NE 2022 Budgets on October 7th
- The ISO Board of Directors will vote on the 2022 Budgets after the NPC meeting
- The ISO will file the 2022 Budgets with FERC on or about October 15th



STRATEGIC PLANNING PROCESS OVERVIEW



The Annual Process – Strategic Planning

ISO-NE is guided by a purposeful and integrated business planning approach that drives focus towards a common target that management teams and the entire organization can get behind, with the aim of creating value for ISO stakeholders



ISO New England's Vision

The ISO's Vision for the future represents our long-term intent and guides the formulation of our Strategic Goals



Vision Statement:

To harness the power of competition and advanced technologies to reliably plan and operate the grid as the region transitions to clean energy

Our Strategic Goals

The ISO ties its annual budget to resource requirements by Goals, Objectives, and Initiatives

ISO-NE Strategic Goals

- **Responsive Market Designs:** Improve the current market structure and continue to evolve and reposition the market design to accommodate the states' objectives and the transition to high levels of renewables and distributed resources. Maintain a robust fleet of balancing resources and preserve the ability of the market to attract new entry.
- **Progress and Innovation:** Evolve capabilities to support the grid as the region transitions to clean energy, including improved power system and market modeling. Support investments in transmission infrastructure to enable renewable energy. Facilitate the integration of distributed energy resources. Provide data and information-based services.
- **Operational Excellence:** Continuously improve operations and processes, with a focus on efficiency and effectiveness, business results, and continuity of operations.
- **Stakeholder Engagement:** Collaboratively understand and anticipate needs, demonstrate thought leadership through high quality analysis and communication, and nurture productive relationships with FERC, the states and market participants.
- **Attract, Develop, and Retain Talent:** Develop a sense of community around our Core Values, Mission, Vision, and Goals; prepare the workforce; recognize and reward employee's success and innovation; and honor diversity and promote inclusion.

Summary of 2022 Objectives

Goal 1: Responsive Market Designs

- Advance Energy Security and Additional Market Services to Support the Region's Transition to Clean Energy
- Address Impacts of Distributed Resources on Market Services

Goal 2: Progress and Innovation

- Enhance Modeling Capabilities for New Technologies and Distributed Resources to Keep Pace with the Evolving Power System
- Research and Develop Tools and Processes for Enhancing Real-Time Situational Awareness and Market Administration
- Future Grid/Transmission Studies
- Enhance Mitigation of Market Financial Risk

Goal 3: Operational Excellence

- Develop Scalable Technology Solutions to Address Evolving Cyber Security Threats, Effectiveness of Operations, Evolving Workplace Requirements, and Meet Reliability Metrics
- Continuously Improve Restoration Capabilities Through Cyber Security, Infrastructure, and Asset Replacement to Ensure Continuity of Operations
- Continually Update Technology, Software, Analytics, and Modeling Capabilities in a Structured Way to Support Operations
- Develop Business Efficiency Improvements

Summary of 2022 Objectives *(cont.)*

Goal 4: Stakeholder Engagement

- Affirm State and Stakeholder Risk-Tolerance and Readiness Regarding Extreme Weather Events
- Responding to Stakeholders, Educating and Ensuring Awareness of Impacts of Ongoing and Relevant Trends
- Communicating Potential Tariff Changes from Adoption of New Practices and Longer-Term (>10 year) Studies
- Reinforce ISO's Identity and Share Best Industry Practices with Industry and Region

Goal 5: Attract, Develop, and Retain Talent

- Launch Internal Communication Efforts to Familiarize ISO Employees with the Importance of the Organization's Mission, Vision, Core Values, and Strategic Goals

Goal 5: Attract, Develop, and Retain Talent (continued)

- Design, Implement, and Measure Training and Mentorship Solutions to Support the Development of Employees' Managerial, Leadership, Interpersonal, and Business Skills
- Assure the ISO's Culture is Supportive of Diversity and Inclusion by Running Unconscious Bias Training and Further Development of the Council for Diversity and Inclusion (CDI)
- Ensure use of Competitive Benefits and Compensation to Attract the Technical Skills and Talent the ISO Needs to Support the Requirements of a Transition to a Clean-Energy Future

2022 BUDGET OVERVIEW



2022 Budget Overview

- Assessing resourcing needs, the ISO anticipates the need for approximately 21 FTE additions between 2022 and 2023
 - Over the past 5 years full-time equivalent position funding has been kept flat with the ISO supplementing staffing needs with contract additions where practicable to augment staff and cover short-term needs
- The 2022 budget includes funding for 9 FTE⁽¹⁾ additions primarily to address the growing volume and workload for the integration of clean energy and distributed resources in the Market Development, Transmission Planning, Power System Modeling, and Legal areas; and for Cyber Security and Information Technology support

(1) The 2022 budget includes the recruitment of 14 additional positions, with funding for 9 full-time equivalents with onboarding expected to occur throughout the year. In 2023 the funding for a full year of all 14 of the 2022 positions plus the addition of 7 positions for 2023 is expected, bringing the two year total to 21 as noted above.

2022 Budget Overview *(cont.)*

- The operating budget includes an increase of \$0.9M of contingency funding that will be used to target areas of importance to the region including Transmission Planning for Clean-Energy Transition, Resource Capacity Accreditation (Effective Load Carrying Capability (ELCC) analysis), cyber security needs, and Pathways to the Future Grid studies
 - ISO-NE's preliminary budget contemplated \$1.2M in additional study work in the area of Market Development to address these targeted areas; however, when the planning phases of these efforts are completed later in 2021 and early 2022, and the required work and related resources are defined, these estimates will be firmed up; it is unpredictable as to the exact level of funding that will be required; the limited additional contingency allows a constrained level of flexibility to finance these initiatives

2022 Budget Overview *(cont.)*

- In summary, the 2022 operating budget year-over-year increase before depreciation is \$10,605,000 or 5.9%; the increase, including depreciation is \$10,277,400 or 5.0%
- The 2022 Capital Budget is \$32 million
 - Between 2022 and 2027 the capital budget is expected to increase by up to \$7M over the \$28M budget that has been in place for several years
 - The increased capital budget need is being driven by 4 primary drivers as follows:
 - nGEM platform (which replaces the current market system)
 - Major market and reliability related efforts
 - Cyber security
 - IT asset and infrastructure replacement
 - The increased capital spending will result in higher interest expense costs and depreciation expense in future years as capital projects go into production and are included in budgets and rates
 - The 2022 capital budget of \$32.0 million is provided with a list of projects, by strategic goal, that are currently chartered and on-going or in planning/conceptual design (See Slides 23-25)

Note: Throughout the presentation some schedules may appear inconsistent due to rounding of amounts.

SUMMARY 2022 BUDGET INFORMATION



Summary Budget Information

	%		%		%		%		%		
(Budget Amounts are in Millions)	<u>2022</u>	<u>Change</u>	<u>2021</u>	<u>Change</u>	<u>2020</u>	<u>Change</u>	<u>2019</u>	<u>Change</u>	<u>2018</u>	<u>Change</u>	<u>2017</u>
Operating Budget Before Depreciation	\$189.2	5.9%	\$178.6	1.8%	\$175.4	3.9%	\$168.9	2.9%	\$164.2	3.3%	\$158.9
Capital Budget	32.0	14.3%	28.0	0.0%	28.0	0.0%	28.0	0.0%	28.0	0.0%	28.0
Total Cash Budget	\$221.2	7.1%	\$206.6	1.6%	\$203.4	3.3%	\$196.9	2.5%	\$192.2	2.8%	\$186.9
Operating Budget Before Depreciation	\$189.2	5.9%	\$178.6	1.8%	\$175.4	3.9%	\$168.9	2.9%	\$164.2	3.3%	\$158.9
Depreciation	26.0	(1.2)%	26.3	0.2%	26.3	(9.6)%	29.1	(6.3)%	31.0	(8.0)%	33.7
Revenue Requirement Before True-up	215.2	5.0%	205.0	1.6%	201.7	1.9%	198.0	1.5%	195.2	1.3%	192.7
True up	1.1		0.2		(2.9)		(9.3)		0.4		(0.4)
Revenue Requirement	\$216.3	5.5%	\$205.1	3.2%	\$198.8	5.4%	\$188.7	(3.5)%	\$195.5	1.7%	\$192.3
Forecast – TWhs (1)	144.4	(2.0)%	147.4	1.0%	145.9	0.2%	145.6	2.5%	142.1	1.2%	140.3
\$/KWh Rate	\$0.00150	7.6%	\$0.00139	2.1%	\$0.00136	5.1%	\$0.00130	(5.8)%	\$0.00138	0.4%	\$0.00137
Average Monthly Consumer Cost (2)	\$1.12		\$1.04		\$1.02		\$0.97		\$1.03		\$1.03

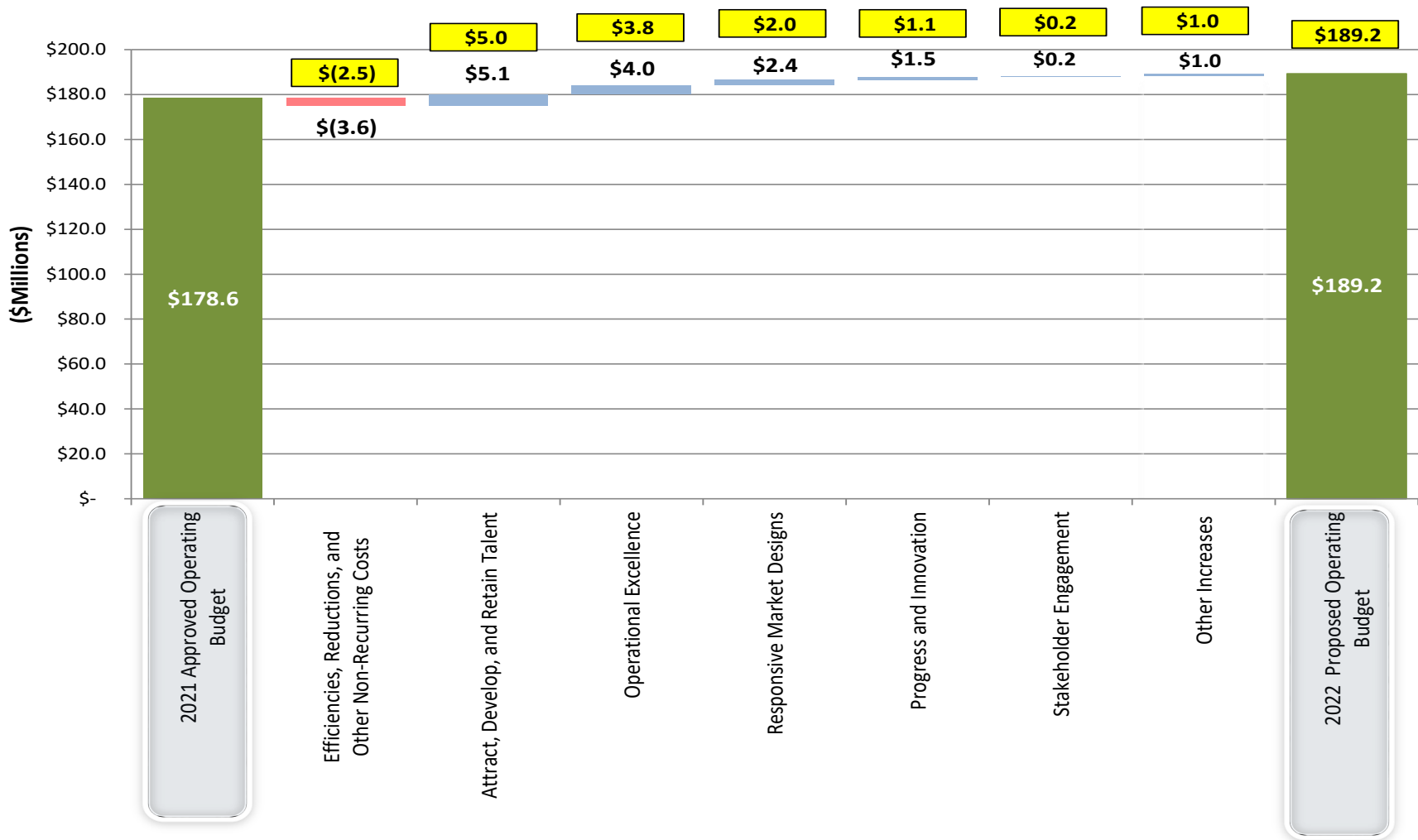
(1) 2022 Forecast based on May 2021 CELT Report (Schedule 1.5.2 - Net Annual Energy - Gross (without reductions)). All other years based on CELT Report for the applicable year, which can be found on www.iso-ne.com.

(2) Based on average consumption of 750 kWh per month.

Note: Throughout the presentation some schedules may appear inconsistent due to rounding of amounts.

2022 Budget Changes by Strategic Goal Proposed vs. Projected

(net increase of 5.9% (consistent with Projected Budget) over 2021)



Note: Items in yellow above represent the estimate that was included in the 2022 preliminary budget presented in June 2021.

2022 OPERATING BUDGET RISKS



2022 Operating Budget Risks

- Although ISO-NE spending has never exceeded budget, the risk exists that ISO-NE may have to incur additional expenditures during 2022; specific potential risks include:
 - Additional funding may be required to support the next phase of the pathway studies project, construct new models to study extreme weather and contingencies, conduct new studies and the integration of the penetration of variable resources and emerging technologies including long-range transmission planning
 - Information Technology software licensing and maintenance costs may require additional funding
 - Insurance policy renewals may be higher than increases estimated in the budget
 - Interest Rates may impact ISO-NE floating rates on tax-exempt debt, pension and post-retirement benefit plans liability costs, and interest income on settlement float balance
 - Legal costs from material litigation that may arise during the course of the year would pose a risk to ISO-NE's ability to operate within the approved budget
 - Federal and state policy directives/changing policies could result in additional cost associated with new requirements including multiple scenarios under a 2050 Transmission Study
 - Potential impact of workforce disruption due to continued uncertainty in remote versus on-site work

CAPITAL BUDGET SUMMARY



Capital Budget

2022 Expenditures

Goal: Responsive Market Designs

Project	2022 Budget	Total Project Cost	Estimated Completion Date	Project Stage
nGEM Market Clearing Engine Implementation (see Note 1)	\$4.4M	\$13.9M	03/23	In Development
nGEM Software Development Part II (see Note 1)	\$2.7M	\$4.8M	12/22	In Development
nGEM Hardware Phase II (see Note 1)	\$3.0M	\$3.0M	12/22	Planning/Conceptual Design
Minimum Offer Price Rule	\$1.5M	\$2.0M	12/23	Planning/Conceptual Design
Solar Do Not Exceed Dispatch	\$0.5M	\$0.6M	09/22	Planning/Conceptual Design
Total:	\$12.1M			

Goal: Progress and Innovation

Project	2022 Budget	Total Project Cost	Estimated Completion Date	Project Stage
Internal Market Monitoring Data Analysis Phase III	\$0.9M	\$1.6M	12/22	In Development
Integrated Market Simulator Phase I	\$0.4M	\$1.5M	06/22	In Development
Replacement of Locational Marginal Price Monitor	\$0.1M	\$0.4M	04/22	In Development
Amazon Web Services (“AWS”) Cloud Foundation	\$1.0M	\$1.0M	04/22	Planning/Conceptual Design
Linear State Estimator	\$0.5M	\$0.7M	10/22	Planning/Conceptual Design
External Website Migration to Cloud	\$0.4M	\$0.4M	10/22	Planning/Conceptual Design
Total Transfer Capability Calculator Redesign w/G2 Replacement	\$0.3M	\$0.4M	04/22	Planning/Conceptual Design
Forecast Enhancements	\$0.2M	\$0.2M	06/22	Planning/Conceptual Design
Total:	\$3.8M			

Note 1: nGEM related projects will advance multiple goals including Responsive Market Designs, Progress and Innovation, and Operational Excellence. For purposes of this presentation, nGEM projects have been grouped under the Responsive Market Designs strategic goal.

Capital Budget

2022 Expenditures Cont'd

Goal: Operational Excellence

Project	2022 Budget	Total Project Cost	Estimated Completion Date	Project Stage
Forward Capacity Tracking System Infrastructure Conversion Part III	\$2.9M	\$3.2M	12/22	In Development
Security Info. and Event Mgt. Log Monitoring Replacement	\$0.3M	\$2.9M	07/22	In Development
Forward Capacity Market Cost Allocation & Accelerated Billing	\$0.3M	\$1.1M	05/22	In Development
TranSMART Technical Architecture Update	\$0.3M	\$0.8M	06/22	In Development
Cyber Security Improvements	\$2.0M	\$2.0M	12/22	Planning/Conceptual Design
2022 Issue Resolution Projects	\$1.5M	\$1.5M	12/22	Planning/Conceptual Design
CIP Electronic Security Perimeter Redesign Phase II	\$1.0M	\$1.0M	12/22	Planning/Conceptual Design
Enterprise Application Integration Phase III	\$0.5M	\$0.5M	11/22	Planning/Conceptual Design
Windows Server 2019R2 Deployment	\$0.4M	\$0.8M	06/23	Planning/Conceptual Design
Identity and Access Management Phase III	\$0.4M	\$0.4M	12/22	Planning/Conceptual Design
Email List Server Technology Refresh	\$0.3M	\$0.4M	06/22	Planning/Conceptual Design
Non-Project Capital Expenditures	\$3.0M			Planning/Conceptual Design
Total:	\$12.9M			

Capital Budget

2022 Expenditures Summary

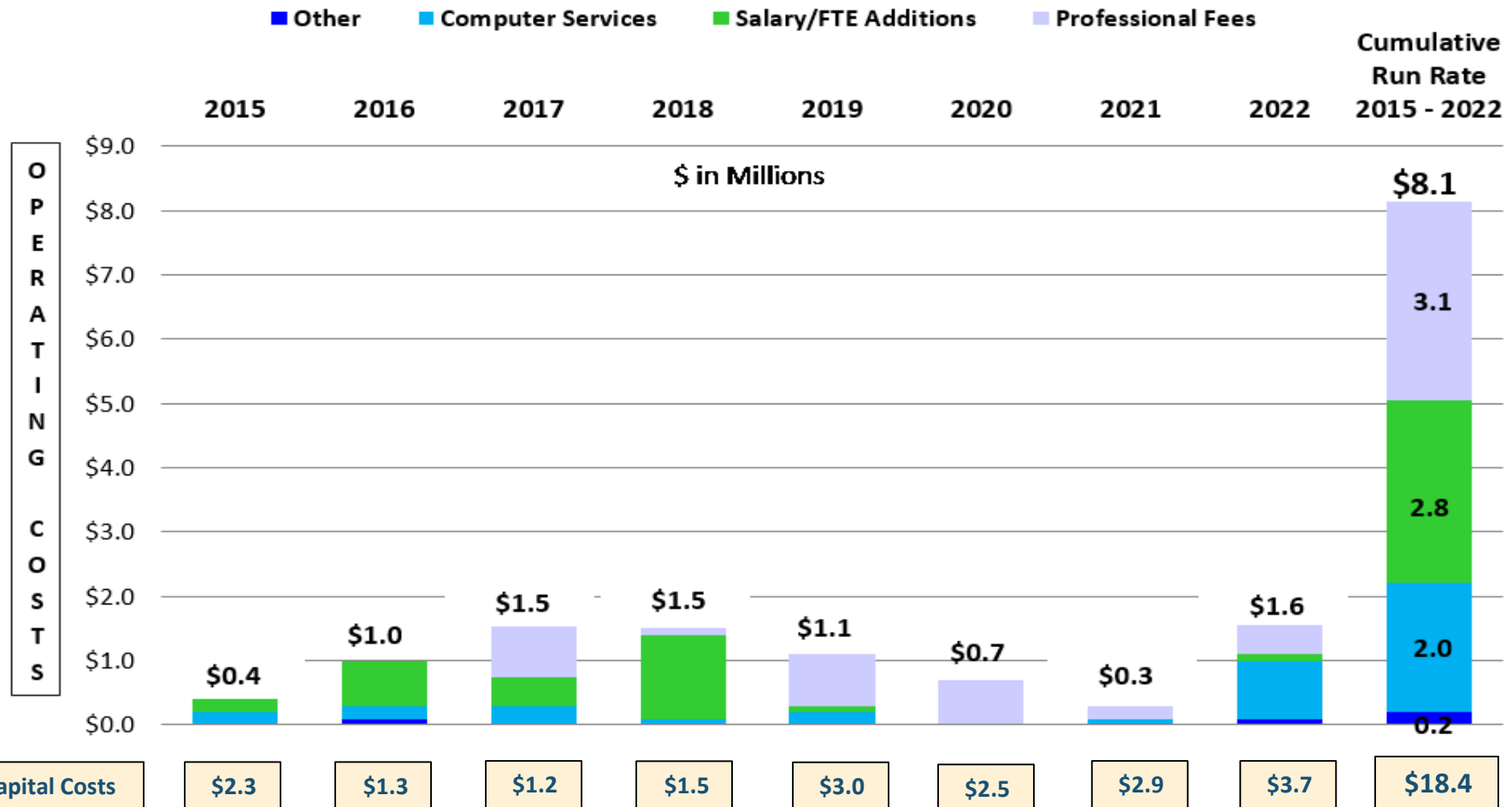
2022 Capital Budget Expenditure Summary

Allocation Category	2022 Budget
Goal: Responsive Market Designs	\$12.1M
Goal: Progress and Innovation	\$ 3.8M
Goal: Operational Excellence	\$12.9M
Other Emerging Work	\$ 2.7M
Capital Interest	\$ 0.5M
Total:	\$32.0M

APPENDIX 1: CYBER SECURITY AND CIP COMPLIANCE HISTORY AND COSTS



Cyber Security and CIP Compliance Annual Capital and Incremental Operating Costs 2015-2022



Above amounts represent cumulative annual costs for cyber security that have been added in the 2015 through 2022 budgets and are ongoing and included in the 2022 proposed budget. An additional \$1.2 million of incremental non-recurring cyber security costs were incurred from 2015 through 2021 that are not included above.

APPENDIX 2: ISO/RTO FINANCIAL COMPARISON



Financial Results Summary

ISO/RTO Financial Summary - 2020 Actual Results

Operating Expense and Capital Expenditures for Calendar Year 2020, and Outstanding Debt as of December 31, 2020 ⁽¹⁾

(Amounts in Millions)

	ISO-NE ⁽²⁾	NYISO	CAISO	IESO ⁽³⁾	PJM	MISO	SPP	ERCOT
Operating Expense - 2020	\$ 195.6	\$ 202.7	\$ 216.1	\$ 227.0	\$ 359.0	\$ 373.9	\$ 206.3	\$ 211.7
Less: Amortization & Depreciation	(24.8)	(21.9)	(26.2)	(23.1)	(35.5)	(34.6)	(18.5)	(30.1)
Regulatory Fees	(6.4)	(14.2)	-	-	(65.3)	(53.1)	(22.3)	(19.4)
Grant Expenses	-	-	-	-	-	-	-	-
Net Operating Expense - 2020	\$ 164.4	\$ 166.5	\$ 189.9	\$ 204.0	\$ 258.2	\$ 286.3	\$ 165.5	\$ 162.2
Other Financial Data								
Capital Expenditures for 2020	\$ 26.3	\$ 17.3	\$ 22.1	\$ 56.3	\$ 39.9	\$ 38.9	\$ 12.8	\$ 33.5
Outstanding Debt as of 12/31/20	\$ 96.0	\$ 94.9	\$ 169.4	\$ 120.0	\$ 13.7	\$ 274.3	\$ 182.1	\$ 47.0
Actual full-time equivalent headcount as of 12/31/20	577.5	564.0	642.0	769.0	724.0	965.0	636.0	774.0

(1) Applicable amounts were taken from each entity's 2020 audited financial statements.

(2) ISO-NE Amortization & Depreciation and Capital Expenditures are presented on a cash-flow basis

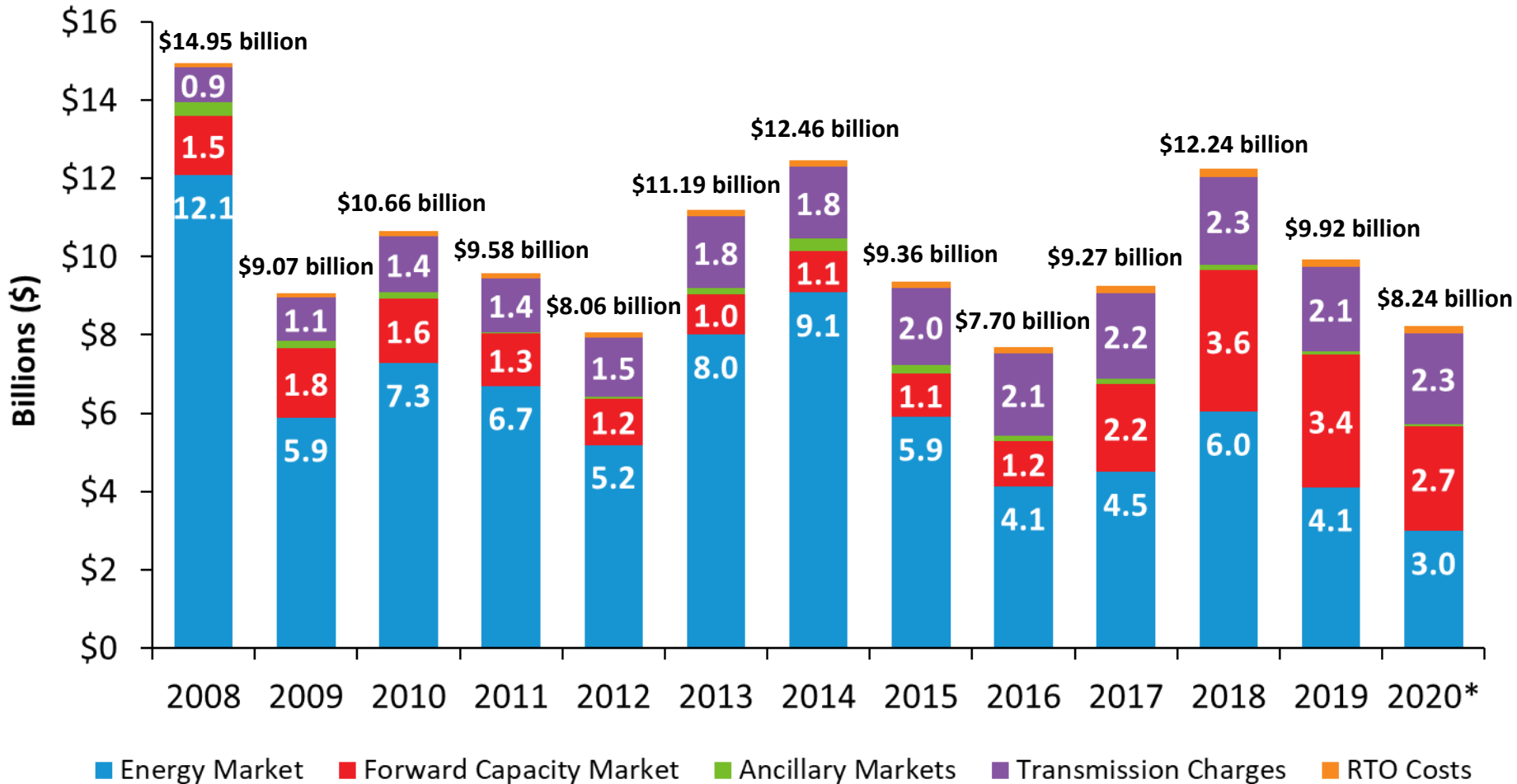
(3) Amounts are in Canadian dollars

APPENDIX 3: NEW ENGLAND WHOLESALE ELECTRICITY COSTS AND RETAIL ELECTRICITY RATES



New England Wholesale Electricity Costs

Annual wholesale electricity costs have ranged from \$7.7 billion to \$15 billion



Source: [2020 Report of the Consumer Liaison Group](#); *2020 data is preliminary and subject to resettlement

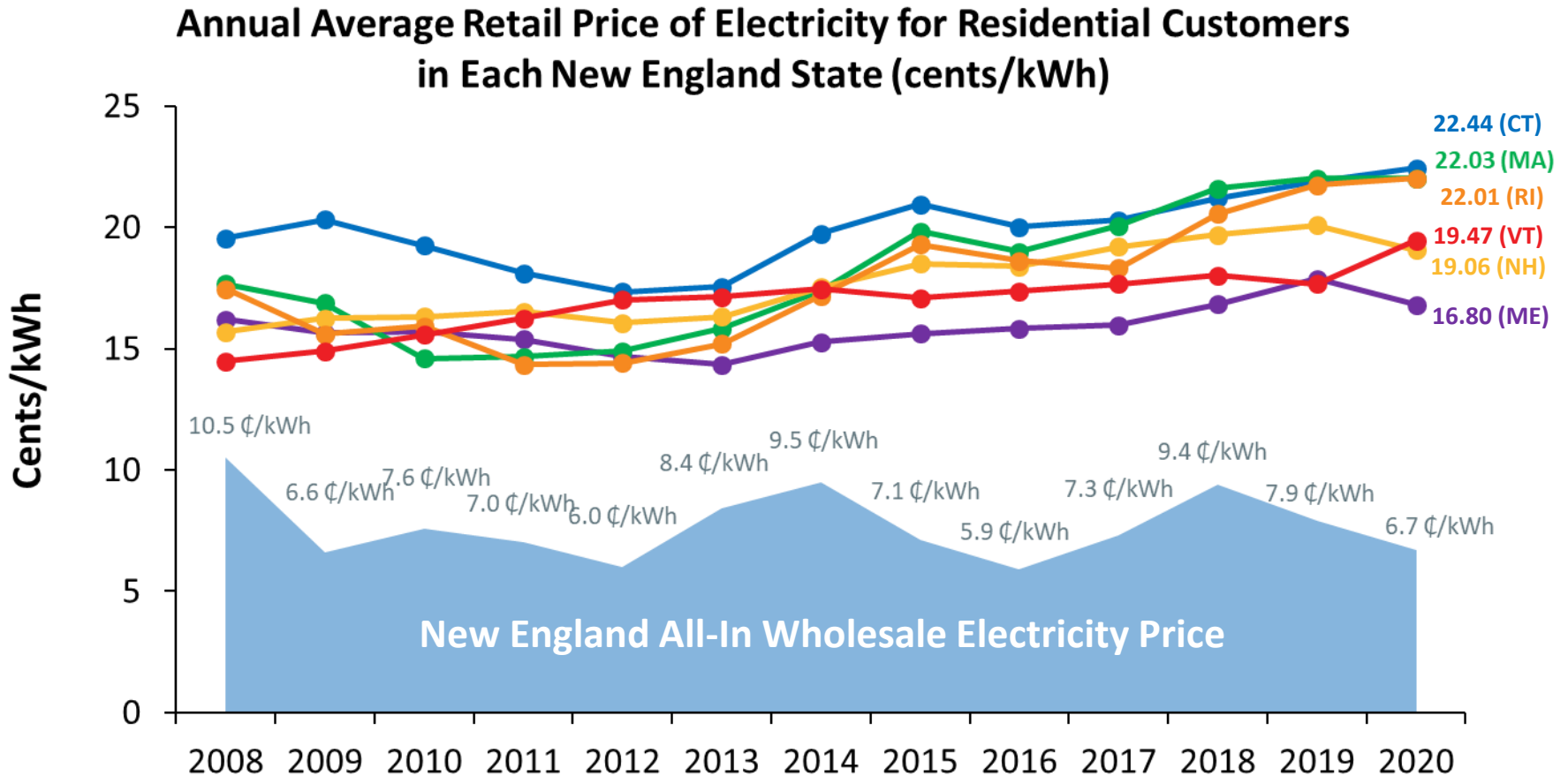
Note: Forward Capacity Market values shown are based on auctions held roughly three years prior to each calendar year.

New England Wholesale Electricity Costs^(a)

	2016		2017		2018		2019		2020*	
	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh	\$ Mil.	¢/kWh
Wholesale Market Costs										
Energy (LMPs) ^(b)	\$4,130	3.2	\$4,498	3.5	\$6,041	4.7	\$4,105	3.3	\$2,996	2.4
Ancillaries ^(c)	\$146	0.1	\$132	0.1	\$147	0.1	\$83	0.1	\$62	0.1
Capacity ^(d)	\$1,160	0.9	\$2,245	1.8	\$3,606	2.8	\$3,401	2.7	\$2,662	2.2
Subtotal	\$5,437	4.2	\$6,875	5.4	\$9,794	7.6	\$7,589	6.0	\$5,720	4.7
Transmission charges^(e)	\$2,081	1.6	\$2,199	1.7	\$2,250	1.7	\$2,146	1.7	\$2,331	1.9
RTO costs^(f)	\$180	0.1	\$193	0.2	\$196	0.2	\$184	0.1	\$191	0.2
Total	\$7,698	5.9	\$9,267	7.3	\$12,240	9.4	\$9,918	7.9	\$8,242	6.7

- (a) Average annual costs are based on the 12 months beginning January 1 and ending December 31. Costs in millions = the dollar value of the costs to New England wholesale market load servers for ISO-administered services. Cents/kWh = the value derived by dividing the dollar value (indicated above) by the real-time load obligation. These values are presented for illustrative purposes only and do not reflect actual charge methodologies. ***The wholesale values for 2020 are preliminary and subject to resettlement.**
- (b) Energy values are derived from wholesale market pricing and represent the results of the Day-Ahead Energy Market plus deviations from the Day-Ahead Energy Market reflected in the Real-Time Energy Market.
- (c) Ancillaries include first- and second-contingency Net Commitment-Period Compensation (NCPC), forward reserves, real-time reserves, regulation service, and a reduction for the Marginal Loss Revenue Fund.
- (d) Capacity charges are those associated with the Forward Capacity Market (FCM).
- (e) Transmission charges reflect the collection of transmission owners' revenue requirements and tariff-based reliability services, including black-start capability, voltage support, and FCM reliability.
- (f) RTO costs are the costs to run and operate ISO New England and are based on actual collections, as determined under Section IV of the *ISO New England Inc. Transmission, Markets, and Services Tariff*.

Retail Electricity Prices Follow Wholesale Prices, But Are Also Influenced by Individual State Policies



Source: U.S. Energy Information Administration, *Electric Power Monthly*, Average Retail Price of Electricity to Ultimate Customers by End-Use Sector, by State (Annual); [2020 Report of the Consumer Liaison Group](#), the New England all-in wholesale electricity price is derived by dividing total wholesale electricity costs by real-time load obligation (presented for illustrative purposes; does not reflect actual charge methodologies)

State Agencies' Questions to ISO-NE regarding 2022 Budget

- 1) Please provide the latest copy of ISO-NE's FERC Form 1 to each state agency representative.

Electronic pdf version is attached.

- 2) Please provide the most recent copy of ISO-NE's Form 990 to each state agency representative.

Electronic pdf version is attached.

- 3) Flexibility. Discuss ISO-NE ability to take on additional assignments within a budget year. Do certain areas of ISO-NE's operations suffer when unexpected tasks arise? Does ISO-NE need additional flexibility to handle unexpected work? Please explain.

Each year, ISO-NE develops an annual work plan (published in the fall and updated in the spring), which outlines major priorities and activities for the year that are designed to improve upon existing ISO-NE systems, practices, and services to New England. The work plan is a result of ISO-NE planning and engagement with stakeholders; ISO-NE seeks stakeholder input on its work plan by sharing and discussing it with the New England Power Pool ("NEPOOL") Participants Committee and representatives of the New England states through the New England Conference of Public Utilities Commissioners ("NECPUC") and the New England States Committee on Electricity ("NESCOE"). Although the work plan specifies priorities and activities, ISO-NE necessarily maintains some flexibility to take on additional assignments or reprioritize previously identified initiatives. ISO-NE also prepares a rolling six-quarter forecast so as new information becomes available (regarding cost, resources, or other factors) or there is a shift in priorities, ISO-NE is able to pivot to that work and apply resources accordingly. Within a budget year, ISO-NE's flexibility is dependent on two factors: availability of budget funds and availability of internal (and external) resources.

To ensure ISO-NE has sufficient funding to allow for flexibility and to address unexpected needs, the ISO-NE operating budget contains two line items: (i) the CEO Emerging Work Allowance (\$1.1 million in 2021), and (ii) the Board Contingency (\$700,000 in 2021). Inclusion of these contingency amounts provides ISO-NE with sufficient flexibility to address unforeseen needs. The CEO Emerging Work Allowance covers new or deferred activities and initiatives that emerge or become priorities during the year and requires approval from both the CEO and CFO. The Board Contingency provides a funding source of last resort and approval for use must be obtained from ISO-NE's Board of Directors. Notably, ISO-NE is seeking to increase the CEO Emerging Work Allowance for the budget year 2022 to allow for increased flexibility to address areas of importance to the region, including transmission planning for a clean-energy transition, resource capacity accreditation, cyber security needs, and Pathways to the Future grid studies. (See Slides 14, 52, 54, and 91, of the "ISO New England Proposed 2022 Operating and Capital Budgets" presentation (the "Budget Presentation") presented to the states on August 6, 2021).

Within the capital budget, ISO-NE works within the approved budget for any given capital year and, to the extent necessary, will reprioritize projects based on stakeholder feedback and internal resources. On a quarterly basis, ISO-NE reviews updates to the capital budget at meetings of the NEPOOL Budget and Finance Subcommittee and then files these updates with the Federal Energy Regulatory Commission (“FERC”).

ISO-NE develops each proposed budget (for the upcoming year) to include adequate funds to support ISO-NE’s mission which is aligned with the vision to harness the power of competition and advanced technologies to reliably plan and operate the grid as the region transitions to clean energy. ISO-NE will always prioritize core functions over emerging work, to ensure core operations do not suffer. Unexpected tasks will have to be considered within the context of the new and emerging initiatives already underway in ISO-NE’s work plan, and be prioritized according to the relative importance of the unexpected task as compared to those already in the work plan.

As reflected by the increases in the 2022 proposed operating budget, resource allocation has become challenging as ISO-NE’s workload has increased to address the highest priority initiatives as determined by FERC and discussion with ISO-NE’s stakeholders. Working within ISO-NE’s annual budget involves careful planning to ensure the company has the adequate internal resources (i.e., highly qualified personnel with specialized skills) to support its core functions and the aforementioned emerging work. This involves monitoring and managing full-time equivalent positions (and when new or additional positions become necessary) and ISO-NE’s turnover rate (considering the costs of recruiting, relocation, development time, and the disruption of workflow).

4) Metrics. Please identify the metrics that ISO-NE uses to determine its performance and progress regarding:

a) System reliability;

ISO-NE employs various metrics to measure system reliability performance and progress. Among these are transmission equipment outage coordination metrics, which are documented in an annual public report, the ISO New England Transmission Equipment Outage report; this report is available on ISO-NE’s website at <https://www.iso-ne.com/markets-operations/transmission-operations-services/transmission-outage-scheduling/>. Additionally, the Transmission Outage Coordination Working Group (“TOCWG”) annually reviews the trends, performance, and challenges of the outage-coordination process, and proposes new goals for transmission outage-coordination metrics for the upcoming year to improve outage coordination and performance. The metrics assess, among other things, accuracy of ISO-NE’s estimation of congestion cost impacts and inputs used in such estimation; long-term impacts on ISO-NE’s rescheduling of transmission-outage requests; and the provision of information to the Participating Transmission Owners (“PTOs”) to facilitate their identification of opportunities to improve outage coordination, reduce congestion costs, or increase operational flexibility. The TOCWG-set metrics tracked over the past three years (2018-2020) included: a long-term planning metric to measure the successful submittal of outages into the long-term outage process that could have an

impact on economic dispatch and system reliability; a 90-day metric to measure the submittal of requests for outages that could have an impact more than 90 days before the planned outage date; a planned outage goal to improve coordination of all planned transmission outages; and an outage cancellation goal to improve timely notifications to ISO-NE for cancelling a transmission equipment outage by a specified time. Metrics that tracked outage coordination performance over the past three years consistently identified areas of continued success and improvement, as well as areas that may require improvements (which are then incorporated into action plans for effecting such identified improvements).

ISO-NE also tracks a number of compliance requirements set in the North American Electric Reliability Corporation (“NERC”) Reliability Standards to measure system reliability performance and progress. These include a metric regarding the Inter-area Operating Standard that is based on a count of Interconnection Reliability Operating Limit (“IROL”) exceedances and time to clear above defined time thresholds. The objective is for ISO-NE not to exceed an IROL for more than thirty minutes; past exceedances have been of short duration, demonstrating the ability to act quickly. ISO-NE also tracks system regulating metrics, such as NERC balancing standards which measure how effectively the region’s supply and demand balance assists in maintaining interconnection frequency; Balancing Authority Area Control Error (“ACE”) Limit compliance, which measures how well the region’s supply and demand balance assists in maintaining the ACE limit; and metrics that measure ISO-NE’s ability to activate operating reserves to restore its ACE following large resource losses, such as the Disturbance Control Standard. Over the past three years, ISO-NE has consistently met the defined thresholds, indicating operation of the system in compliance with the standards.

Additional metrics on system reliability performance are reflected in the monthly reports of ISO-NE’s Executive Vice President and Chief Operating Officer to the NEPOOL Participants Committee, which are available on ISO-NE’s website at: <https://www.iso-ne.com/committees/participants/participants-committee/?document-type=COO%20Reports%20to%20the%20Participants%20Committee&load.more=2>. An operational metric reflected in these reports is accuracy in load forecasting for all hours in the day and the peak hour of the day. On average, ISO-NE has met its load forecast accuracy objectives over the past three years, but 2020 was particularly challenging given the COVID-19 pandemic. ISO-NE forecasters, however, have continued to closely monitor load curve trends and retrain the models as the economy reopens, which has enabled ISO-NE to meet its load forecasting goals in recent months.

b) The wholesale markets (capacity, energy, and ancillary);

ISO-NE’s Internal Market Monitor (“IMM”) publishes quarterly and annual markets reports that assess the state of competition in the wholesale electricity markets operated by ISO-NE. Each annual markets report covers ISO-NE’s most recent operating year and addresses the development, operation, and performance of the wholesale electricity markets administered by ISO-NE and presents an assessment of each market based on market data, performance criteria, and independent studies. For the past three years

(2018-2020), the IMM has found the ISO-NE capacity, energy, and ancillary services markets performed well and exhibited competitive outcomes.

Additionally, ISO-NE's External Market Monitor ("EMM"), Potomac Economics, publishes an Annual Assessment of the Electricity Markets in New England. This report provides a summary of market outcomes in the wholesale electricity markets designed and administered by ISO-NE, including the EMM's findings on the competitive performance and operational efficiency of the markets. For the past three years (2018-2020), the EMM has found that ISO-NE's wholesale electricity markets performed competitively; that market power concerns have diminished in Boston and New England; and the markets performed with little evidence of significant market power abuses or manipulation.

The past three IMM annual market reports are available at: <https://www.iso-ne.com/markets-operations/market-monitoring-mitigation/internal-monitor>

The past three EMM annual assessment reports are available at: <https://www.iso-ne.com/markets-operations/market-monitoring-mitigation/external-monitor>

c) Operational efficiency and effectiveness;

ISO-NE's operational performance is determined using goals that are set in advance by the Board of Directors. These goals are objective and measurable (on a monthly and annual basis) and represent organizational goals for operational reliability, efficient and competitive markets, budget performance, and support of stakeholder processes. The metrics regarding operational reliability include measuring compliance with NERC standards; cyber security audits and reporting; and forecasting and study preparation. The metrics regarding efficient and competitive markets include measures of Forward Capacity Market milestones, outage requests, and other market initiatives. The metrics regarding budget performance and the stakeholder process include measures of budget accuracy, information technology systems, employee training requirements, and the NEPOOL technical committee process.

The performance against these metrics is measured and reported to senior management on a monthly basis and is regularly published internally. Each individual goal has a target performance and is scored according to defined metrics, such as accuracy, completion, number of events or violations, etc. The scores are then compiled into an annual performance score. The calculation of each metric is verified by ISO-NE's internal auditors and the Board of Directors assigns a final score to the achievement of the annual goals.

d) Cyber security;

ISO-NE monitors its cyber security posture from several different perspectives. The following summarizes the metrics used and the general results.

ISO-NE's cyber security controls are modeled on the National Institute of Standards and Technology ("NIST") Framework for Improving Critical Infrastructure Cybersecurity, and the NERC Critical Infrastructure Protection ("CIP") controls. On a monthly basis, ISO-NE senior management reviews ISO-NE's cyber security performance against the NIST "Framework Core" which "is a set of cyber security activities, desired outcomes, and applicable references that are common across critical infrastructure sectors...[and] consists of five concurrent and continuous Functions – Identify, Protect, Detect, Respond, Recover." Review of these functions provides a "high-level, strategic view of the lifecycle of an organization's management of cyber security risk." Management's monthly review has indicated that ISO-NE's cyber security controls are functioning adequately and appropriately. The NIST framework is available at:

<https://nvlpubs.nist.gov/nistpubs/CSWP/NIST.CSWP.04162018.pdf>.

Additionally, ISO-NE's Internal Audit Department actively reviews ISO-NE's processes and systems and maintains a particular focus on cyber security risks, including internal cyber security risks and third party risks. Each audit produces a set of recommendations for management regarding the subject of such audit, and management implements these recommendations as appropriate. Typically, audits regarding cyber security risks have indicated ISO-NE has an adequate cyber security posture and in some instances, maintains above-average cyber security controls. Finally, ISO-NE has procured various external cyber security reviews and audits that have confirmed ISO-NE has a solid cyber security foundation.

e) Incorporating state policy goals; and

State policies and goals are incorporated into ISO-NE's system planning processes, market design, and system operations in various ways. ISO-NE tracks the New England states' policy developments as they relate to the electric sector and shares this information with the appropriate staff for consideration in various aspects of system planning, operations, and market development. As examples, five of the six states have overarching greenhouse gas emissions reduction goals and various policies to help achieve those goals, and each of the six states has a form of Renewable Portfolio Standard (RPS) or Renewable Energy Standard (RES) and associated incentive programs; ISO-NE reflects these state-specified metrics into its annual regional system planning process. Similarly, ISO-NE tracks state energy efficiency goals and program spending and photovoltaic resource development, and incorporates this data in its annual and ten-year forecasts. These state policies have impacts on both ISO-NE system planning studies and procurements through the region's Forward Capacity Market. As a response to emerging state policy goals, in 2020, ISO-NE also began forecasting the electrification of transportation and heating.

As ISO-NE plans and studies the transmission system, it approaches future transmission planning that is responsive to state and local policies (and federal policies) using a unique process that is governed by direct state feedback based upon their own policy analysis. ISO-NE also develops and finalizes its biennial Regional System Plan in a way that reflects state policies and provides opportunities for the states and stakeholders to provide direct feedback on the report. In addition, ISO-NE works closely with states and distribution utilities on the interconnection process for distributed resources.

In grid operations, ISO-NE has monitored state policy goals as inputs to regional wind and solar forecasting, tracking, and dispatch procedures. The region's wholesale market development and design are continually influenced by state policy goals, such as plans to incorporate new ancillary services that support greater amounts of variable and distributed resources, and other flexible products. As market design proposals flow through the NEPOOL stakeholder process, the states have opportunities to engage ISO-NE and stakeholders directly, and provide feedback in that process.

In market design, ISO-NE has developed rules that allow for market participation of state-policy resources such as energy efficiency, demand response, and emerging technologies. ISO-NE implemented rules to allow for participation of state-sponsored resources in the capacity market and recently announced additional market rule changes to facilitate further opportunities for participation.

The states' efforts to achieve a decarbonized electricity sector and a clean energy future shape many aspects of ISO-NE's annual budget, work plan, and strategic goals. In annual strategic plan discussions, ISO-NE assesses state policy activity and industry trends to determine if any adjustments to priorities and projects are necessary.

f) Transmission system interconnections and upgrades.

In 2020, ISO-NE began publishing quarterly performance metrics for Interconnection Requests in compliance with FERC's Order No. 845. *ISO New England's Performance Metrics for Large Generating Facility Interconnection Requests in Compliance with Order No. 845* are publicly available publicly on ISO-NE's OASIS site at: <http://www.oasis.oati.com/woa/docs/ISNE/ISNEdocs/Order845GItracker.pdf>. The performance metrics track the processing time for each Interconnection Study – Feasibility Study, System Impact Study, and Facility Study – that is performed under the Large Generator Interconnection Procedures in Schedule 22 of the Open Access Transmission Tariff, as well as statistics on Interconnection Requests withdrawn from the interconnection queue at different phases of the interconnection process. More specifically, the metrics track the number of completed Interconnection Studies and the number of those studies for which ISO-NE exceeded the deadlines specified in the tariff for completion of the studies (without accounting for allowable Reasonable Efforts). Interconnection Studies are performed for Interconnection Requests to identify the transmission system upgrades necessary to facilitate the interconnection of the resources proposed in the requests to the New England system.

Additionally, ISO-NE submits informational quarterly reports to FERC whenever it exceeds the deadline for completing Interconnection Studies for more than 25% of any study for two consecutive calendar quarters. These informational reports are posted on ISO-NE's website, and the latest one is available at: https://www.iso-ne.com/static-assets/documents/2021/08/public_qtrly_interconnec_metrics_rpt_q2_2021.pdf. In addition to identifying the Interconnection Studies for which ISO-NE exceeded the completion deadlines, the informational reports provide the reasons for each Interconnection Study delay and any steps taken to remedy the specific issues and, if

applicable, prevent such delays in the future.

Since ISO-NE began calculating and reporting on the Interconnection Study timeline metrics, it has observed continuous improvements for the Feasibility Study timeline. The improvements may be attributable to the reduced scope of that study that ISO-NE also implemented in 2020. Conversely, the reporting shows the time to complete System Impact Studies has increased, largely due to the complexity and length of the studies for previously-queued projects, which, correspondingly, delay the start of subsequent studies. These studies included the analysis of large offshore wind farms and inverter-based resources, which generally require complex analysis, and the design of complex upgrades such as dynamic reactive devices.

For each identified metric, provide a description of the metric, how ISO-NE uses the metric, and what the metric indicates regarding ISO-NE performance and progress over the last three years.

- 5) Stakeholder Feedback. For the past three years, what are the main areas of stakeholder feedback/concerns provided to ISO-NE? For each area, provide the nature of the feedback/concern, how it was brought to ISO-NE's attention, and the steps ISO-NE is taking to address the feedback/concern.

ISO-NE has created and supports extensive forums for receiving and responding to state and stakeholder feedback. Feedback from the states and stakeholders is continuous, diverse, and varies widely. ISO-NE receives feedback on specific projects, such as market designs or planning procedure proposals; requests for additional information; and requests to study or undertake further development on specific topics. As noted in the answer to Question 3 above, ISO-NE also identifies and discusses regional priorities and projects through the annual work plan discussions.

ISO-NE obtains and responds to feedback through Participant Support and Solutions platforms (AskISO), board sector meetings, staff sector meetings, NEPOOL committee meetings, and planning committee meetings (e.g., Planning Advisory Committee, Environmental Advisory Group, Distributed Generation Forecast Working Group, and Energy Efficiency Forecast Working Group). In addition to NEPOOL members, state and consumer representatives are invited to attend and participate in these meetings. ISO-NE also initiates and responds to individual meeting requests by companies and organizations, and through outreach to and by individual ISO-NE employees on projects or areas of interest. Finally, ISO-NE utilizes stakeholder surveys to get annual feedback on its performance.

ISO-NE also holds monthly meetings with state organizations focused on electricity matters (e.g., NECPUC and NESCOE). Members of senior staff and the board conduct regular outreach meetings in every state, and ISO-NE staff present and respond to inquiries at numerous legislative committees. Furthermore, ISO-NE responds to numerous other speaking engagements where it provides requested information and context about its vision, mission, and proposed plans. At these forums, ISO-NE is open to and responsive to a multitude of questions. Examples of such educational forums include the Consumer Liaison Group and a wide range of state, regional, national, and global government and industry meetings and

conferences. ISO-NE also conducts training on a wide variety of issues as requested and needed for stakeholders to understand and engage in business with ISO-NE; this includes annual training exclusively for government officials and staff.

In addition to the formal meeting process, concerns and requests are often provided directly to ISO-NE through its participant support system (AskISO), which serves as a first line of responsiveness to inquiries and feedback about current rules and processes. ISO-NE receives approximately 9,000 AskISO inquiries a year. For the past several years, the top three topics of questions (by volume) have been questions related to non-Forward Capacity Market information (e.g., eMarket, Internal Bilaterals, Regulation Market, Continuous Storage Facilities); questions related to the Forward Capacity Market and qualification information; and questions related to various data requests (e.g., how to interpret data, suggestions for data, and how to locate data).

Finally, the information and data ISO-NE provides on its website, through ISO Express, and the ISO mobile app are made available to be responsive to the states and stakeholders and to transparently provide access to the vast, non-commercial, information at its disposal.

- 6) Stakeholder Feedback. What steps is ISO-NE taking to increase stakeholder feedback?
What steps is ISO-NE taking to increase its responsiveness to stakeholder feedback?

ISO-NE continues to expand the market and operational data and analysis that is available on ISO-NE's website, ISO Express (data portal), and the ISO mobile app in response to stakeholder feedback and interests. ISO-NE continually creates and provides up-to-date forums to respond to requests for information and to help ensure stakeholders have an opportunity for additional understanding and context of issues through trainings, technical sessions, and stakeholder sector meetings. Written and verbal requests received in various forums (e.g., committee discussions, informal discussions, and work plan meetings) are considered and assessed by subject matter experts in the course of developing new proposals.

ISO-NE has undertaken studies (e.g., pathways, future grid reliability studies, expanded transmission planning, and lessons learned studies) that are directly responsive to stakeholder feedback and ISO-NE has incorporated consequential changes as a result of this feedback.

Ultimately, ISO-NE has constrained resources and cannot attend equally to all requests for service. That is why it is important to develop, and periodically refresh, a work plan that prioritizes the various initiatives. The ISO-NE work plan is developed with the input of all stakeholders and is reviewed at least twice a year with NEPOOL and NESCOE.

New England States Committee on Electricity

2022 Budget Presentation

NEPOOL Budget & Finance Subcommittee

August 9, 2021

The logo for NESCOE (New England States Committee on Electricity) is displayed within a white circle. The text "NESCOE" is written in a bold, yellow, sans-serif font. The letter "O" is stylized to resemble a power plug or a lightning bolt. The circle is set against a blue background that runs vertically down the right side of the slide.

NESCOE

Background: Budget Review

Term Sheet Provision: “... the annual review of its [NESCOE’s] proposed budgets by at least the NEPOOL Participants Committee will be limited to considerations of accounting and reconciliation, so long as spending remains within the boundaries established by those frameworks..... NESCOE will develop an operating budget recommendation for each year in consultation with NEPOOL, the PTO Administrative Committee and ISO-NE within the boundaries of the then-approved five year budget framework ...”

- ✓ Proposed 2022 budget conforms to:
 - Boundaries of previously reviewed 5-year pro forma (2018 - 2022) supported by NEPOOL in June 2017 & accepted by FERC in August 2017
 - NESCOE commitment not to seek an increase over pro forma budget of more than 10% in any 1 year: 2022 proposed budget is less than 2022 5-year pro forma budget
- ✓ Following calendar year 2020, independent auditor concluded NESCOE books conform to generally accepted accounting principles

Background: Policy Priorities

Term Sheet Provision Governing Identification of Policy Priorities:

“Each year NESCOE will produce a *Report to the New England Governors* that will document its accomplishments from the preceding year and its projected policy priorities for the coming two years. This report will include a full accounting of spending by NESCOE during the preceding year and proposed budgets for each of the upcoming two years.”

Consistent with Term Sheet, 2020 *Report to the New England Governors*:

- ✓ Reviewed work in 2020
- ✓ Projected policy priorities
- ✓ Provided spending from prior year
- ✓ Projected budget information for upcoming two years

Projected Policy Priorities

- ✓ NESCOE provided to the Governors the *2020 Annual Report to New England Governors*
- ✓ Report simultaneously released to NEPOOL & ISO-NE & circulated to the Participants Committee
- ✓ NESCOE identified forward looking policy priorities at Section V, pages 17

Report in “Resource Center”

www.nescoe.com



REPORT TO THE NEW
ENGLAND GOVERNORS

New England States
Committee on
Electricity
2020

NESCOE
www.nescoe.com

Projected Policy Priorities, update

- ✓ Support state officials in furthering the recommendations identified in the “*Advancing the Vision*” Report to the New England Governors in April 2021.
- ✓ Participate actively in ISO-NE’s project to remove the Minimum Price Offer Rule from the capacity market design and advocate for consumer cost implications to be chief in the assessment of any associated proposal.
- ✓ Actively engage in FERC’s Advance Notice of Proposed Rulemaking on “*Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*”.
- ✓ Participate in ISO-NE’s effort to quantify risks to reliable system operation and to assess potential operational implications of low probability/high impact extreme weather events and to identify a cost-effective approach to any mitigation that may be appropriate.

NESCOE Organization & Misc.

Employees

- ✓ Diversity in academic training, skills; blend of private & public sector experience
- ✓ Return to employee level of 5 on September 1, 2021 with addition of Sheila Keane to NESCOE staff as Director of Analysis

Office Space

- ✓ 4 Bellows Road, Westborough, MA
 - Current lease through November 30, 2021; anticipate renewal
 - Provides small group meeting space needs
- ✓ Terminated lease of small room in Portsmouth, New Hampshire

Other Organization Matters

Technical Consultants

Technical consultants assist NESCOE in the regular course of business in analyzing ISO-NE studies and data.

Continue work with technical consultants to conduct independent analysis to inform state officials' decisions on key issues, including, for example:

- ✓ Exeter Associates, Inc.
- ✓ Wilson Energy Economics
- ✓ PeterGFlynn, LLC
- ✓ NewGen
- ✓ Bob Laurita
- ✓ Supplement with other expertise, as needed

Legal Counsel

Litigation is not the primary means by which NESCOE seeks to accomplish its objectives & thus, greater resource and focus has historically, and thus far in 2021, been on technical consulting. Further, while NESCOE produces most legal pleadings and analysis internally, the frequency and type of litigation brought by others influences the extent to which NESCOE engages outside counsel.

- ✓ FERC Counsel: Phyllis G. Kimmel Law Office PLLC

5-Year Pro Forma

Proposed 2022 budget conforms to 2022 budget in 5-year Pro Forma Framework

- ✓ 2022 Projected Budget in 5-Year Pro Forma: \$2,617,642
 - ✓ 2022 Proposed Budget: \$2,485,156
 - ✓ 2021 Budget, for reference: \$2,428,300
-

In relation to 2022 5-year Pro Forma, 2022 Proposed Budget reflects:

- ✓ Continued rebalance of technical consulting and legal spending in light of range of proceedings, some of which remain pending
- ✓ Reductions in assumed travel anticipating some continued reliance on remote meeting
- ✓ Reduction in rent (eliminate room in New Hampshire)

5-Year Pro Forma, for reference

NESCOE
 PRO FORMA BUDGET 2018-2022*



Expense Category	Year 11 (2018)	Year 12 (2019)	Year 13 (2020)	Year 14 (2021)	Year 15 (2022)
Salaries and Wages					
Salaries	983,020	1,012,510	1,042,886	1,074,172	1,106,397
Payroll Taxes	98,302	101,251	104,289	107,417	110,640
Health and Other Benefits	84,975	87,524	90,150	92,854	95,640
Retirement §401(k)	39,321	40,501	41,716	42,967	44,256
Total, Salaries and Wages	1,205,618	1,241,787	1,279,040	1,317,411	1,356,934
Direct Expenses - Consulting					
Technical Analysis	517,734	533,266	549,264	565,742	582,714
Legal (FERC)	140,689	144,909	149,257	153,734	158,346
Total, Direct Expenses, Consulting	658,422	678,175	698,520	719,476	741,060
General and Administrative					
Rent	26,523	27,318	28,138	28,982	29,851
Utilities	5,305	5,464	5,628	5,796	5,970
Office and Administrative Expenses	43,497	44,802	46,146	47,530	48,956
Professional Services	78,126	80,469	82,883	85,370	87,931
Travel/Lodging/Meetings	91,155	93,890	96,706	99,608	102,596
Total General and Administrative	244,604	251,943	259,501	267,286	275,304
Capital Expenditures & Contingencies					
Computer Equipment	5,665	5,835	6,010	6,190	6,376
Contingencies	211,431	217,774	224,307	231,037	237,968
Capital Expenditures & Contingencies	217,096	223,609	230,317	237,227	244,344
TOTAL EXPENSES**	2,325,741	2,395,513	2,467,379	2,541,400	2,617,642

*Based on projected 3% annual adjustment. Line items and categories subject to increase greater than, or decreases from, amounts projected.

Any such changes will be subject to review, input, and recommendations by the NEPOOL Participants Committee (and/or its designees).

**At no time during this 5-year period will NESCOE seek a budget increase of more than 10% in any 1 year or more than 30% on a cumulative basis.

2022 Proposed Budget

NESCOE Pro Forma Budget Proposed 2022

	2022
Salaries and Wages	
Salaries	1,106,398
Payroll Taxes	110,640
Health and Other Benefits	92,855
Retirement §401(k)	<u>44,256</u>
Total, Salaries and Wages	<u>1,354,149</u>
Direct Expenses - Consulting	
Technical Analysis	362,070
Legal (FERC)	<u>362,071</u>
Total, Direct Expenses, Consulting	<u>724,141</u>
General and Administrative	
Rent	24,000
Utilities	5,971
Office and Administrative Expenses	47,530
Professional Services	40,000
Travel/Lodging/Meetings	<u>55,000</u>
Total General and Administrative	<u>172,501</u>
Capital Expend. & Contingencies	
Computer Equipment	8,442
Contingencies	<u>225,923</u>
Capital Expend. & Contingencies	<u>234,365</u>
TOTAL EXPENSES	<u><u>2,485,156</u></u>
BUDGET	2,617,642

2020 & 2021 Spending & Implications for 2022

Unspent funds in any year credited toward future year

2020 Total Spending: \$1,565,585*

2021 Spending to end of June: \$741,049

2021 Projected Year End: \$1,642,659*

* Cumulative prior years' true up, including 2019, was reflected in the 2021 revenue requirement and rates. The 2020 true up will be reflected in the 2022 revenue requirement and rates (see next slide). Any 2021 true up will be reflected in the 2023 revenue requirements and rates.

2022 Projected Billing Rate

With thanks to ISO-NE for calculations -

2022 Budget: \$2,485,156

Less 2020 True Up: (\$781,042)

Total Revenue Recovery: \$1,704,114

Divided by Total Network Load: 217,262,589

(total network load from 2021 ISO-NE tariff; no escalation or reduction used in calculation)

2022 Schedule 5 Estimated Rate \$0.00784 per kW-month

Thank you.

Questions?

The NESCOE logo is centered within a white circle that is positioned on the right side of the slide, overlapping a blue vertical bar. The logo itself consists of the word "NESCOE" in a bold, orange, sans-serif font. The letter "O" is replaced by a stylized lightning bolt symbol, also in orange.

NESCOE

MEMORANDUM

TO: NEPOOL Participants Committee Members and Alternates

FROM: Paul Belval and Samantha Regan, NEPOOL Counsel

DATE: August 26, 2021

RE: Request by Stored Solar for Waiver of GIS Operating Rules and GIS Agreement

At the September 2, 2021 Participants Committee meeting, Stored Solar J&WE, LLC (“Stored Solar”) will ask the Participants Committee to waive certain NEPOOL Generation Information System (“GIS”) Operating Rules (“Rules”) and sections of the Amended and Restated Generation Information System Administration Agreement dated as of October 1, 2017, between APX, Inc. (“APX”) and NEPOOL (the “GIS Agreement”). Stored Solar requests this relief so that NEPOOL can direct APX to correct monthly generation data on active GIS Certificates for Stored Solar’s Ryegate 1 biomass generating facility (“Ryegate 1”). This memorandum describes the relevant facts, Rules and provisions of the GIS Agreement. Attachment 1 to this memorandum is a proposed form of Waiver Agreement between NEPOOL and APX to be used if NEPOOL decides to grant the requested waiver. Stored Solar has provided an explanation of why it believes its requested relief is appropriate, which is being distributed with this memorandum.

Ryegate 1 is a 20 MW wood-fired generation facility that is eligible for renewable energy credits under the Connecticut and New Hampshire renewable portfolio standards (“RPS”). The GIS creates and tracks Certificates that are used to evidence those renewable energy credits.¹ Ryegate 1 was registered in the GIS as a multi-fuel (wood and natural gas) generating unit by a prior owner of the facility, and that registration has not been changed since that time. Under Rule 2.5(d), each Certificate for a multi-fuel unit reflects only one fuel source, with the split of total Certificates issued for any month for that unit reflecting the proportion of output per fuel type in that month. The Rule further states:

With its initial registration and by the fifth calendar day preceding each Creation Date thereafter, each GIS Generator and Importing Account Holder that has registered a generating unit with multi-fuel capability will submit to the GIS Administrator information reflecting the proportion of output per fuel type, by MWh, generated by the unit during each month in the applicable calendar quarter to which such Creation Date relates, using available sources of information. Such information shall be used to allocate Certificates for such multi-fuel generating units for each month for which it was supplied.

Stored Solar states that Ryegate 1 uses natural gas (propane) only for plant start-up, and almost all of its output is produced by biomass (wood). There is no natural gas transmission line

¹ Each Certificate in the GIS represents 1 MWh of generation.

to the plant and therefore a propane tank similar to Stored Solar’s other plants is used to ignite the biomass at start-up. For the months of February 2021 and March 2021, Stored Solar incorrectly entered the production by fuel type for each month, such that the biomass output was entered as natural gas output, and the natural gas output was entered as biomass output. As a result, the Certificates issued on July 15, 2021 for Ryegate 1 for those two months reflected the following:

Month	Biomass Output	Natural Gas Output
February 2021	0 MWh	13,151.56 MWh
March 2021	2.06 MWh	14,426 MWh

Vermont Electric Power Producers, Inc. (“VEPPI”), as administrator of the Vermont Standard Offer Program, transfers 50 percent of the Certificates generated by Ryegate 1 to sixteen Vermont utilities on a pro rata basis. Those utilities then sell the Certificates to entities that can use them to satisfy the Connecticut and New Hampshire RPSs. Since only Ryegate 1’s biomass output is eligible for the RPSs in Connecticut and New Hampshire, the error in allocating the output by fuel types between biomass and natural gas results in only two of the GIS Certificates issued for February and March for the facility being RPS eligible, whereas if the fuel types had been entered correctly, 27,578 eligible Certificates would have been issued for that month. Stored Solar was supposed to have delivered the correctly categorized Certificates to the Vermont utilities in August. Stored Solar estimates that it will lose approximately \$1,000,000 as a result of the Certificates being issued with the incorrect fuel types.

Stored Solar has approached the regulators in Connecticut and New Hampshire about permitting the Ryegate 1 Certificates for February and March that were erroneously reported as generated by natural gas to be recognized as having been produced by biomass and accordingly eligible to satisfy the respective RPSs. Both sets of regulators have reportedly indicated to Stored Solar that, in order to be counted as having been produced by biomass, the Certificates must be corrected in the GIS. Stored Solar requested that APX correct the Certificates after they had been issued. APX declined that request, concluding that it did not have the contractual authority to grant it.

The documents that govern APX’s contractual authority over the GIS are found in the GIS Agreement and GIS Operating Rules. Section 4.2 of the GIS Agreement and Rule 1.4 require APX to administer and operate the GIS in accordance with the GIS Operating Rules. APX, as the GIS Administrator, has under those provisions “the sole responsibility for the compilation, indexing, reasonable interpretation and implementation of the GIS Operating Rules.” There is no Rule that permits adjustments to Certificates following their creation due to a data entry error by a GIS account holder. Rule 2.8(a), which APX referenced to Stored Solar, states:

A GIS Generator or Importing Account Holder may request that the GIS Administrator adjust the number of Certificates to be created for it (or, if Certificates of different types or classes are being created for the same GIS Generator or Importing Account Holder, the number of Certificates of each type created for it) at least five calendar days prior to the Creation Date on which such Certificates will be created.

APX indicated to NEPOOL counsel that it would be willing to waive these contractual requirements and grant Stored Solar's request to correct the inaccurate Certificates issued to Stored Solar on July 15, 2021 if NEPOOL, as the counterparty to the GIS Agreement, agreed to such a waiver and directed APX to correct the Certificates. Stored Solar, which is a NEPOOL Participant, has requested such a waiver. In order to ensure that any potentially affected entities are aware of this waiver request APX will provide a notice to all GIS account holders and direct them to provide any input on those waivers to NEPOOL counsel prior to the Participants Committee meeting.

Section 13.5 of the GIS Agreement requires that any modifications of that agreement be in writing signed by both NEPOOL and APX. The waivers of the GIS Agreement provisions and the Rules identified herein are therefore reflected in the proposed Waiver Agreement included with this memorandum as Attachment 1. The Waiver Agreement has been drafted to apply only to the current situation involving Stored Solar and would not otherwise change any Rule or the GIS Agreement. Any similar waivers of the Rules in the future would also require the approval of the Participants Committee. The approval of the Waiver Agreement requires a two-thirds Vote of the Participants Committee.

As reflected in the forms of resolutions below, if the Participants Committee wishes to grant the requested waiver, it must also take a number of related actions to effect the Waiver Agreement. One resolution, if passed, would approve the form of Waiver Agreement to accomplish the waiver required to instruct APX to correct the Certificates. A second resolution, if passed, would authorize the Participants Committee Chair to execute the Waiver and would direct NEPOOL counsel to take such actions as deemed reasonably necessary to implement the Waiver Agreement if approved.

The following forms of resolutions can be used for Participants Committee actions on this matter as described above:

RESOLVED, that the Participants Committee (i) approves the temporary waivers of the relevant GIS Operating Rules and the relevant section of the GIS Agreement, as set forth in the Waiver Agreement circulated to this Committee and posted with the materials for this meeting, and (ii) instructs APX, as the GIS Administrator, to correct certain GIS Certificates issued to Stored Solar J&WE, LLC, in each case as described in the materials circulated in advance of this meeting.

RESOLVED, that the Participants Committee Chair is authorized to execute the Waiver Agreement on behalf of NEPOOL in the form circulated in advance of this meeting with such non-material changes thereto as may be approved by the Participants Committee Chair, and NEPOOL Counsel is directed and authorized to make any filing(s) and take any other actions as it deems reasonably necessary to implement the Waiver Agreement.

WAIVER AGREEMENT

This WAIVER AGREEMENT (this “Waiver”) is made effective as of the 2nd day of September, 2021 by and among APX, Inc., a California corporation (“APX”), and the entities that are Participants from time to time in the New England Power Pool, pursuant to the Restated New England Power Pool Agreement dated as of September 1, 1971, as amended and restated to date and as further amended and/or restated from time to time, acting herein by and through the Participants Committee (“NEPOOL”). This waiver is made under the Amended and Restated Generation Information System Administration Agreement dated as of October 1, 2017 between APX and NEPOOL (the “GIS Agreement”). APX and NEPOOL may be referred herein as the “Parties” and each may be referred to as a “Party.” Capitalized terms used in this Waiver and not otherwise defined have the meanings assigned to such terms in the GIS Agreement.

WHEREAS, Rules 2.5(d) and 2.8(a) of the NEPOOL Generation Information System (“GIS”) Operating Rules (“Rules”) require that certain information for multi-fuel generating units, and requests for changes to that information, be provided no later than five days prior to the Creation Date for the Certificates to be issued based on that information (the “Certificate Information Deadline”); and

WHEREAS, Rule 1.4(a) and Section 4.2 of the GIS Agreement require APX to administer the GIS in accordance with the Rules; and

WHEREAS, Rule 1.4(b) and Section 4.2 of the GIS Agreement state that APX, as the GIS Administrator, shall have the sole responsibility for the compilation, indexing, reasonable interpretation and implementation of the Rules; and

WHEREAS, NEPOOL Participant Stored Solar J&WE, LLC (“Stored Solar”) is the GIS account holder for the Ryegate 1 generating unit, which is registered as a generating unit with multi-fuel capability under Rule 2.5(d) of the Rules; and

WHEREAS, Stored Solar has requested that APX change information on its Certificates for the first quarter of 2021 after the Certificate Information Deadline to correct a reporting error made by Stored Solar such that (i) the Certificates issued for generation in February 2021 and March 2021 that had erroneously identified natural gas as the fuel source be corrected to identify wood as a fuel source and (ii) Certificates issues for generation in February 2021 and March 2021 that had erroneously identified wood as the fuel source be corrected to identify natural gas as the fuel source (the “Stored Solar Adjustment”); and

WHEREAS, APX has determined that absent a waiver by both APX and NEPOOL of the GIS Agreement and applicable Rules, APX does not have the contractual authority to effect the requested Stored Solar Adjustment; and

WHEREAS, APX is willing to agree to waive the applicable GIS Agreement and Rules but only if NEPOOL also agrees to such a waiver and directs APX to make the Stored Solar Adjustment; and

WHEREAS, the NEPOOL Participants Committee voted on September 2, 2021 to authorize this Waiver Agreement and to direct APX to make the Stored Solar Adjustment;

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

1. The Parties waive Rules 1.4(a), 1.4(b), 2.5(d) and 2.8(a) and Section 4.2 of the GIS Agreement solely to the extent necessary for APX to make the Stored Solar Adjustment prior to September 15, 2021.
2. NEPOOL directs APX to make the Stored Solar Adjustment prior to September 15, 2021, notwithstanding the provisions of the Rules.
3. This Waiver shall be governed by, and construed and enforced in accordance with, the laws of the State of Connecticut.
4. This Waiver may be executed by the Parties in counterparts, each of which shall be deemed an original and which, taken together, shall be deemed to constitute one and the same instrument. Facsimile signatures on this Waiver, including those transmitted in portable document format (.pdf) or other electronic means, shall have the effect of original signatures thereon.
5. This Waiver shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns.
6. Except as specifically waived hereby, all terms and provisions contained in the GIS Agreement and the Rules shall remain unchanged and in full force and effect.
7. The waivers of rights under this Waiver are limited solely to the matters and times set forth herein. This Waiver sets forth the entire understandings of the Parties with respect to the matters addressed herein and supersedes any prior negotiations or agreements, whether written or oral, with respect thereto. As provided in Section 13.1 of the GIS Agreement, no waiver of rights under this Waiver shall be deemed to be a waiver with respect to any other matter arising under the GIS Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have executed this Waiver as of the date first above written.

NEW ENGLAND POWER POOL, acting through the NEPOOL Participants Committee

By _____
Name: David A. Cavanaugh
Title: Chair of the NEPOOL Participants Committee

APX, INC.

By _____
Name:
Title:



Stored Solar, LLC
1231 Main Road
West Enfield, ME 04493

NEPOOL

New England Power Pool
Participants Committee

VIA EMAIL: Belval, Paul N. <pnbelval@daypitney.com>

Dear Committee Members:

Our staff when entering the emission data for the Ryegate facility for the first quarter of this year made a mistake and placed the correct emissions numbers in the wrong box.

We feel that the error is so obvious that the correction of this should not be controversial, however the error was not caught by us, or the GIS Administrator before the portal was officially closed. On numerous occasions the GIS office has called us when something looked wrong with the emissions data. The emissions data entered for February and March for Ryegate was correct and inconsistent with natural gas as a fuel. While we don't rely on the GIS Administrator's office to correct our entries, we feel there is enough blame to go around for us, and/or the GIS Administrator's office, for not recognizing the error in sufficient time to correct it while the portal was open.

The root cause of the error even being allowed, is that the set-up of the facility was wrong from the beginning. It is a single fuel plant and was incorrectly set up as dual fuel. This site has no access to natural gas. As in all our other biomass plants (eight in total), a start-up fuel is used. As in Ryegate, several of the plants have propane tanks for lighting the biomass, while others without propane use a combination of oily rags, newspaper, and other means of lighting the biomass fuel. None of our other plants are categorized as dual fuel. I checked with our managers who have worked for other companies on other biomass plants, and they have told me they never had an issue with them being categorized as dual fuel. I think the previous allocation was merely a result of having two boxes and the individual input should not have been split, however it is amount of heat input allocated as a start-up fuel. This allocation is not customary and does not occur on other similar plants in our portfolio and to our knowledge other owners as well. We plan to take the steps required to correct this set-up, so an error of this type could not recur.

Additionally, in reviewing the GIS rules, we feel there is ambiguity caused by 2.8 (c) which states:

(c) QEA's for EPA-provided emissions data for any calendar quarter that are provided to the GIS Administrator on or before the fifth day before the Creation Date for that calendar quarter shall be reflected on the Certificates created for that calendar quarter. QEA's for EPA-provided emissions data for



Stored Solar, LLC
1231 Main Road
West Enfield, ME 04493

any calendar quarter that are provided to the GIS Administrator after the fifth day before the Creation Date for that calendar quarter shall be reflected on the Certificates created on the next Creation Date, so long as such subsequently created Certificates relate to generation that occurred in the same calendar year as the emissions that are the subject of any such QEA. Any QEA that is provided to the GIS Administrator after the fifth day before the Creation Date for the fourth quarter Trading Period for the applicable calendar year will be disregarded by the GIS Administrator.

In spite of the fact that the RECs in question are not QEAs, this would infer, that adjustments can be made except in fourth quarter RECs. Since these are first quarter RECs there should no harm to the system to make the change to correct this clerical error, provided it is not for fourth quarter RECs.

The RECs generated by the Ryegate plant are shared with all Vermont power producers, so the failure to remedy this clerical error would cause irreparable damage to the entire State of Vermont.

We respectfully request that your committee quickly allow this correction to be made since the GIS Administrator has agreed to allow the correction upon the instruction of NEPOOL.

If you have any questions regarding the above, I am available to discuss them with you at your convenience.

Sincerely,

William J. Harrington
Director and Vice President
Stored Solar, LLC
bharrington@storedsolarllc.com
(219) 712-4764 Cellular