

APPROVED
E&O Committee Meeting
Remote Zoom Meeting – October 24, 2022
2:00 p.m. – 3:30 p.m.

Committee Directors: Tom Mongeon (Chair), Leo Dwyer (absent), Bill Darcy, Carolyn Kedersha

Mike Jennings, Josh Mazzei, Harry Veins, Sharon Davis, Carl Borowiec, Jim Bakas, Ed French, Paul Phillips, Drew Dunagin, Alyssa Clemson Roberts, Dustin Ryan, Steve Kaminski, Jeff Morrill, Autumn Doan, Brian Callnan, Brenda Boisvert, Maida Lessard (recording)

Other Attendees: Elizabeth Whitney of Maguire Whitney

Chair Mongeon convened the meeting at 2:00pm

Agenda Review

Agenda approved with addition of reviewing items from Corporate Services Meeting and reviewing action/parking lot items at the end of this meeting.

Meeting Minutes Approval – August 4, 2022

Upon motion by Mr. Darcy and seconded by Mrs. Kedersha it was:

VOTED: Unanimously to accept the minutes with additions.

Corporate Services Meeting Update

Mr. Jennings gave an update on Vegetation Management and the consultant study completed previously.

It was decided to review Vegetation Management items at the next E&O Committee Meeting in the spring. The goal is to revisit policies, procedures, and the chosen cycle to further inform the Board.

We will be reevaluating the hiring of internal vs external tree crews for next year and will report back to the Board.

Mr. Darcy requested the consultant-based report on Vegetation Management be uploaded to OnBoard.

Mr. Bakas commented that he had previously reviewed insourcing our own tree crews and found it not advantageous but is good to review it again.

Policy Review

Chair Mongeon and Mr. Jennings discussed and decided not to recommend any changes at this time.

VOTED: Unanimously to recommend to the Board to reaffirm policies as is.

Capital Construction Budget Overview

Mr. Jennings reviewed how assumptions are figured according to the category of the budget. He explained LED lights typically go by the number of members converting from HPS fixtures to LED fixtures and that would drive the cost. Percentage of members that still need to convert to LED lights in the future plays a part in how the assumption is figured. Some are less varied categories.

Overall Dollars

New Terminology – no longer Controllable and Uncontrollable

2023 Recurring Spending (Cost of doing business – member driven)

Historical

Projections

Highlights

2023 Elective Spending (Projects we chose to make the system better)

Highlights

Overall Dollars

	<u>2022 Budget</u>	<u>2023 Budget</u>
Uncontrollable/Recurring	\$11,145,582	11,128,000
Controllable/Elective*	\$8,118,761	12,040,129
(Increased due to large expenditures for 2023 and now includes SCADA Expansion \$1million)		
*TRP dollars included	\$4,020,000	\$4,950,000
Total CCB	\$19,264,343	\$23,168,129

Recurring Historical Spending

- Recurring accounts are predicted based on historical spending.
- Dollars are adjusted for known projects from 2022.
- Trends are taken into account.

- New Lines – New Consumers
- Other determining factors.
 - Pole replacements and cable failures.

New Lines – New Consumers

- Projected approximately \$3.5 million dollars in 2022 and \$3 million in 2023.
 - By 2023, we should see a decrease in consumers buying and building in the state due to increased interest rates.
 - Re-visiting allowances which should increase the contributions we receive for membership.

Ordinary Replacements

- Driven mainly by failed equipment and storms and not the economy. We are on track to spend approximately \$2 million in 2023.

Projected Recurring Categories

- Failed Cable Replacement (600-DB)
 - Spending will decrease over the years as we replace direct buried cable through the DB Replacement Program.
- Pole Replacement Program (600-PR)
 - Spending will be low for 2023 due to employee issues and pole testing cannot be done in the winter months so much of it will roll into the following year if not started early.
 - Pole testing issues cause replacements to be delayed until 2024.
- Total spending is projected at \$11,128,000

Mr. Darcy asked if there will be more pole testing and a significant amount of defective poles found due to the broadband expansion for next year.

Mr. Jennings responded that the percentage of failed poles is relatively low (<1%). While completing the make ready they will be going out to inspect the pole and if does not pass the testing, it will be part of the make ready.

Elective Spending (Controllable)

- Large increase budgeted \$12,040,129

- Projects are put in priority order.
 - Current issues such as load driven projects (capacity and voltage) are first priority and any leftover money is used for reliability projects.
- Large Expenditures
 - Transformer Replacement Plan - \$4 million budget for this year, next year it is projected to be \$5 million.
 - Mobile Transformer – one time expenditure next year of \$2.32 million, down payment is due this year.
 - SCADA Expansion - \$1 million which is now included in this budget (not a new expense).
 - Required Line Upgrades – \$1.8 million budgeted for 2023. These are load driven projects that we have to do, not reliability-based projects, these are system needs in order to serve our members.
- Security Upgrades
 - No longer have this category as all the security upgrades (fences and cameras) have been completed. The only exception would be new substation re-builds, fencing will be done at that time.

Elective Spending Breakdown (with Mobile Substation)

- New Mobile Substation (one time expense) 18%
 - Our existing mobile substation is 43 years old.
 - Second unit is a mobile transformer only.
 - TRP and system reliability requires a third unit.
 - Cannot perform maintenance while rebuilding a substation.
 - Substation upgrades for 12+ years.
 - Estimated cost ~ Approximately \$3 million.
 - \$2.15m remaining for delivery in 2023.
 - Maintain three mobiles for the length of the TRP.
- Minor System Improvements (1600) 10%
 - WB11 Line Relocation
 - Phase 1: Relocate 1 mile of line from out of ROW to roadside. Will be completed Q1 2022.
 - Phase 2: Continue building along NH11 to the existing 1 phase line.
 - Future – Phase 3 & 4.
 - Phase 3 will complete the transition to feed all 3 phases from the road.
- Capacitors (0605) 1%
- Voltage Regulators Installation (0604) 4%

- SCADA Expansion (2020-2026) 8%
 - 2022 Completed Plymouth District
 - 2023 Meredith and Ossipee
 - \$1 Million Total
 - 2024 – 2026 will complete the system
 - \$2.5 Million Estimated
 - Future – Technology roadmap
 - “DMS” / “FLISR” (Distribution Management System/Fault Location Isolation Restoration)
 - Inverter control
 - Microgrid
 - Building the house
- Recloser & Sectionalizing Equipment Inst (0603) 1%
- Substation Changes (0500) 2%
- New Substations (0400) – TRP 41%
 - Glen Substation is now complete.
 - Barnstead will be completed in 2022.
 - Webster and Jackson Substations are planned for 2023.
 - Webster transformer failing and regulator issues.
 - Control houses and transformers ordered.
 - Center Harbor will begin in 2023 and complete in 2024. Delayed due to Webster Substation issues.
- Line Conversions (0300) LRP Load Driven 15%
 - 3.7 Miles total of reconductoring and new line to fix identified issues.
 - First priority projects that must be completed.
 - \$1.8 million total for all projects
 - "3PH 1/0 SPACER to 3PH 336 MCM SPACER (Dbl Ckt) - 0.7 mile Conductor Capacity"
 - "1ph 2 ACSR & 1/0 Spacer to 3ph 1/0 ACSR - 0.2 mile 1PH Loading, Low Voltage"
 - "1ph 2 & 1/0 ACSR to 3ph 1/0 ACSR - 1.2 miles 1PH Loading, Low Voltage"
 - "3ph 1/0 ACSR to 3ph 336 ACSR - 0.1 mile Conductor Capacity"
 - "Vph & 1ph 2 ACSR to 3ph 1/0 ACSR - 1.1 miles Load Balance, Low Voltage"
 - "Extend 3PH 336 MCM ACSR Dbl Ckt - 0.4 mile Low Voltage, Conductor Capacity"
- Overall Dollars
 - Uncontrollable - \$11,128,000 48%
 - Controllable - \$12,040,129 52%
 - TRP dollars included - \$4,950,000 21.4%

- Total CCB - \$23,168,129 100%

VOTED: Unanimously to recommend the Board approve the CCB budget.

Substation and Camera Follow-Up (Carl Borowiec)

- Glen Substation Rebuild/SWI Substation Security Systems
 - On July 2, 2020, the Glen Substation suffered a catastrophic failure
 - A risk analysis study was completed on all substations
 - In the Fall of 2020, a long-term Transformer Replacement Plan was approved
 - In 2021 we hired a substation engineering firm and environmental consultants to help with substation rebuilds
 - In December of 2021 we started demo & construction at the Glen Substation with ICREed
 - In June of 2022, the new Glen transformer was energized
 - Carl shared photos of the old substation, original transformers, transformer concrete tower containment base, new regulators, security fencing, and completed substation
- Substation Security
 - In May of 2018, the Lincoln Substation was broken into, and some copper grounds were cut and stolen. Although only approximately \$100 worth of copper was stolen, the damage that was done to our station was very costly.
 - Substation construction cost approximately \$1 million dollars to repair the damage.
 - A decision was made to increase our security at our substations to deter future thefts and to protect our infrastructures.
 - The substation's perimeter fences have been replaced to make them taller and harder to get in to. A tight 3/8's mesh fabric was installed that is not able to be cut with bolts cutters or to be climbed.
 - We also rebuilt the feed coming into Glen. We were able to remove 13 poles and replace with only 7 poles and 1 push brace. This made the site safer and less confusing due to what was added over the years.
 - Systems With Intelligence (SWI) camera systems were added in some of our substations to help be able to deter and catch thieves if they do break in.
- SWI Security Camera Systems
 - Lincoln, Green Street, and Glen systems have been installed, commissioned and in service.
 - Barnstead system has arrived and will be installed during the substation rebuild.
 - Moultonborough Neck and Corliss systems are on order and will be installed before the end of the year.
 - Carl shared photos that the infrared cameras pick up on – including a black bear!

Chair Mongeon asked if NHEC receives a discount on our insurance since we now have security systems in place, and is there signs warning of security cameras etc.

Mr. Jennings replied not currently. However, the more costly substations have been prioritized to receive these systems. For example, Lincoln substation was the first one to receive these security enhancements since there are 3 transformers and due to thefts in the past.

The cameras are noticeable, but no visible signs currently exist.

Grant Update – 3rd Quarter

Mr. Jennings introduced Ms. Whitney from McGuire Whitney.

Ms. Whitney shared an overview of McGuire Whitney:

- Government relations, policy analysis, strategic counsel, and communications
- Exclusive clientele: public power & co-op business models
- Expanded into grant writing in 2021
- Four lobbyists, three grant writers, one grants manager, one associate
- Ms. Whitney shared the Targeted Program Status and dollars available
- Reviewed what the GRIP (Grid Resilience Innovation Partnerships) program consists of as the statute divides the program between a Federal program (GRIP) and a State formula grant program that can be sub awarded to utilities. Applicants can only apply to one.
 - Grid Resilience – 40101
 - Veg Management
 - Undergrounding
 - Supplemental
 - Underserved communities
 - Max award is 3x past 3 years' expenditures on resilience or \$100 million
 - Grid Resilience R&D – 40103
 - States, local governments or tribes, or PUCs are applicants – meetings with the NH Dept of Energy will be forthcoming to discuss
 - Likely to focus on innovative transmission, distribution projects including advanced technologies, innovative partnerships, financial arrangements, and environmental siting and permitting strategies
 - 4-40 awards anticipated
 - \$50-250 million, up to \$1b for interregional transmission
 - Smart Grid – 40107

- Broad set of eligible smart grid investments, focus shifted away from AMI
- 25-40 awards anticipated
- Max \$30 million

Mr. Jennings updated meeting status with NHEC and the DOE.

- Last meeting NHEC attended with three other utilities and the DOE, it was noticed that the DOE took notes on all suggestions presented by NHEC.
- Money awarded has a preference for disadvantage populations – challenge is NHEC has the lowest percentage of disadvantaged people using their qualifier in the entire country. Working with the DOE to revise the criteria to determine disadvantaged populations within the electric infrastructure.
- Other utilities seem to not help their cause – money is no issue to us – we don't need more money it's because we can't raise our rates. NHEC portrayed that they do in fact need the money and are concerned about improving reliability for the members. infrastructure.
- Meetings overall have been going well – we have a good likely hood of receiving money. They were to receive an updated guidance at the end of September which they have not received yet. They have decided to award the 1st and 2nd year combined due at the end of March 2023.

Mr. French mentioned that Veg Management would be included in the resilience piece but noted that NHEC is still not where they want to be. Mr. French asked if this grant money could potentially assist NHEC in offsetting the budgetary impact in increasing Veg Management as well as getting on a better rotation and time frame to get funding.

Mr. Jennings replied that this would be dependent on what the evaluation criteria will be which is up in the air right now. The DOE wants part of the criteria to be a project that we would do or on our radar even without the grant money and put the information in an application and tell them what we would do with that extra money that we didn't have to spend should we be awarded grant money. NHEC has not determined the exact project that would be but we do have a priority list of different projects we could use based on what the current language is.

Mrs. Kedershaw asked if the 10107 Smart Grid could be used to take one circuit at a time and connect it to a smartgrid technology as was mentioned in the original strategic plan.

Ms. Whitney replied that they are planning to apply for funding for some of this money to invest in smart grid.

Chair Mongeon asked who is the one person that is looking over the strategies on the various programs and prioritizing them.

Ms. Whitney replied that McGuire Whitney holds bi-weekly meetings with NHEC's Senior Management team but there is not one single person that oversees it.

Mr. Callnan also commented that McGuire Whitney refers back to the funding plan and knows the areas of focus. As they are researching grants the Senior Management team gets alerted if there is an opportunity that they need to pay attention to and do further research.

Chair Mongeon suggested that we need to make sure we put all appropriate resources towards this as there is a lot of money out there.

Mr. Darcy commented he is feeling more comfortable and suggested we schedule an informal meeting with the DOE alone without other utilities to get a feel of what their priorities are focused on. There are other resources that could help schedule these meetings.

Ms. Whitney agreed with Mr. Darcy. A follow-up individual meeting with the US Dept of Energy Regional Specialist for the New England area, someone who was in the NEPPA meeting previously and have a one on one to share ideas.

Ms. Whitney went over the top IRA (Inflation Reduction Act) wins for co-ops that was just became law this quarter:

- Most of the spending in this bill is in the form of tax credits for clean energy investments.
- This will allow co-ops to file for a direct pay rebates.

New Grant Programs – IRA

Grants

- Forgivable loans for rural energy
- Rural Energy for America
- Biofuel infrastructure
- **Cooperative Transition Fund**
- Siting interstate transmission lines
- Clean heavy-duty vehicles
- **Green Bank**
- Environmental and Climate Block Grants

Loans, Rebates, Etc.

- Home energy performance based rebates

- High-efficiency electric home rebates on appliances
- Assistance for building code adoption
- Energy Infrastructure Reinvestment Financing
- Transmission facility financing
- HALEU

Mr. Jennings commented that almost all of these grants have some sort of cost share so they are not just free money. We have to spend some money in order to obtain these large grants. We are focusing on topics such as infrastructure or electric vehicles as these would be worthwhile for us to apply for.

Strategic Topic Discussion

Objective: to come up with a list of prioritized topics for future strategic discussion within the E&O Committee.

Chair Mongeon shared that strategy at the board level consists of 4 areas:

1. Reliability
2. Supply Chain Risks
3. EV Adoption Rate, PB Penetration, DMS/FLISR
4. Major Storms – Restoration Plan submitted on an annual basis

The E&O Committee attendees brainstormed together some Strategic Topics to focus on in the future:

- Beneficial Electrification/Drive to scale (CK)
- EV/Heat Pumps (CK)
- System Impact (JB)
- Measure reliability beyond reliability metrics we currently use (CK)
- Strategic plan changed? Piloting a circuit for a particular technology in the future (CK)
 - Re-evaluating circuits and re-engineer feeders if necessary (JB)
- Reliability – measure against other utilities, cooperatives, triggers of unreliability? (BD)
- Large risk – supply chain, maintenance never ends to maintain a good system (JB)
- Resiliency (TM)
- Mutual Aid – any future risks? (TM)
- Re-visit PUC rules and how they apply to NHEC (MJ)
- Identifying cost effective projects that have the largest impact for reliability improvements (JM)
- VP HR vacancy - risk with adequate line crews? VP of Operations & Engineering retiring in the future? (BB)
- Retention Management – 1/3 of our staff are new employees since Covid (DR)
- Grants (JB)

- Refresher of how the co-op is situated with PUC etc (SK)
- PUC/DOE rules – look at different rules and changes (PP)
- Potential future issues – PV penetration and EVs (TM)

Action Item: Upload consultant Veg Management report and McGuire Whitney's slides to OnBoard.

Adjournment

Upon motion by Mr. Darcy, seconded by Mrs. Kedershaw, Chair Mongeon adjourned the meeting at 3:31pm.