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Minutes

Date: November 6, 2023
To: NCPA Facilities Committee
From: Carrie Pollo
Subject: November 1, 2023 Facilities Committee Meeting Minutes

- 1. Call meeting to order & Roll Call** – The meeting was called to order by the Committee Vice-Chair Shiva Swaminathan (Palo Alto) at 9:10 am. Attending via teleconference and on-line presentation were Midson Hay (Alameda), Yuliya Shmidt (BART), Josh Cook, (Biggs), Jake Carter (Gridley), Nathan Tang (Port of Oakland), Nick Rossow (Redding), Monica Nguyen, Basil Wong, Kathleen Hughes, and Suds Jain (Santa Clara), and Colin Selby (TID). Peter Lorenz (non-voting Representative with TID) also attended via teleconference and on-line presentation. Those attending in person are listed on the attached Attendee Sign-in Sheet. Committee Representatives from Healdsburg, Lompoc, Plumas-Sierra, Shasta Lake, and Ukiah were absent. A quorum of the Committee was established.

PUBLIC FORUM

No public comment.

OPEN SESSION

DISCUSSION / ACTION ITEMS

- 2. Approval of Minutes** – Approve minutes from the October 11, 2023 Facilities Committee meeting.

Motion: A motion was made by Jiayo Chiang and seconded by Monica Nguyen recommending approval of the October 11, 2023 Facilities Committee meeting minutes. A vote was taken by roll call: YES = Alameda, BART, Biggs, Gridley, Lodi, Palo Alto, Port of Oakland, Redding, Roseville, Santa Clara, and TID. The motion passed.

Informational item # 16 was presented after approval of the minutes per a Member request.

- Brad Wilkie with the City of Lompoc joined the meeting during the presentation of Informational item # 16.

3. **All NCPA Facilities, Members, SCPPA – Utilicast, LLC MTCSA –** Staff presented background information and was seeking a recommendation for Commission approval of a five-year Multi-Task Consulting Services Agreement with Utilicast, LLC for miscellaneous energy and utility related consulting services, with a not to exceed amount of \$1,000,000, for use at all facilities owned and/or operated by NCPA, NCPA Members, by SCPPA, and SCPPA Members.

This is a current NCPA vendor. The current agreement with Utilicast, LLC is expiring. NCPA has utilized this vendor in the past, and has a good working relationship with this vendor. NCPA desires to enter into this agreement so established terms and conditions are in place should this vendor be the successful bidder on future purchases. This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are needed, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA has agreements in place for similar services with Trimark Associates, Inc., Aspen Environmental Group, and Utility System Efficiencies, Inc. A draft Commission Staff Report and the draft agreement were available for review. It is recommended to place this item on the Commission Consent Calendar.

Motion: A motion was made by Brian Schinstock and seconded by Jiayo Chiang recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task Consulting Services Agreement with Utilicast, LLC for energy and utility related consulting services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$1,000,000 over five years, for use at any facilities owned and/or operated by NCPA, NCPA Members, by SCPPA and SCPPA Members. A vote was taken by roll call: YES = Alameda, BART, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Port of Oakland, Redding, Roseville, Santa Clara, and TID. The motion passed.

4. **All NCPA Facilities, Members, SCPPA – Valley Power Systems North, Inc. MTGSA –** Staff presented background information and was seeking a recommendation for Commission approval of a five-year Multi-Task General Services Agreement with Valley Power Systems North, Inc. for fire pump maintenance related services, with a not to exceed amount of \$500,000, for use at all facilities owned and/or operated by NCPA, NCPA Members, by SCPPA, and SCPPA Members.

This is a current NCPA vendor. The current agreement with Valley Power Systems North, Inc. is expiring. NCPA has utilized this vendor in the past, and has a good working relationship with this vendor. NCPA desires to enter into this agreement so established terms and conditions are in place should this vendor be the successful bidder on future purchases. This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are needed, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA has agreements in place for similar services with Bay Cities Pyrotector and Sabah International. A draft Commission Staff Report and the draft agreement were available for review. It is recommended to place this item on the Commission Consent Calendar.

Motion: A motion was made by Jake Carter and seconded by Brian Schinstock recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with Valley Power Systems North, Inc. for fire pump maintenance related services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$500,000 over five years, for use at any facilities owned and/or operated by NCPA, NCPA Members, by SCPPA and SCPPA Members. A vote was taken by roll call: YES = Alameda, BART, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Port of Oakland, Redding, Roseville, Santa Clara, and TID. The motion passed.

5. **All NCPA Facilities, Members, SCPPA – North American Substation Services, LLC MTGSA –** Staff presented background information and was seeking a recommendation for Commission approval of a five-year Multi-Task General Services Agreement with North American Substation

Services, LLC for transformer related services, with a not to exceed amount of \$1,000,000, for use at all facilities owned and/or operated by NCPA, NCPA Members, by SCPPA, and SCPPA Members.

This is a current NCPA vendor. The current agreement with North American Substation Services, LLC is expiring. NCPA has utilized this vendor in the past, and has a good working relationship with this vendor. NCPA desires to enter into this agreement so established terms and conditions are in place should this vendor be the successful bidder on future purchases. This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are needed, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA has an agreement in place for similar services with VPF Transformer Consulting, Inc. A draft Commission Staff Report and the draft agreement were available for review. It is recommended to place this item on the Commission Consent Calendar.

Motion: A motion was made by Jiayo Chiang and seconded by Basil Wong recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with North American Substation Services, LLC for transformer related services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$1,000,000 over five years, for use at any facilities owned and/or operated by NCPA, NCPA Members, by SCPPA and SCPPA Members. A vote was taken by roll call: YES = Alameda, BART, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Port of Oakland, Redding, Roseville, Santa Clara, and TID. The motion passed.

6. Property Insurance Program Renewal for CY 2024 – Staff provided background information and was seeking a recommendation for Commission approval to renew the Agency’s property insurance program for CY 2024.

One of the goals identified in the 2021-2026 Strategic Plan was to develop a long-term, cost-effective insurance coverage strategy while building solid relationships between the Agency and its insurers. FM Global has been insuring the Agency’s property assets since 2021 and has become a trusted and valued partner. NCPA has a strong partnership with FM Global, and an excellent relationship with the account managers, engineers and company executives. FM Global offers engineering support, cyber security assessments, and responsive account managers/engineers. In addition, FM Global provides credits, upon Board approval, for continued membership in the Mutual.

NCPA will receive a 5% Membership Credit from FM Global in the amount of \$206,393 to be applied directly to the policy premium at renewal for CY24. In addition, NCPA will also receive a Resiliency Credit of \$206,393 (5%) for loss control recommendations with the goal of increasing plant resiliency and reducing FM Global's risk profile.

FM Global presented the Agency with two proposals for the CY24 Property Insurance renewal. Option one is to make no changes and keep Earth Movement coverage at \$70M. Option two is to lower the Earth Movement Coverage to \$40M, resulting in a \$300,000 premium credit. FM Global recommends option two as the maximum foreseeable loss at any one plant is less than \$40M; Agency staff agrees with this recommendation.

The Agency’s two-year rate lock expired in CY23. Because of the expiration of the rate lock and the Agency’s loss history in CY23, the rate used to calculate the total premium increased by 9%. In addition to the rate increase, the TIV of the Agency’s assets also saw a sizeable increase driven by higher forecasted revenues at Geo and Hydro. The total premium for option 1 and option 2 are detailed below:

	Option 1	Option 2
2023 TIV	\$ 1,570,733,112	\$ 1,570,733,112
2023 Premium	\$ 4,559,729	\$ 4,559,729
2023 TRIA	\$ 211,795	\$ 211,795
CA EM to \$40M Credit	\$ -	\$ 300,000
2023 Membership Credit	\$ 206,393	\$ 206,393
2023 Resilience Credit	\$ 206,393	\$ 206,393
Net Premium:	\$ 4,358,738	\$ 4,058,738

The property insurance premium is allocated based on the total insured value, calculated as Property Value + BI. Based on the recommendation of selection Option 2, the expected CY24 Property Insurance Renewal Premium is at a not-to-exceed of \$4,100,000. NCPA's commitment is an NTE of \$2,738,000, while LEC's commitment is an NTE of \$1,362,000 for the CY24 renewal.

Motion: A motion was made by Basil Wong and seconded by Jake Carter recommending Commission approval authorizing the General Manager to negotiate and bind Property Insurance coverage with FM Global for CY24 at a not-to-exceed premium of \$4,100,000. A vote was taken by roll call: YES = Alameda, BART, Biggs, Gridley, Lodi, Lompoc, Port of Oakland, Redding, Roseville, and Santa Clara. The motion passed.

7. Settlements Summary Results for FY 2023 – Staff provided background information and was seeking a recommendation for Commission approval of the FY2023 Annual Billing Settlement for the period of July 1, 2022 through June 30, 2023.

This year's Net Refund of Excess Collections due to participants at fiscal year-end was \$6.8 million or 1.0% of Collections (net of credits) through 6/30/23. The sources of these refunds were as follows: (1) Net Generation & Transmission operating costs of \$2.8 million; (2) Management Services costs of \$2.0 million; and (3) Pass-Through Costs and Interest and Other Income of \$2.0 million.

Fuel, CAISO charges and energy and ancillary services sales do not play a material role in the annual settlements process as those items are adjusted monthly in the Agency's All Resources Bill when the actual costs for these categories are invoiced by NCPA.

Motion: A motion was made by Jiayo Chiang and seconded by Brain Schinstock recommending Commission approval of the FY 2022-2023 Annual Billing Settlements. A vote was taken by roll call: YES = Alameda, BART, Biggs, Gridley, Lodi, Lompoc, Port of Oakland, Redding and Roseville. The motion passed.

8. First Amendment to Resolution 23-13, Revised Deposit Calculation Requirements for Schedule Coordination Program Agreement (SCPA), Third Phase Agreements, Market Purchase Program, Gas Purchase Program, NCPA Green Power Program, and Single Member Services Agreements – Staff presented background information and was seeking a recommendation for Commission approval of a First Amendment to Resolution 23-13 extending the temporary implementation timeframe through calendar year 2024 allowing staff to continue working with the Members to vet and approve changes to the program agreement terms. The temporary Schedule Coordination Program Agreements deposit calculation is based on the highest two months of estimated CAISO costs, and the temporary deposit calculation for the other Programs is based on the highest single-month contract cost(s) plus the two highest months of Mark-to-Market.

The Northern California Power Agency (NCPA) provides various Power Management services to its members pursuant to various program-based agreements that are signed by the participating member. These agreements provide for the obligation of the participating member to cover all costs and liabilities incurred through the program, thereby shielding other participating and non-participating members from the procurement costs and risks of the respective program. On February 23, 2023, the Commission authorized the revised deposit calculation requirements for the Programs and authorized the General Manager or his designee to temporarily implement the revised deposit calculations through calendar year 2023.

Prior to the approval of the revised calculations, the pending fiscal year 2024 budget reflected that all but one member would be required to deposit additional funds into the Schedule Coordination Program Agreement Balancing Account (SCPA) for a total additional collection of \$9.0 million. With the application of the revised methodology, all members' SCPA balances fell within the calculation tolerance range, and no additional collections or refunds were required. As a result of the revised methodology, members' committed funds totaling \$7.9 million were released back to their available GOR balances for the other programs.

During calendar year 2024, staff will continue to work with Members to revise respective program agreements. The extension of time will provide the continued benefit of the revised calculation methodologies to participating members until the agreements have been amended by the Commission and the participating members' governing bodies. The deposit methodology requirements will be included in Policy No. 200-101, and the respective agreements will reference that policy. Each subsequent update will require Commission-approved updates to Policy No. 200-101.

This new methodology will not be applicable to the Purchase Agreements Between the Geysers Power Company, LLC and Northern California Power Agency and the Third Phase Agreement for Purchase Agreements with Geysers Power Company, LLC. This agreement will include a 3 month deposit requirement. Members have asked for a projection of the reserve requirement.

Motion: A motion was made by Jake Carter and seconded by Shiva Swaminathan recommending Commission approval of the First Amendment to Resolution 23-13 extending the temporary implementation timeframe through calendar year 2024 allowing staff to continue working with the Members to vet and approve changes to the program agreement terms. The temporary Schedule Coordination Program Agreements deposit calculation is based on the highest two months of estimated CAISO costs, and the temporary deposit calculation for the other Programs is based on the highest single-month contract cost(s) plus the two highest months of Mark-to-Market. A vote was taken by roll call: YES = Alameda, BART, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Port of Oakland, Redding, Roseville, and Santa Clara. The motion passed.

- 9. NCPA Geothermal Plant 2 Fire System Modernization Project** – Staff presented background information and was seeking a recommendation for Commission approval of the Geothermal Plant 2 Fire System Modernization Project and delegating authority to the General Manager or his designee to award bids, execute agreements, and to issue purchase orders for the project in accordance with NCPA purchasing policies and procedures, without further approval by the Commission, for a total project cost not to exceed \$778,855.50.

The fire protection system and supporting equipment at NCPA's Geothermal Plant 2 is malfunctioning, unserviceable, unsupported by the manufacturer, and is no longer considered reliable. NCPA Geothermal staff have determined this system must be replaced. The Plant 2 fire protection system is critical to the safety of NCPA personnel and the preservation of plant equipment in the event of a fire. Staff is seeking approval for a full replacement of the fire protection system in Plant 2, which includes the following:

- Replacement of fire alarm system that monitors the turbine generator building, fire pump house, cooling tower and outdoor transformers.
- Replacement of smoke detectors, strobes and horns.
- Replacement of water flow switches and valve supervisor devices.
- Replacement of air handling monitoring and shutdown capability.
- Replacement of extinguishing agent discharge monitoring system.

Project design will be routed to the CEC CBO for review. It should be noted that there is some risk for scope creep as a result of CEC engineering review.

The Geothermal Plant 2 Fire System Modernization Project forecast is shown below. Purchase orders referencing the terms and conditions of any agreements executed for work related to this project will be issued following NCPA procurement policies and procedures. Below is a breakdown of the project costs:

- Contractor’s Proposed Project Cost = \$589,650
- 27% Contingency = \$159,205.50
- CEC Reviews and Inspections = \$30,000
- **Not to Exceed Project Authorization Total = \$778,855.50**

This project will be funded through the following source:

- FY2024 Capital Project Budget = \$1,600,000

The total cost of this project is not to exceed \$778,855.50. This amount includes \$159,205.50, or approximately 27% in contingency funds. No cash collection or budget augmentation is required for this work.

CEQA information needs to be updated in the Staff Report.

Motion: A motion was made by Jake Carter and seconded by Josh Cook recommending Commission approval authorizing the NCPA Geothermal Plant 2 Fire System Modernization Project and delegating authority to the General Manager or his designee to award bids, execute agreements, and to issue purchase orders for the project in accordance with NCPA purchasing policies and procedures, without further approval by the Commission, for a total project cost not to exceed \$778,855.50. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Roseville, and Santa Clara. ABSTAIN = BART, Port of Oakland, and Redding. The motion passed.

10. PPA and Third Phase Agreement for Transaction with ZWEDC – Staff presented background information and was seeking a recommendation for Commission approval of (i) a Power Purchase Agreement (PPA) between Zero Waste Energy Development Company, LLC (ZWEDC) and NCPA, and (ii) a Third Phase Agreement for Power Purchase Agreement with ZWEDC, to authorize NCPA to purchase SB 1383 compliant energy supply on behalf of the Participating Members.

Purchase Power Agreement (PPA)

- The cities of Santa Clara and Palo Alto requested that NCPA issue a Request for Proposals to purchase the following Products from an eligible facility:
 - Renewable Energy; compliant with SB 1383 Requirements
 - Capacity

- The proposal that was deemed responsive to this request, and that was determined to best satisfy the requirements, was submitted by Zero Waste Energy Development Company, LLC (ZWEDC).

NCPA has developed a PPA with ZWEDC based on the proposal received. NCPA has now completed the PPA negotiations.

ZWEDC Facility Information

- 1.6 MW biomass power plant
- Interconnection: CAISO BAA
- Resource ID: DIXNLD_1_LNDFL
- Owner: ZWEDC
- Operator: ZWEDC
- SC: Seller
- Term: 10 Year Term
- Products: Energy, Capacity and Environmental Attributes
- Cost: \$185.00 / MWh escalated annually concurrent with anniversary
 - Escalation percentage equal to the positive difference between the average Consumer Price Index (“CPI”) percentage for the most recent 12 month period, limited to 2% per year

The seller will operate and schedule the facility into the CAISO markets. Settlements will be “netted” based on the PPA rate and CAISO market revenues. NCPA will take of the products at the point of interconnection. This facility will be SB 1383 compliant and RPS compliant at all times. In the event the facility is no longer SB 1383 compliant or RPS compliant, NCPA may elect to terminate the contract with no requirements of termination payment due to the Seller or Buyer.

Third Phase Agreement

This is an agreement between NCPA and participating Members to enable NCPA to enter into the PPA. By executing the Third Phase Agreement, the participating Members agree to purchase the products produced by ZWEDC under a “take-or-pay” agreement.

- Key Third Phase Agreement Provisions:
 - Specify the rights and obligations of NCPA and the Participants
 - Products will be delivered to the Participants based on their Project Participation Percentage
 - Each Participant agrees to pay for their share of Project Costs, Administrative Services Costs, scheduling coordination costs, and all other related costs
 - Establishes Security Deposit Requirements
 - Establishes rules for governance and other administrative functions

Motion: A motion was made by Basil Wong and seconded by Jim Stack recommending Commission approval authorizing the General Manager of Northern California Power Agency (NCPA) to enter into (i) the Power Purchase Agreement between Zero Waste Energy Development Company, LLC and Northern California Power Agency (PPA), and (ii) the Third Phase Agreement for Power Purchase Agreement with Zero Waste Energy Development Company, LLC (Third Phase Agreement), including any modifications to the Third Phase Agreement and any modifications to the PPA approved by the NCPA General Counsel. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Port of Oakland, Redding, Roseville, and Santa Clara. The motion passed.

11. Appointment of Facilities Committee Chair and Vice Chair – Approve the appointment of the 2023 Vice Chair, Shiva Swaminathan, as the 2024 Chair and the nomination of Nick Rossow as the new Vice Chair.

Motion: A motion was made by Alan Harbottle and seconded by Jiayo Chiang recommending approval of the appointment of the 2023 Vice Chair, Shiva Swaminathan, as the 2024 Chair, and nominates Nick Rossow as the new Vice Chair. A vote was taken by roll call: YES = Alameda, BART, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Port of Oakland, Redding, Roseville, and Santa Clara. The motion passed.

INFORMATIONAL ITEMS

12. New Business Opportunities – Staff provided an update regarding new business opportunities.

Grace Solar

- Project Details:
 - Developer: NextEra Energy Resources Development (NextEra)
 - Capacity: 50 MW “Slice”; Total 400-500 MW Project
 - Offer Price:
 - 15 Yr. @ \$45.73 / MWh Flat Solar PPA Rate
 - **20 Yr. @ \$41.97 / MWh Flat Solar PPA Rate**
 - Energy Only – no deliverability at this time
 - BAA Interconnection:
 - SCE Colorado River 230 kV substation
 - Blythe, Riverside County, CA
 - COD: December 2027
- Estimated Member Interest:
 - Biggs: 0.4 MW
 - Gridley: 0.6 MW
 - Healdsburg: 3.0 MW
 - Lodi: 10 MW to 15 MW
 - Lompoc: 5.0 MW
 - Palo Alto: 5.0 MW
 - Port of Oakland: 5.0 MW
 - Shasta Lake: 5.0 MW
 - SVP: 11.0 MW to 16.0 MW

13. FERC Transmission Rate Case Advocacy Program – Staff discussed development and scope for a FERC Transmission Rate Case Advocacy Program.

TANC’s PA 6 Program is expiring at the end of 2023. NCPA will pick up TANC’s prior TO case work. Funds included in the FY 2024 budget to cover this expenditure are \$600,000. NCPA issued an RFP and solicited offers from rate case attorneys. Duncan Weinberg Genzer and Pembroke, P.C. (DWGP) was selected.

The next steps in the process is to obtain Commission approval to enter into contracts including an amendment to a Multi-Task Professional Services Agreement with DWGP and bill Members according to an approved cost split for funds actually incurred. Approval will be requested through a Commission Resolution. NCPA Staff and participating NCPA Members will develop a Transmission Owner Rate Case Program (the Program).

The Program Committee role will include setting annual program goals, and providing direction on the level of participation throughout the year. Staff propose a smaller group or committee to meet quarterly or as often as needed to direct work. All participants will receive information throughout the year.

Transmission Related Activities / Focus

- TO Rate Cases – NCPA TO Rate Case Program
- STAR Process – NCPA staff, with existing legal support and technical support
- CAISO TPP – NCPA staff, with existing legal support and technical support
- CAISO Interconnection Process – NCPA staff, with existing legal support and technical support
- Policy Objectives – NCPA L&R Team

Program Goals and Objectives

- Minimize the CAISO wheeling access charge increases; and
- Prioritize NCPA Member projects

14. Proposed Changes to NCPA’s Energy Risk Management Regulations – Staff presented proposed changes to NCPA’s Energy Risk Management Regulations.

General changes include grammatical changes as well as language simplification and clarification. Other proposed changes include product transaction limits, new definitions, and financial and physical coverage recommendations.

Product Transaction Limits in Appendix 4 changes would include:

- AGM of Power Management
 - Can enter into transactions for up to 60 consecutive/cumulative months
- Manager Portfolio and Pool Administration
 - Can enter into transactions for up to 24 consecutive months
- Scheduler and Planner
 - Increase from 10 to 20 days before the conclusion of the current month

New Definitions in Appendix 1 would include:

- “Financial Coverage”
 - Defines the percentage of a Member’s forecasted load costs covered by the expected revenues from generating resources, IST, or PPA. The financial coverage a thermal resource provides is net of that resource's fuel cost.
- “Physical Coverage”
 - Defines the percentage of a Member’s forecasted load that is covered by a physical generating resource, IST, or PPA. Physical coverage does not include coverage from a generation asset that doesn’t have a contract or contracts for the delivery of natural gas.

Recommended Coverage in Appendix 9 include:

- Incorporates a broader view of analyzing a combination of:
 - Physical coverage;
 - Financial coverage;
 - Super peak hours coverage; and
 - Historical price volatility by month
- Leading towards a more robust and advanced monthly recommended coverage matrix to better hedge against risk

At the November ROC meeting staff will be seeking a recommendation for Commission approval.

15. NCPA Inter-Agency Resource Plan – Staff provided an update on the NCPA Inter-Agency Resource Plan, including presenting a draft version of the plan for Committee review/comment.

- **What is the IARP?**
 - Inter-Agency Resource Plan
 - A goal within NCPA’s 2021-2026 NCPA Strategic Plan
 - An NCPA and member document to prepare; develop and maintain diverse generation resource portfolio in accordance with or exceeding renewable portfolio standard and capacity obligations.
- **Why is important?**
 - California Air Resources Board (CARB) established a plan to transition to a clean electrical energy economy by 2045
 - Load growth is rising and existing generation is changing
 - Drastically reducing fossil fuels
 - Achieve carbon neutrality
 - Meeting energy efficiency goals
 - This plan develops steps forward

IARP Evaluation Goals

- **Short Term 2021-2026**
 - Identify Member’s common needs (existing load and member owned resources)
 - Conceptual plans of transition periods (effects of electrification and EV charging)
 - Proposal & Economic Evaluation (increasing transmission costs)
- **Transition Term 2027-2030**
 - New Capital Projects (Increase in inverter-based resources translates into falling system inertia, hence the need to consider H₂ combustion for generation plants).
 - Adding Electrolyzers at LEC
 - Upgrading CT2 (50 MW aero derivative turbine with H₂ compatibility)
 - Add Storage Resources – H₂ & BESS
- **Long Term 2031-2045**
 - Baseload Resources such as Geothermal Capital Improvements
 - Peaking Resources such as CT 1 (25 MW combustion turbine, fuel with H₂)
 - Storage Resources and Emerging Technology

NCPA Short Term Findings

- Pool and SVP meet RA requirements until 2026 when added capacity will be needed
- NCPA resources can satisfy energy requirements until 2026
- RPS mandates from SB 1020 can be met with NCPA resources until 2026

NCPA Mid-Term Findings

- Transition LEC to run on a blend of hydrogen and natural gas
- Plan for full hydrogen conversions for LEC, Lodi STIG, Lodi CT1 and Alameda CT1
- Add resources to cover capacity, energy and RPS requirements starting in 2025
- Evaluate energy storage options to manage renewables and provide RA

NCPA Long-term Findings

- Future resources are required to meet increasing Capacity and Energy needs
- To meet statutory and regulatory goals
 - *Meet RPS Requirement: 60% by 2030*
 - *Meet Retail Electricity Sales Requirements:*
 - 90% by 2035
 - 95% by 2040
 - 100% by 2045

16. Geothermal Steam Field Model – Staff provided an informational presentation regarding the latest Geothermal Steam Field Model.

Project Scope

- Develop numerical reservoir model of the Geysers Geothermal Field with an emphasis on NCPA lease
 - Utilize the ECLIPSE simulation software
 - Transition the model from previous TETRAD software
- Milestones
 - Task 1: Prepare well and resource data/history for model
 - Task 2: History matching and model calibration
 - Task 3: Reservoir Forecast (8 scenarios)
 - Task 4: Formal Report

Task 2: History Matching Data

- Wellhead temperature shows degree of superheat change from 2013-2022

Task 3: Forecasting – Confirm previous model indications

- Case 1: Base Case Forecast- 80% void replacement
 - Scenario 1: Steam Rate Constrained: How fast does pressure fall off
 - Scenario 2: Pressure Constrained: How fast does steam production fall off
- Case 2: Reduced SEGEP Injection – 30% mass replacement
 - Scenario 1&2 as Case 1
- Case 3: Increase SEGEP Injection – 100% mass replacement
 - Scenario 1&2 as Case 1
- Case 4: No Production – What happens to reservoir pressure
 - Can Pressure/Temperature rebound to initial conditions
- Case 5: Customized Schedule of production and injection
 - No production from March to June, injection during March to May

Each of these eight scenarios were discussed in great detail with the Members, providing graphs and data.

Conclusion

- All tasks have been completed by GeothermEx
 - GeothermEx remarks:
 - Model can be improved by calibrating against superheat conditions
 - Maintaining a lower level of injection allows a high steam production rate overall (this is assuming current injection strategy)
 - Results are consistent with measured data and reservoir understanding
 - Reservoir appears to be at a turning point where the model shows the bottom to be watering out – Need to confirm
- Potential work to be considered
 - Tracer history matching
 - Optimize trickled injection
 - Integrate NCG
 - Improve Superheat matching

17. NCPA Generation Services Plant Updates – Plant Staff will provide the Committee with an update on current plant activities and conditions.

CTs – CT1 had 17 starts, including 1 ghost, of 0 forecasted. FYTD total is 50 starts. CT2 had 8 starts of 0 forecasted. FYTD total is 26 starts.

- **Outages**

- **CT1 Lodi – Available.**

- On 10/18/23 @ 0830 thru 0854, CB52L SF6 circuit breaker low pressure alarm came in. After investigating, the CB pressure temperature compensation switch calibration might be off, these are lab tested. Added .8lbs of SF6 to top off circuit breaker.
- On 10/27/23 @ 1400 thru 1600, Gas compressor lost communications, found a bad power supply card.
- 10/28/23 & 10/29/23 @ 0600 thru 0900, Reported icing capacity derate due to ambient conditions.

- **CT1 Alameda – Available.**

- On 10/4/23 @ 1514 thru 1936, U1/U2 forced out due to air compressor trip on high discharge temp, found an air leak in the system. Leak was repaired and plant was restored.
- On 10/10/23 @ 1546 we received a call for U1 exceptional dispatch, unit came online and we lost our back up ECN Communication network and had to dispatch an operator to the site. While operator was in route to Alameda @ 1645 the U1 tripped on Hi-Hi vibration on #1 inlet bearing. Found the vibration probe to be defective and was replaced. U1 returned to service on 10/11/23 @ 1145. ** Reason for CAISO exceptional dispatch was due to PG&E asking AMP to switch their island load to Oakland Station “J”. PG&E needed to conduct maintenance at their Oakland Substation “C” XFRM from 10/10/23 thru 10/16/23.
- From 10/10/23 thru 10/16/23- 0600 thru 2100 Alameda units were manned. CAISO dispatched one CT (20MW), to support PG&E station “C” work and to support Alameda island load. Both units were forced thru the same period from 2100 thru 0530 in the morning.
- On 10/12/23 – AT&T ECN communications were restored and back on the main line.

- **CT2 STIG – Available.**

- 10/28/23 & 10/29/23 @ 0600 thru 0900, Reported icing capacity derate due to ambient conditions.

**NERC Cold weather implementation standard (EOP-012-1), operations is submitting a capacity derate to dispatch when ambient conditions have the potential for inlet icing based on temps <42* & humidity >65%. These ambient capacity derate do not constitute a forced outage.

2024 Planned Outages

- **CT1 Lodi-** 1/1/24 thru 1/31/24
- **CT2 STIG-** 4/1/24 thru 4/30/24
- **CT1 Alameda U1/U2-** 5/1/24 thru 5/31/24

- **CT1 Lodi Run Hours**

- YTD hours 32.2 of 200 Allowed (based on calendar year)

- **CT1 Alameda Diesel Hours**

- U1= 4.80 hrs. of 42 (during any consecutive 12 month period)
- U2= 3.82 hrs. of 42 (during any consecutive 12 month period)

- **Safety and Environmental**

- There were two minor safety issues
- No environmental issues to report

- **Staff reviewed the CAISO Commitment Runs for October 2023**

Hydro – Collierville (CV) Power House was at 59% availability due to the normal annual fall outage. The CV outage has now been completed. New Spicer Meadows (NMS) Power House was at 52% availability due to the PG&E TIGO during the month of October. The monthly

generation profiles for CV and NMS were shared with the Committee. Annual maintenance performed during the CV outage included turbine guide bearing inspection, turbine runner pit maintenance, runner and needle inspections, and E testing of the rotor. Staff from AMP visited the site during the Collierville outage. During the month 230 kV switching was performed and NSM received a battery replacement.

New Spicer Meadows Reservoir Storage

- 19,882 acre feet decrease (14%) month-over-month
- 145,182 acre feet to 125,300 acre feet
- Storage levels remain strong going into winter
- Optimizing stored water

Current Events

- Projects
 - Completed CV outage 10/26
 - Spicer Batter Replacement 10/30 for 2 weeks
 - Beaver Creek Trash-rack Removal and Permitting
 - Alpine and Utica Dam Maintenance
 - Continued FEMA/OES damage coordination
 - EAP face to face meeting coming up
 - CCWD coordination meetings – next is December
 - Snow damage repair work: design, permitting, fieldwork

Geo – There were no safety incidents for the month of October. Safety Training is 75% complete. Vegetation was performed along the steam pipelines. The average Net Generation for the month of October was 48 MW. The total net generation was 35.72 GWh. CY 2023 actual net generation = 455.4 GWh, which is 15.4% below forecast. CY net generation goal is 664.8 GWh. On October 11, 2023, the Unit 1 turbine rotor and diaphragms for the Unit 1 Steam Strainer Damage Project was transported to Reliable Turbine Services for repair. The Unit 4 damaged lube oil pump has been sent out for repairs. Metal debris has been found throughout the seal oil system. Machining on the turbine rotor shaft was performed to remove damage caused by the lube oil pump. Other annual maintenance is almost complete in the Unit 4 Overhaul Project. The projected return to service is November 15, 2023. Efforts are being made to shorten this timeline.

Geothermal Plant Projects Update to September 30, 2023 – The Administrative Services department provided cost and funding updates to the Committee for the Geothermal Plant 2023 projects including the Plant 2 Unit 4 Overhaul, the Plant 1 Steam Strainer Project, the Cooling Tower Temporary Measures, and the Crane Repairs. Staff also provided the Maintenance Preserve projection.

18. Planning and Operations Update – Staff reviewed the current water storage conditions, which still remain above average due to the exceptional water year. The Pacific gas storage versus the five year average was provided. Six new resources will be integrated into the NPCA systems during 2024. And, staff provided information regarding the Wildcat Energy Farm 1 Solar.




19. Next Meeting – The next Facilities Committee meeting is scheduled for December 6, 2023.

ADJOURNMENT

The meeting was adjourned at 1:44 pm by the Committee Chair.

**Northern California Power Agency
November 1, 2023 Facilities Committee Meeting
Attendance List**

NCPA Facilities Committee Members are requested to sign, but signature by members of the public is voluntary.

<u>MEMBER</u>	<u>NAME</u>
ALAMEDA	
BART	
BIGGS	
GRIDLEY	
HEALDSBURG	
LODI	
LOMPOC	
PALO ALTO	
PLUMAS-SIERRA REC	
PORT OF OAKLAND	
REDDING	
ROSEVILLE	
SANTA CLARA	
SHASTA LAKE	
TID	
UKIAH	