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# Minutes

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**Date:** September 28, 2023  
**To:** NCPA Facilities Committee  
**From:** Carrie Pollo  
**Subject:** September 28, 2023 Special Facilities Committee Meeting Minutes

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- 1. Call meeting to order & Roll Call** – The meeting was called to order by Committee Chair Alan Harbottle (Alameda) at 9:04 am. Attending via teleconference and/or on-line presentation were Midson Hay (Alameda), Jake Carter (Gridley), Jiayo Chiang and Melissa Price (Lodi), Brad Wilkie (Lompoc), Mike Brozo (Plumas-Sierra), Nathan Wang and Liem Nguyen (Port of Oakland), Nick Rossow (Redding), Basil Wong, Monica Nguyen and Jared Isaacson (Santa Clara), and Cindy Sauers (Ukiah). Peter Lorenz (non-voting Representative with TID) also attended the meeting via teleconference and on-line presentation. Those attending in person are listed on the attached Attendee Sign-in Sheet. Committee Representatives from BART, Biggs, Healdsburg, Palo Alto, Shasta Lake, and TID, were absent. A quorum of the Committee was established.

## **PUBLIC FORUM**

No public comment.

## **OPEN SESSION**

## **DISCUSSION / ACTION ITEMS**

- 2. NCPA Geothermal Facility – Geothermal Plant 1 Unit 1 Steam Strainer Damage Project Modifying the Scope and Requesting Additional Funds** – Staff presented background information and was seeking a recommendation for Commission approval of an Amendment to Resolution 23-49 authorizing additional funds of \$2,500,000 for the Geothermal Plant 1 Unit 1 Steam Strainer Damage 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 project total not to exceed amount of \$5,000,000, to be funded through a Geothermal FY2024 budget augmentation.

On March 1, 2023, NCPA's Geothermal Plant 1, Unit 1 was taken offline for routine seasonal Stretford maintenance. During the course of inspections conducted by NCPA staff, steam strainer failures were found which caused strainer material to enter the steam turbine. NCPA hired Reliable Turbine Services, LLC (RTS) to perform a Steam Path Inspection. RTS removed the upper turbine case and found screen material throughout the turbine rotor and casing diaphragms. RTS recommended further inspection of the turbine rotor to determine the extent of the damage and

recommend possible repairs. The NCPA Geothermal Plant 1 Unit 1 Steam Strainer Damage Project was approved by the Commission at the May 25, 2023 Commission Meeting (SR 167:23; Resolution 23-49), with a budget of not-to-exceed \$2,500,000.

RTS continued their inspections. The results of the inspections confirmed that there was impact damage from the strainer material primarily to the first three stages of the turbine, as RTS had anticipated. What was not expected was the extensive erosion and wear on the remaining four stages of the turbine. Per the lead RTS engineer, the erosion on the last stage was so widespread, had the strainer not caused the unit to be down, the last stage blades would in all likelihood have liberated, resulting in much more extensive damage. It is important to note that this type of erosion is normal wear and tear. These blades were first put into service in 2013, and have served a useful life.

NCPA staff and RTS agree that it is not recommended to put the turbine back into service without properly refurbishing all of the components. Attempting to do anything else would result in a significant loss of power as well as high risk of harmonic frequency changes, resulting in the breakage of blades. Due to the need to manufacture new blades, projected return to service date is 2/29/2024. While the unplanned nature of this work is unfortunate, completion of this project will reset the clock and the Year 2026 Overhaul will be rescheduled for 2029.

The actual cost that has been spent to date is \$1.85 million. The estimated cost to complete the additional repairs is \$3.6 million for a total of \$5.5 million. It should be noted that the large contingency is to allow for unexpected findings. A breakdown of the project scope and associated costs is shown below:

<b>Scope of Work</b>	<b>Cost</b>
Inspection To Date	\$1,853,700
Proposal for Turbine Repairs	\$2,851,096
Contingency Funds	\$595,204
Incidentals (Scaffold, Oil Flush...)	\$200,000
<b>Total Project Cost</b>	<b>\$5,500,000</b>

Members previously approved funding up to \$2,500,000 for this work. A FY2024 budget augmentation in the amount of \$3,000,000 is requested to fund the remainder of this maintenance work. This amendment will result in an updated total not to exceed of \$5,500,000.

Motion: A motion was made by Jake Carter and seconded by Brad Wilkie recommending Commission approval of an Amendment to Resolution 23-49 authorizing additional funds of \$3,000,000 for the Geothermal Plant 1 Unit 1 Steam Strainer Damage 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 not-to-exceed amount of \$5,500,000, to be funded through a Geothermal FY24 budget augmentation, with any insurance funds received to be deposited into the Maintenance Reserve. A vote was taken by roll call: YES = Alameda, Gridley, Lodi, Lompoc, Plumas-Sierra, Roseville, Santa Clara, and Ukiah. ABSTAIN = Port of Oakland and Redding. The motion passed.

## **ADJOURNMENT**

The meeting was adjourned at 9:54 am by the Committee Chair.

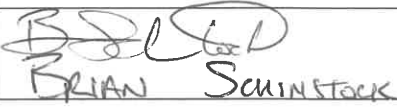
**Northern California Power Agency  
September 28, 2023 Special Facilities Committee Meeting  
Attendance List**

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

<u>NAME</u>	<u>AFFILIATION</u>
Carrie Pollo	NCPA
Michael DeBortoli	NCPA
Jane Luckhardt	NCPA
BRIAN SCHINSTOCK	ROSEVILLE
Tony Zimma	NCPA

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