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# Notice – Call of Special Facilities Committee Meeting

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**Date:** September 25, 2023

**To:** Facilities Committee

**From:** Alan Harbottle, Chair

**Subject:** September 28, 2023 NCPA Special Facilities Committee Meeting Notice and Agenda

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PLEASE TAKE NOTICE that, pursuant to Government code section 54956, a special meeting of the Northern California Power Agency Facilities Committee is hereby called for September 28, 2023 at 9:00 am to discuss those matters listed on the attached Agenda. The meeting will be held at NCPA's Roseville Office, 651 Commerce Drive, Roseville, California, 95678.

*Alan Harbottle*

ALAN HARBOTTLE  
Facilities Committee Chair

AB/cp



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# Facilities Committee Special Meeting Agenda – Revised

**Date:** September 28, 2023  
**Subject:** NCPA Special Facilities Committee Meeting  
**Location:** NCPA, 651 Commerce Drive, Roseville, California 95678 // Conference Call  
**Time:** 9:00 am

**\*\*In compliance with the Brown Act, you may participate via teleconference at one of the meeting locations listed below or attend at NCPA Headquarters. In either case, please: (1) post this Agenda at a publicly accessible location at the participation location no later than 24-hours before the meeting begins, and (2) have a speaker phone available for any member of the public who may wish to attend at your location.\*\***

## NCPA, 651 Commerce Drive, Roseville, CA 95678 (916) 781-3636

ALAMEDA MUNICIPAL PWR 2000 Grand St., Alameda, CA	BAY AREA RAPID TRANSIT 2150 Webster Street, 10 <sup>th</sup> Floor, Oakland, CA	CITY OF BIGGS 3016 Sixth Street, Biggs, CA
CITY OF GRIDLEY 685 Kentucky Street, Gridley, CA	CITY OF HEALDSBURG 401 Grove Street, Healdsburg, CA	CITY OF LODI 1331 S. Ham Lane, Lodi, CA
CITY OF LOMPOC 100 Civic Ctr. Plaza, Lompoc, CA	CITY OF PALO ALTO 250 Hamilton Avenue, 3 <sup>rd</sup> Floor Palo Alto, CA	PLUMAS-SIERRA REC 3524 Mulholland Way, Sacramento CA
PORT OF OAKLAND 530 Water Street, Oakland, CA	CITY OF REDDING 3611 Avtech Pkwy., Redding, CA	CITY OF ROSEVILLE 2090 Hilltop Circle, Roseville, CA
CITY OF SHASTA LAKE 4332 Vallecito St., Shasta Lake, CA	SILICON VALLEY POWER 881 Martin Ave., Santa Clara, CA	TURLOCK IRRIGATION DISTRICT 333 E. Canal Drive, Turlock, CA
CITY OF UKIAH 300 Seminary Ave., Ukiah, CA		

*The Facilities Committee may take action on any of the items listed on this Agenda regardless of whether the matter appears as a Discussion/Action Item or a Report or an Information Item. When this Agenda is supplemented by Staff Reports, they are available to the public upon request. Pursuant to California Government Code Section 54957.5, the following is the location at which the public can view Agendas and other public writings: NCPA Offices, 651 Commerce Drive, Roseville, California, or [www.ncpa.com](http://www.ncpa.com).*

*Persons requiring accommodations in accordance with the Americans with Disabilities Act in order to attend or participate in this meeting are requested to contact the NCPA Secretary at (916)781-3636 in advance of the meeting to arrange for such accommodations.*

## **REVIEW SAFETY PROCEDURES**

### **1. Call Meeting to Order and Roll Call**

#### **PUBLIC FORUM**

Any member of the public who desires to address the Committee on any item considered by the Committee at this meeting before or during the Committee's consideration of that item shall so advise the Chair and shall thereupon be given an opportunity to do so. Any member of the public who desires to address the Committee on any item within the jurisdiction of the Committee and not listed on the Agenda may do so at this time.

#### **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 is seeking a recommendation for 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 project total not to exceed amount of \$5,500,000, to be funded through a Geothermal FY2024 budget augmentation, with any insurance funds received to be deposited into the Maintenance Reserve. All purchase orders will be issued following NCPA procurement policies and procedures. (*Commission Category: Discussion/Action; Sponsor: Geo*)

#### **ADJOURNMENT**

AB/cp



# Commission Staff Report – *DRAFT*

**COMMISSION MEETING DATE:** October 6, 2023

**SUBJECT:** Amendment to NCPA Geothermal Plant 1, Unit 1 Steam Strainer Damage Project; Applicable to the following: NCPA Geothermal Facility

**AGENDA CATEGORY:** Discussion/Action

<b>FROM:</b>	Michael DeBortoli	<b>METHOD OF SELECTION:</b>
	Assistant General Manager	<i>Competitive Pricing Process</i>
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Geothermal	

<b>IMPACTED MEMBERS:</b>		
All Members	<input type="checkbox"/>	City of Lodi <input checked="" type="checkbox"/>
Alameda Municipal Power	<input checked="" type="checkbox"/>	City of Shasta Lake <input type="checkbox"/>
San Francisco Bay Area Rapid Transit	<input type="checkbox"/>	City of Lompoc <input checked="" type="checkbox"/>
City of Biggs	<input checked="" type="checkbox"/>	City of Palo Alto <input type="checkbox"/>
City of Gridley	<input checked="" type="checkbox"/>	City of Redding <input type="checkbox"/>
City of Healdsburg	<input checked="" type="checkbox"/>	City of Roseville <input checked="" type="checkbox"/>
		City of Santa Clara <input checked="" type="checkbox"/>
		Plumas-Sierra REC <input checked="" type="checkbox"/>
		Port of Oakland <input type="checkbox"/>
		Truckee Donner PUD <input type="checkbox"/>
		Other <input checked="" type="checkbox"/>
	<i>If other, please specify</i>	Turlock
		_____
		_____

## **RECOMMENDATION:**

Approval of 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.

## **BACKGROUND:**

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.

On May 25, 2023, the Commission approved Resolution 23-49 authorizing a \$2,500,000 budget augmentation, which included \$1,073,465 in Contingency, to be committed to the Plant 1 Unit 1 Steam Strainer Damage Project and delegated 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. NCPA issued a special invoice for \$1,426,535 on May 26, 2023, payable on June 15, 2023. NCPA was to issue a subsequent invoice for the Contingency if the final findings indicated those funds were needed to complete the repair. Staff encumbered FY23 unspent budgeted project funds in the amount of \$1,068,094 at fiscal yearend and \$926,833 remaining collected budget augmentation funds eliminating the need to collect the Contingency funds of \$1,073,465.

After a significant delay due to crane damage, 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.

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.

**FISCAL IMPACT:**

Members previously approved funding up to \$2,500,000 for this work. This amendment will result in an updated total not to exceed of \$5,500,000. 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	\$200,000
<b>Total Project Cost</b>	<b>\$5,500,000</b>

It should be noted that the large contingency is to allow for unexpected findings.

A FY24 budget augmentation in the amount of \$3,000,000 is requested to fund the remainder of this maintenance work. If approved, the additional cost would require funding from the Geothermal Member agencies in proportion to their individual shares in the Plant 1 project, as shown below.

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**Impact of Plant 1 Unit 1 Steam Strainer Damage FY24 Budget Augmentation to Participants**

<b>Participant</b>	<b>Total Cost</b>
	<b>3,000,000</b>
<b>Alameda</b>	<b>506,474</b>
<b>Biggs</b>	<b>6,810</b>
<b>Gridley</b>	<b>10,080</b>
<b>Healdsburg</b>	<b>110,220</b>
<b>Lodi</b>	<b>308,400</b>
<b>Lompoc</b>	<b>110,430</b>
<b>Plumas Sierra</b>	<b>21,030</b>
<b>Roseville</b>	<b>236,490</b>
<b>Santa Clara</b>	<b>1,331,714</b>
<b>Ukiah</b>	<b>168,436</b>
<b>TID</b>	<b>189,916</b>
	<b>3,000,000</b>

NCPA staff will discuss with its insurance carrier a potential claim resulting from the steam strainer damage. The initial work up to this point is approximately \$1.9M. Of the repairs recommended, less than \$150,000 are needed to fix damage due to the strainer impact. The

total value related to the claim is about \$2,050,000. There is a \$1,000,000 deductible, and staff anticipates approximately \$1,000,000 to be reimbursable by insurance. Any funds received from insurance reimbursements will be deposited into the Maintenance Reserve.

NCPA will issue a special invoice for \$3,000,000 on October 9, 2023 and payable by November 6, 2023. Project Participants can elect to provide a letter of direction using their GOR funds or send funds from their bank account.

### **SELECTION PROCESS:**

On April 10, 2023, NCPA issued a Request for Proposals for the Geothermal Plant 1, Unit 1 Steam Path Inspection Project. Three potential bidders were contacted. One bidder declined and two bidders responded with proposals. RTS was selected based on cost and availability. If the project is approved, RTS will be tasked with completing the inspection and implementing the repairs necessary to restore the plant to operation. On May 22, 2023, RTS submitted an updated proposal based on the results of the Steam Path Inspection for recommended repairs to the turbine rotor, diaphragms, and upper turbine case.

### **ENVIRONMENTAL ANALYSIS:**

These activities are categorically exempt under Class 1, 2, 3, 4, and 11 from the provisions of the California Environmental Quality Act pursuant to Sections 15301 (b), 15302 (c), 15303, 15304 and 15311 of the CEQA Guidelines. A Notice of Exemption was approved by the NCPA Commission on September 27, 2013 for this class of work and was filed in Sonoma County. No environmental review is necessary.

### **COMMITTEE REVIEW:**

Pending Committee review.

On September 28, 2023, the Facilities Committee reviewed and endorsed the recommendation above for Commission approval.

Respectfully submitted,

RANDY S. HOWARD  
General Manager

Attachments:

- Amended Resolution 23-49

AMENDED RESOLUTION 23-49

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY
APPROVING THE AMENDMENT TO THE NCPA GEOTHERMAL PLANT 1 UNIT 1 STEAM STRAINER
DAMAGE PROJECT MODIFYING THE SCOPE AND REQUESTING ADDITIONAL FUNDS

(reference Staff Report #218:23)

WHEREAS, the Northern California Power Agency (NCPA) operates and maintains on behalf of the project owners a Geothermal facility near Middletown, CA consisting of two power plants with containment areas and 78 steam production and injection wells; and

WHEREAS, 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; and

WHEREAS, 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; Reso: 23-49), with a budget of not-to-exceed \$2,500,000; and

WHEREAS, during the course of inspections performed as a part of the project, impact damage from the strainer material was discovered in the first three stages of the turbine, as well as extensive erosion and wear on the remaining four stages of the turbine, and a full refurbishment of all components is required in order to bring the unit back into service; and

WHEREAS, NCPA is now requesting to modify the scope and increase the not-to-exceed amount from \$2,500,000 to \$5,500,000, with the additional \$3,000,000 to be funded through a Geothermal FY2024 budget augmentation; and

WHEREAS, these activities are categorically exempt under Class 1, 2, 3, 4, and 11 from the provisions of the California Environmental Quality Act pursuant to Sections 15301 (b), 15302 (c), 15303, 15304 and 15311 of the CEQA Guidelines. A Notice of Exemption was approved by the NCPA Commission on September 27, 2013 for this class of work and was filed in Sonoma County. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes approval of 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 project total not-to-exceed amount of \$5,500,000, to be funded through a Geothermal FY2024 budget augmentation, with any insurance funds received to be deposited into the Maintenance Reserve.

PASSED, ADOPTED and APPROVED this \_\_\_\_ day of \_\_\_\_\_, 2023, by the following vote on roll call:

Table with 4 columns: Name, Vote, Abstained, Absent. Lists 15 names: Alameda, San Francisco BART, Biggs, Gridley, Healdsburg, Lodi, Lompoc, Palo Alto, Port of Oakland, Redding, Roseville, Santa Clara, Shasta Lake, Truckee Donner, Ukiah, Plumas-Sierra.

JERRY SERVENTI
CHAIR

ATTEST:

TRISHA ZIMMER
ASSISTANT SECRETARY