



651 Commerce Drive
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April 25, 2019

TO: Facilities Committee

FROM: Carrie Pollo

SUBJECT: Notice of the Facilities Committee Meeting

Facilities Committee: In compliance with the Brown Act, if participating on the conference call **and/or online presentation**, please attend one of the locations listed below and post this notice at a publicly accessible location at the participation location **72-hours** before the call begins.

Date:	Wednesday, May 1, 2019
Time:	9:00 am
Where:	NCPA Headquarters 651 Commerce Drive Roseville, CA 95678
Contact at NCPA:	Carrie Pollo 916.781.4282

ALAMEDA MUNICIPAL PWR 2000 Grand St., Alameda 510.748.3901	BAY AREA RAPID TRANSIT 300 Lakeside Drive, Oakland 510.464.6435	CITY OF BIGGS 465 "C" Street, Biggs 530.868.5493
CITY OF GRIDLEY 685 Kentucky Street, Gridley 530.846.5695	CITY OF HEALDSBURG 401 Grove Street, Healdsburg 707.431.3317	CITY OF LODI 1331 S. Ham Lane, Lodi 209.333.6762
CITY OF LOMPOC 100 Civic Ctr. Plaza, Lompoc 805.875.8299	CITY OF PALO ALTO 250 Hamilton Ave., Palo Alto 650.329.2273	PORT OF OAKLAND 530 Water Street, Oakland 510.627.1100
PLUMAS-SIERRA REC 73233 Hwy 70, Portola 530.832.4261	CITY OF REDDING 3611 Avtech Parkway, Redding 530.339.7344	CITY OF ROSEVILLE 2090 Hilltop Cir., Roseville 916.774.5602
CITY OF SANTA CLARA 881 Martin Avenue, Santa Clara 408.261.5490	TURLOCK IRR. DISTRICT 333 E. Canal Drive, Turlock 209.883.8300	CITY OF UKIAH 300 Seminary Ave., Ukiah 707.463.6200



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Agenda

Date: Wednesday, May 1, 2019

Subject: Facilities Committee Meeting

Location: NCPA Headquarters, 651 Commerce Drive, Roseville CA.

Time: 9:00 am

The Committee may take action on any of the items listed on this Agenda regardless of whether the matter appears on the Consent Calendar or is described as an Action Item, a Report or an Informational Item. This agenda is often supplemented by various documents which are available to the public upon request. Pursuant to 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.

Persons requiring accommodation 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 wishes to address the Committee on matters not on the Agenda, but within the subject matter jurisdiction of the Committee, or 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.

OPEN SESSION

2. Approve minutes from the April 3, 2019 Facilities Committee meeting.

3. All Generation Services Facilities, Members, SCPPA – Mechanical Analysis Repair, Inc. dba Martech MTGSA – Staff is seeking a recommendation for Commission approval of a five-year Multi-Task General Services Agreement with Mechanical Analysis Repair, Inc. dba Martech for machining services, with a not to exceed amount of \$1,500,000 for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. (*Commission Category: Consent; Sponsor: CTs*)

4. All Generation Services Facilities, Members, SCPPA – KSB, Inc. MTGSA – Staff is seeking a recommendation for Commission approval of a five-year Multi-Task General Services Agreement with KSB, Inc. for pump related maintenance services, with a not to exceed amount of \$1,000,000, for use at all facilities owned and/or operated by NCPA, its

Members, SCPPA, and SCPPA Members. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. (*Commission Category: Consent; Sponsor: CTs*)

5. **NCPA Geothermal Facility – Steam Field Operations Forecast Report** – Staff is seeking a recommendation for Commission approval of the 2019 Steam Field Operations Forecast Report dated April 2019, including approval regarding the market power price at which to curtail the load at the NCPA Geothermal facilities, as the Geothermal Operating Protocol effective July 1, 2019, and remaining in effect until replaced by the Commission. (*Commission Category: Consent; Sponsor: Geo*)
6. **NCPA Generation Services Plant Updates** – NCPA Plant Staff will provide the Committee with an informational update on current plant activities and conditions. (*Commission Category: Informational; Sponsor: Generation Services*)
7. **MSSA Deviation Equation Status Update** – Staff will provide an update. (*Commission Category: Informational; Sponsor: Power Management*)
8. **Planning and Operations Update** – Staff will provide an update on issues related to planning and operations.
9. **Schedule next meeting date** – The next Facilities Committee meeting is currently scheduled for June 5, 2019.

ADJOURNMENT

/cp



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Minutes – Draft

Date: April 8, 2019
To: NCPA Facilities Committee
From: Carrie Pollo
Subject: April 3, 2019 Facilities Committee Meeting Minutes

1. **Call meeting to order & Roll Call** – The meeting was called to order by Committee Chair Tikan Singh at 9:02 am. A sign-in sheet was passed around. Attending via teleconference and/or on-line presentation were Alan Harbottle (Alameda), Mark Sorensen (Biggs), Paul Eckert (Gridley), Shiva Swaminathan, (Palo Alto), Jared Carpenter (Port of Oakland), Brian Schinstock (Redding), and, Paulo Apolinario and Steve Hance (Santa Clara). Those attending in person are listed on the attached Attendee Sign-in Sheet. Committee Representatives from BART, Healdsburg, Plumas-Sierra, TID, and Ukiah were absent. A quorum of the Committee was established.

PUBLIC FORUM

No public comment.

2. **Approve Minutes from the March 6, 2019 Facilities Committee Meeting, and March 12, 2019 Special Facilities Committee Meeting.**

Motion: A motion was made by Jiayo Chiang and seconded by Brian Zard recommending approval of the March 6, 2019 Facilities Committee meeting minutes, and the March 12, 2019 Special Facilities Committee meeting minutes. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Redding, Roseville, and Santa Clara. The motion passed.

3. **All Generation Services Facilities, Members, SCPPA – American Power Systems, Inc. MTGSA** – Staff provided background information and was seeking a recommendation for Commission approval of a five-year Multi-Task General Services Agreement with American Power Systems, Inc. for battery services, with a not to exceed amount of \$500,000 for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. This is a renewal agreement with an existing vendor. It is an enabling agreement with no commitment of funds. Since there is no engineering services provided in this agreement, General Counsel recommended making minor changes in section 5.2 of the agreement, by changing to the standard provisions. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review.

Motion: A motion was made by Brian Zard and seconded by Jiayo Chiang recommending

Commission approval authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with American Power Systems, LLC for battery 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 all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Redding, Roseville, and Santa Clara. The motion passed.

4. All Generation Services Facilities, Members, SCPPA - WorleyParsons Group, Inc. MTPSA

– Staff presented and was seeking a recommendation for Commission approval of a five-year Multi-Task Professional Services Agreement with Worley Parsons Group, Inc. for project support services, with a not to exceed amount of \$1,500,000 for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. This is a renewal agreement with an existing vendor. It is an enabling agreement with no commitment of funds. The vendor will provide full service engineering. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review.

Motion: A motion was made by Jiayo Chiang and seconded by Brian Zard recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with WorleyParsons Group, Inc. for project support services related to plant operations, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$1,500,000 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Redding, Roseville, and Santa Clara. The motion passed.

5. All Generation Services Facilities, Members, SCPPA – Johnson Controls, Inc., MTGSA–

Staff presented and was seeking a recommendation for Commission approval of a five-year Multi-Task General Services Agreement with Johnson Controls, Inc. for HVAC and chiller maintenance related services, with a not to exceed amount of \$500,000 for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. This is a renewal agreement with an existing vendor. It is an enabling agreement with no commitment of funds. Staff is also searching for other vendors that can provide this type of work. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review.

Motion: A motion was made by Brian Zard and seconded by Jiayo Chiang recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with Johnson Controls, Inc. for HVAC and chiller 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 all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Redding, Roseville, and Santa Clara. The motion passed.

6. All Generation Services Facilities, Members, SCPPA – GEI Consultants, Inc., MTPSA–

Staff provided background information and was seeking a recommendation for Commission approval of a five-year Multi-Task Professional Services Agreement with GEI Consultants, Inc. for engineering services, with a not to exceed amount of \$1,000,000 for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. GEI

Consultants is an international engineering company with multidisciplinary expertise. NCPA has relied on GEI for regulatory compliance and engineering services. Past projects with GEI over the last 5 years include Dam Safety Part 12 Study Independent Consultants and the newly required Owner Dam Safety Program Audit. This is an enabling agreement, with no commitment of funds. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review.

Motion: A motion was made by Jiayo Chiang and seconded by Brian Zard recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with GEI Consultants, Inc. for engineering 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 all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Redding, Roseville, and Santa Clara. The motion passed.

7. NCPA Generation Services Plant Updates – NCPA Plant Staff provided the Committee with an informational update on current plant activities and conditions.

Geo – There were no safety incidents to report for the month of March. Safety review topics during March included asbestos awareness and, a Lock-out Tag-out (LOTOT) review, which was perfect timing for the plant overhauls scheduled in April. Plant #2 was down for 77 hours to repair the Gland Steam Leak-off System. The estimated loss in generation was approximately 1500 MWh during the outage. The Plant #1 overhaul for Unit #2 has started and is scheduled from April 1 – May 10, 2019. Plant and Steam Field LOTOT has been established, and the cooling tower has been drained. Work is progressing on the turbine with generator inspection and repair, condenser cleaning, ball cleaning system, steam ejector replacement, and electrical cleaning and testing. The overhaul for Unit #1 is scheduled from April 22 – May 26, 2019.

CTs – Alameda Unit #2 was in a forced outage for 5 days because of a switchgear failure. The wires were changed out in the switchgear, so the unit is back up and running now. The West Turner Road facility is almost finished with repair work. There are currently no issues at STIG, and not much action. LEC is in a full outage that started April 1st. Ethos is currently on site at both LEC and Turner Road locations.

Hydro – The New Spicer Meadow Reservoir is close to empty now, at 60,000 acre feet, after peaking last June. Water is being actively moved to make room for the 2019 snow melt. Precipitation is at 127% of normal or 42.5 inches of rain. The snow pack is now 165% of normal, approximately where it was in 2016-2017. More snow is forecasted for this weekend at 12-18 inches. McKays may spill more water pending how the snow melt occurs. There will also be some impacts with tail water which is out of NCPA's control.

8. Proposed FY2020 Annual Budget Review and Approval – Staff reviewed the final budget, including each business unit for FY2020, and was seeking a recommendation for Commission approval of the budget.

Generation Services FY2020 Budget Review

- **Hydro FY2020 Budget:** Staff reviewed the updated FY2020 proposed budget. The overall budget includes a \$2.2 million increase for a total proposed amount of \$54 million. Routine O&M is up 6.3%, labor is up 6.2%, CAISO charges are up by \$600,000, and the Capital Reserve Fund is up \$3.3 million, due mainly to the Collierville Rewind Project and the McKays Cleanout Project. Revenues are up due to the higher estimated market prices. Net revenue assumptions is \$26.7 million. The net budget cost is \$27.4

million with an increase to participant's costs by \$53,722. The proposed projects remain the same, with a total cost of \$4,775,000.

- **Geo FY2019 Budget:** Staff reviewed the updated FY2020 proposed budget. The total FY2020 proposed budget is \$35.3 million, which is an increase over the FY2019 budget of \$885,600. Routine O&M is up 2.0%, labor is up 5.0%, CAISO charges are up by \$333,000, project O&M costs are up by \$495,000, and revenues are up due to the higher estimated market prices. Net revenue assumptions is \$30.7 million. The net project cost to participants is down to \$4.6 million, which is a decrease of \$2.4 million. The Network Infrastructure Improvement Project has been removed, which brings the total project cost down by \$68,000.

CT's FY2020 Budget: Staff reviewed the updated FY2020 proposed budget for the CTs.

- **CT1 FY2020 Budget:** The proposed budget for CT1 decreased \$1.9 million, for a total FY2020 budget of \$6.2 million. Routine O&M is up by 64%, labor is up by 31%, which includes a request for one new full time employee, other costs are up by \$1.4 million, the Capital projects are down \$3.4 million, and net revenues are up due to the higher estimated market prices and increased generation. The total cost to participants is decreasing by \$2.6 million. The NFPA Purge Credit Project has been removed, bringing the total project cost down by \$600,000.
- **CT2 FY2020 Budget:** The proposed budget for CT2 increased \$695,557 for a total FY2020 budget of \$9.4 million. Routine O&M costs is up 14%, labor is up 2.7%, other costs are up by \$337,000, replenishment to the maintenance reserve of \$350,000, and net revenues are up due to the higher estimated market prices and increased generation, decreasing the cost to participants by \$419,756. The proposed projects remain the same, which will be at a bare minimum to maintain running the plant through the proposed project end date of 2026.

Power Management FY2020 Budget Review

There have no changes to the Power Management proposed FY2020 Budget since the last review during the Special Facilities Committee Meeting on March 12. Labor is up 1.9%, with non-personnel costs down by 14%, due to less travel, office supplies, and administrative liquidation. The A&G costs are projected to decrease by approximately \$90,000. Overall a net reduction by \$75,000 for a total proposed FY2020 Power Management budget of \$10.6 million. The Power Management budgeted revenues will increase at a minimum of \$350,000. If services customers renew contracts, the forecasted revenues will increase \$2.5 million.

Administrative Services FY2020 Budget Review

The Executive and Administrative Services FY2020 proposed budget was reviewed. Labor is up by 2.6%, with non-personnel down across all departments except Information Technology. The projects proposed decreased by \$445,000. The overall reduction is almost \$500,000, for a total proposed budget of \$15.3 million.

The proposed FY2020 budget will be published to NCPA Connect for Member review, per business unit details, participant funding, and a 10-year forecast. Staff will finalize the remaining budget package. Any changes will be only immaterial adjustments. The Utility Directors and Commissioners will review in April. Staff will seek Commission approval in May.

Motion: A motion was made by Brian Zard and seconded by Shiva Swaminathan recommending Commission approval of the FY2020 budget as presented in the Facilities Committee Meeting April 3, 2019 for Generation Services, Administrative Services, and Power Management subject

to non-substantive modifications. A vote was taken by roll call: YES = Alameda, Gridley, Lodi, Lompoc, Palo Alto, Redding, Roseville, and Santa Clara. The motion passed.

- 9. All NCPA Facilities, Members, SCPPA – Trimark Associates, Inc. MTGSA** – Staff presented and was seeking a recommendation for Commission approval of a five-year Multi-Task General Services Agreement with Trimark Associates, Inc. to provide meter related (installation, maintenance, data acquisition, telemetry, etc.) services as requested, with a not to exceed amount of \$2,000,000 for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. This is an enabling agreement with no commitment of funds. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review.

The purpose of this agreement is to consolidate a majority of existing agreements with Trimark Associates, Inc. under one enabling structure, with the exception of BART's Meter Data Management Agreement, and the Member Meter Maintenance Agreement. Another reason is to move away from a sole source provider, as well as allowing members to be able to use this agreement through shared support services for bidding. The General Manager recommended adding language in the Staff Report pertaining to the fact that Pacific Power Engineers, Inc. is another vendor that can provide the same services.

Motion: A motion was made by Jiayo Chiang and seconded by Brian Zard recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with Trimark Associates, Inc. for revenue meter related services, including any non-substantial changes recommended and approved by the NCPA General Counsel, and shall not exceed \$2,000,000 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Gridley, Lodi, Lompoc, Palo Alto, Port of Oakland, Roseville, and Santa Clara. The motion passed.

- 10. All NCPA Facilities, Members, SCPPA – Pacific Power Engineers MTGSA** – Staff presented and was seeking a recommendation for Commission approval of a five-year Multi-Task General Services Agreement with Pacific Power Engineers to provide meter related (installation, maintenance, data acquisition, telemetry, etc.) services as requested, with a not to exceed amount of \$2,000,000 for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. This is an agreement with a new vendor similar to the agreement with Trimark Associates, Inc. for competitive bidding. Pacific Power Engineers is a CAISO approved Meter Company. It is also recommended to add language in the Staff Report with regards to the fact that Trimark Associates, Inc. is another vendor that can provide the same services. This is an enabling agreement with no commitment of funds. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review.

Motion: A motion was made by Brian Zard and seconded by Jiayo Chiang recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with Pacific Power Engineers, Inc. for revenue meter related services, including any non-substantial changes recommended and approved by the NCPA General Counsel, and shall not exceed \$2,000,000 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Gridley, Lodi, Lompoc, Palo Alto, Port of Oakland, Roseville, and Santa Clara. The motion passed.

11. RFP for Joint CCA RA Portfolio Management Services – NCPA staff will discuss and review a Joint CCA RFP seeking Resource Adequacy Portfolio Management Services. ***This item was pulled.***

12. Planning and Operations Update –

- CCA Activities – The transition of SJCE and EBCE to their own SCID is 90% complete. These two entities need to complete a few contracting steps with the CAISO to complete the process. This should be done by May.
- Developing CY 2020 RA Peak Demand Forecast – Information due to CEC in the coming weeks.
- Opportunities to Sell Project Attributes – Since NCPA should have a robust hydro production year, NCPA staff are exploring opportunities to sell RPS, GHG-Free and Resource Adequacy to CCA customers. Please contact Tony Zimmer for information regarding contractual requirements.
- SFWPA – A meeting is scheduled on April 10, 2019 with SFWPA. Staff is developing an analysis for valuing of the project. Next steps are to seek Member interest to procure output of project.
- Resource Adequacy Enhancements Update – The CAISO is actively working to overhaul the requirements for RA, such as what counts as RA, as well as outage coordination. NCPA will submit comments.
- Day-Ahead Market Enhancements (DAME) Update – This will be implemented in the fall of 2020, changing the DAM to be scheduled in 15 minute increments. NCPA will need to change all internal software.

13. Schedule Next Meeting Date – The next regular Facilities Committee meeting is scheduled for May 1, 2019.

ADJOURNMENT

The meeting was adjourned at 11:15 pm.

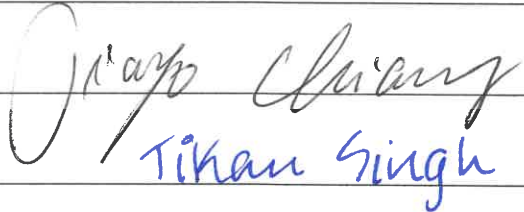

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NCPA Facilities Committee Members, Alternates & Staff are requested to sign, but signature by members of the public is voluntary.

[illegible]

**Northern California Power Agency
April 3, 2019 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	
TID	
UKIAH	



Commission Staff Report – *DRAFT*

Date: April 25, 2019

COMMISSION MEETING DATE: May 23, 2019

SUBJECT: Mechanical Analysis Repair, Inc. dba Martech – Five Year Multi-Task General Services Agreement for machining related services; Applicable to the following projects: All NCPA Facility Locations, Members, SCPPA, and SCPPA Members

AGENDA CATEGORY: Consent

FROM:	Ken Speer	METHOD OF SELECTION:
	Assistant General Manager	N/A
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Combustion Turbines	

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

Approval of Resolution 19-XX authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with Mechanical Analysis Repair, Inc. dba Martech for machining related services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$1,500,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (“SCPPA”), or by SCPPA Members.

It is recommend that this item be placed on the Commission Consent Calendar.

BACKGROUND:

Machining related services are required from time to time related to project support at facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (“SCPPA”), or by SCPPA Members.

FISCAL IMPACT:

Upon execution, the total cost of the agreement is not to exceed \$1,500,000.00 over five years, to be used out of the NCPA approved budget. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures.

SELECTION PROCESS:

This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are required, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA has an agreement in place with Bay Valve Service for similar services and seeks bids from multiple qualified providers whenever services are needed. Bids are awarded to the lowest cost provider. NCPA will issue purchase orders based on cost and availability of the services needed at the time the service is required.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a “project” for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

Pending committee review.

Respectfully submitted,

RANDY S. HOWARD
General Manager

Attachments (2):

- Resolution
- Multi-Task General Services Agreement with Mechanical Analysis Repair, Inc. dba Martech

RESOLUTION 19-XX

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY APPROVING A MULTI-TASK GENERAL SERVICES AGREEMENT WITH MECHANICAL ANALYSIS REPAIR, INC. DBA MARTECH

(reference Staff Report #xxx:19)

WHEREAS, machining related services are periodically required at the facilities owned and/or operated by Northern California Power Agency (NCPA), its Members, the Southern California Public Power Authority (SCPPA), and SCPPA Members; and

WHEREAS, Mechanical Analysis Repair, Inc. dba Martech is a provider of these services; and

WHEREAS, NCPA seeks to enter into a Multi-Task General Services Agreement with Mechanical Analysis Repair, Inc. dba Martech to provide such services as needed at all NCPA Generation facility locations, Member, SCPPA, and SCPPA Member facilities in an amount not to exceed \$1,500,000 over five years; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager or his designee to enter into a Multi-Task General Services Agreement with Mechanical Analysis Repair, Inc. dba Martech with any non-substantial changes as approved by the NCPA General Counsel, which shall not exceed \$1,500,000 for machining related services for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (SCPPA), or by SCPPA Members.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2019 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
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	_____	_____	_____

ROGER FRITH
CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY



**MULTI-TASK
GENERAL SERVICES AGREEMENT BETWEEN
THE NORTHERN CALIFORNIA POWER AGENCY AND
MECHANICAL ANALYSIS REPAIR, INC. DBA MARTECH**

This Multi-Task General Services Agreement ("Agreement") is made by and between the Northern California Power Agency, a joint powers agency with its main office located at 651 Commerce Drive, Roseville, CA 95678-6420 ("Agency") and Mechanical Analysis Repair, Inc. dba Martech, a California corporation with its office located at 142 N. Cluff Avenue, Lodi, CA 95240 ("Contractor") (together sometimes referred to as the "Parties") as of _____, 2019 ("Effective Date") in Roseville, California.

Section 1. SCOPE OF WORK. Subject to the terms and conditions set forth in this Agreement, Contractor is willing to provide to Agency the range of services and/or goods described in the Scope of Work attached hereto as Exhibit A and incorporated herein ("Work").

- 1.1 Term of Agreement.** The term of this Agreement shall begin on the Effective Date and shall end when Contractor completes the Work, or no later than five (5) years from the date this Agreement was signed by Agency, whichever is shorter.
- 1.2 Standard of Performance.** Contractor shall perform the Work in the manner and according to the standards observed by a competent practitioner of the profession in which Contractor is engaged and for which Contractor is providing the Work. Contractor represents that it is licensed, qualified and experienced to provide the Work set forth herein.
- 1.3 Assignment of Personnel.** Contractor shall assign only competent personnel to perform the Work. In the event that Agency, in its sole discretion, at any time during the term of this Agreement, requests the reassignment of any such personnel, Contractor shall, immediately upon receiving written notice from Agency of such request, reassign such personnel.
- 1.4 Work Provided.** Work provided under this Agreement by Contractor may include Work directly to the Agency or, as requested by the Agency and consistent with the terms of this Agreement, to Agency members, Southern California Public Power Authority ("SCPPA") or SCPPA members.
- 1.5 Request for Work to be Performed.** At such time that Agency determines to have Contractor perform Work under this Agreement, Agency shall issue a Purchase Order. The Purchase Order shall identify the specific Work to be performed ("Requested Work"), may include a not-to-exceed cap on monetary cap on Requested Work and all related expenditures authorized by that Purchase Order, and shall include a time by which the Requested Work shall be completed. Contractor shall have seven calendar days from the date of the Agency's issuance of the Purchase Order in which to respond in writing that Contractor chooses not to perform the Requested Work. If Contractor agrees to perform the Requested Work, begins to perform the Requested Work, or does not respond within the seven day period specified, then Contractor will have

agreed to perform the Requested Work on the terms set forth in the Purchase Order, this Agreement and its Exhibits.

Section 2. COMPENSATION. Agency hereby agrees to pay Contractor an amount **NOT TO EXCEED** ONE MILLION FIVE HUNDRED THOUSAND dollars (\$1,500,000.00) for the Work, which shall include all fees, costs, expenses and other reimbursables, as set forth in Contractor's fee schedule, attached hereto and incorporated herein as Exhibit B. This dollar amount is not a guarantee that Agency will pay that full amount to the Contractor, but is merely a limit of potential Agency expenditures under this Agreement.

2.1 Invoices. Contractor shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain the following information:

- The beginning and ending dates of the billing period;
- Work performed;
- The Purchase Order number authorizing the Requested Work;
- At Agency's option, for each work item in each task, a copy of the applicable time entries or time sheets shall be submitted showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense, with supporting documentation, to Agency's reasonable satisfaction;
- At Agency's option, the total number of hours of work performed under the Agreement by Contractor and each employee, agent, and subcontractor of Contractor performing work hereunder.

Invoices shall be sent to:

Northern California Power Agency
651 Commerce Drive
Roseville, California 95678
Attn: Accounts Payable
AcctsPayable@ncpa.com

2.2 Monthly Payment. Agency shall make monthly payments, based on invoices received, for Work satisfactorily performed, and for authorized reimbursable costs incurred. Agency shall have thirty (30) days from the receipt of an invoice that complies with all of the requirements above to pay Contractor.

2.3 Payment of Taxes. Contractor is solely responsible for the payment of all federal, state and local taxes, including employment taxes, incurred under this Agreement.

2.4 Authorization to Perform Work. The Contractor is not authorized to perform any Work or incur any costs whatsoever under the terms of this Agreement until receipt of a Purchase Order from the Contract Administrator.

- 2.5 Timing for Submittal of Final Invoice.** Contractor shall have ninety (90) days after completion of the Requested Work to submit its final invoice for the Requested Work. In the event Contractor fails to submit an invoice to Agency for any amounts due within the ninety (90) day period, Contractor is deemed to have waived its right to collect its final payment for the Requested Work from Agency.

Section 3. FACILITIES AND EQUIPMENT. Except as set forth herein, Contractor shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the Work.

Section 4. INSURANCE REQUIREMENTS. Before beginning any Work under this Agreement, Contractor, at its own cost and expense, shall procure the types and amounts of insurance listed below and shall maintain the types and amounts of insurance listed below for the period covered by this Agreement.

- 4.1 Workers' Compensation.** If Contractor employs any person, Contractor shall maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Contractor with limits of not less than one million dollars (\$1,000,000.00) per accident.

4.2 Commercial General and Automobile Liability Insurance.

4.2.1 Commercial General Insurance. Contractor shall maintain commercial general liability insurance for the term of this Agreement, including products liability, covering any loss or liability, including the cost of defense of any action, for bodily injury, death, personal injury and broad form property damage which may arise out of the operations of Contractor. The policy shall provide a minimum limit of \$1,000,000 per occurrence/\$2,000,000 aggregate. Commercial general coverage shall be at least as broad as ISO Commercial General Liability form CG 0001 (current edition) on "an occurrence" basis covering comprehensive General Liability, with a self-insured retention or deductible of no more than \$100,000. No endorsement shall be attached limiting the coverage.

4.2.2 Automobile Liability. Contractor shall maintain automobile liability insurance form CA 0001 (current edition) for the term of this Agreement covering any loss or liability, including the cost of defense of any action, arising from the operation, maintenance or use of any vehicle (symbol 1), whether or not owned by the Contractor, on or off Agency premises. The policy shall provide a minimum limit of \$1,000,000 per each accident, with a self-insured retention or deductible of no more than \$100,000. This insurance shall provide contractual liability covering all motor vehicles and mobile equipment to the extent coverage may be excluded from general liability insurance.

4.2.3 General Liability/Umbrella Insurance. The coverage amounts set forth above may be met by a combination of underlying and umbrella policies as long as in combination the limits equal or exceed those stated.

4.3 Professional Liability Insurance. Not Applicable.

4.4 Pollution Insurance. Not Applicable.

4.5 All Policies Requirements.

4.5.1 Verification of coverage. Prior to beginning any work under this Agreement, Contractor shall provide Agency with (1) a Certificate of Insurance that demonstrates compliance with all applicable insurance provisions contained herein and (2) policy endorsements to the policies referenced in Section 4.2 and in Section 4.4, if applicable, adding the Agency as an additional insured and declaring such insurance primary in regard to work performed pursuant to this Agreement.

4.5.2 Notice of Reduction in or Cancellation of Coverage. Contractor shall provide at least thirty (30) days prior written notice to Agency of any reduction in scope or amount, cancellation, or modification adverse to Agency of the policies referenced in Section 4.

4.5.3 Higher Limits. If Contractor maintains higher limits than the minimums specified herein, the Agency shall be entitled to coverage for the higher limits maintained by the Contractor.

4.5.4 Additional Certificates and Endorsements. If Contractor performs Work for Agency members, SCPPA and/or SCPPA members pursuant to this Agreement, Contractor shall provide the certificates of insurance and policy endorsements, as referenced in Section 4.5.1, naming the specific Agency member, SCPPA and/or SCPPA member for which the Work is to be performed.

4.5.5 Waiver of Subrogation. Contractor agrees to waive subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. In addition, the Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Agency for all work performed by Contractor, its employees, agents and subcontractors.

4.6 Contractor's Obligation. Contractor shall be solely responsible for ensuring that all equipment, vehicles and other items utilized in the performance of Work are operated, provided or otherwise utilized in a manner that ensures they are and remain covered by the policies referenced in Section 4 during this Agreement. Contractor shall also ensure that all workers involved in the provision of Work are properly classified as employees, agents or independent contractors and are and remain covered by any and all workers' compensation insurance required by applicable law during this Agreement.

Section 5. INDEMNIFICATION AND CONTRACTOR'S RESPONSIBILITIES.

- 5.1 Effect of Insurance.** Agency's acceptance of insurance certificates and endorsements required under this Agreement does not relieve Contractor from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Contractor acknowledges and agrees to the provisions of this section and that it is a material element of consideration.
- 5.2 Scope.** Contractor shall indemnify, defend with counsel reasonably acceptable to the Agency, and hold harmless the Agency, and its officials, commissioners, officers, employees, agents and volunteers from and against all losses, liabilities, claims, demands, suits, actions, damages, expenses, penalties, fines, costs (including without limitation costs and fees of litigation), judgments and causes of action of every nature arising out of or in connection with any acts or omissions by Contractor, its officers, officials, agents, and employees, except as caused by the sole or gross negligence of Agency. Notwithstanding, should this Agreement be construed as a construction agreement under Civil Code section 2783, then the exception referenced above shall also be for the active negligence of Agency.
- 5.3 Transfer of Title.** Not Applicable.

Section 6. STATUS OF CONTRACTOR.

- 6.1 Independent Contractor.** Contractor is an independent contractor and not an employee of Agency. Agency shall have the right to control Contractor only insofar as the results of Contractor's Work and assignment of personnel pursuant to Section 1; otherwise, Agency shall not have the right to control the means by which Contractor accomplishes Work rendered pursuant to this Agreement. Notwithstanding any other Agency, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing services under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any and all claims to, any compensation, benefit, or any incident of employment by Agency, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of Agency and entitlement to any contribution to be paid by Agency for employer contributions and/or employee contributions for PERS benefits.

Contractor shall indemnify, defend, and hold harmless Agency for the payment of any employee and/or employer contributions for PERS benefits on behalf of Contractor or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of Agency. Contractor and Agency acknowledge and agree that compensation paid by Agency to Contractor under this Agreement is based upon Contractor's estimated costs of providing the Work, including salaries and benefits of employees, agents and subcontractors of Contractor.

Contractor shall indemnify, defend, and hold harmless Agency from any lawsuit, administrative action, or other claim for penalties, losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such claims, whether directly or indirectly, due to Contractor's failure to secure workers' compensation insurance for its employees, agents, or subcontractors.

Contractor agrees that it is responsible for the provision of group healthcare benefits to its fulltime employees under 26 U.S.C. § 4980H of the Affordable Care Act. To the extent permitted by law, Contractor shall indemnify, defend and hold harmless Agency from any penalty issued to Agency under the Affordable Care Act resulting from the performance of the Services by any employee, agent, or subcontractor of Contractor.

- 6.2 Contractor Not Agent.** Except as Agency may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of Agency in any capacity whatsoever as an agent. Contractor shall have no authority, express or implied, pursuant to this Agreement to bind Agency to any obligation whatsoever.
- 6.3 Assignment and Subcontracting.** This Agreement contemplates personal performance by Contractor and is based upon a determination of Contractor's unique professional competence, experience, and specialized professional knowledge. A substantial inducement to Agency for entering into this Agreement was and is the personal reputation and competence of Contractor. Contractor may not assign this Agreement or any interest therein without the prior written approval of the Agency. Contractor shall not subcontract any portion of the performance contemplated and provided for herein, other than to the subcontractors identified in Exhibit A, without prior written approval of the Agency. Where written approval is granted by the Agency, Contractor shall supervise all work subcontracted by Contractor in performing the Work and shall be responsible for all work performed by a subcontractor as if Contractor itself had performed such work. The subcontracting of any work to subcontractors shall not relieve Contractor from any of its obligations under this Agreement with respect to the Work and Contractor is obligated to ensure that any and all subcontractors performing any Work shall be fully insured in all respects and to the same extent as set forth under Section 4, to Agency's satisfaction.
- 6.4 Certification as to California Energy Commission.** If requested by the Agency, Contractor shall, at the same time it executes this Agreement, execute Exhibit C.
- 6.5 Certification as to California Energy Commission Regarding Hazardous Materials Transport Vendors.** If requested by the Agency, Contractor shall, at the same time it executes this Agreement, execute Exhibit D.
- 6.6 Maintenance Labor Agreement.** If the Work is subject to the terms of one or more Maintenance Labor Agreements, which are applicable only to certain types

of construction, repair and/or maintenance projects, then Contractor shall execute Exhibit E and/or similar documentation as to compliance.

Section 7. LEGAL REQUIREMENTS.

- 7.1 Governing Law.** The laws of the State of California shall govern this Agreement.
- 7.2 Compliance with Applicable Laws.** Contractor and its subcontractors and agents, if any, shall comply with all laws applicable to the performance of the work hereunder.
- 7.3 Licenses and Permits.** Contractor represents and warrants to Agency that Contractor and its employees, agents, and subcontractors (if any) have and will maintain at their sole expense during the term of this Agreement all licenses, permits, qualifications, and approvals of whatever nature that are legally required to practice their respective professions.
- 7.4 Monitoring by DIR.** The Work is subject to compliance monitoring and enforcement by the Department of Industrial Relations.
- 7.5 Registration with DIR.** During the term of this Agreement, Contractor warrants that it is registered with the Department of Industrial Relations and qualified to perform Work consistent with Labor Code section 1725.5.
- 7.6 Prevailing Wage Rates.** In accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work as provided in the California Labor Code must be paid to all workers engaged in performing the Work. In accordance with California Labor Code Section 1770 and following, the Director of Industrial Relations has determined the general prevailing wage per diem rates for the locality in which the Work is to be performed; the Agency has obtained the general prevailing rate of per diem wages and the general rate for holiday and overtime work in the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the project; and copies of the prevailing rate of per diem wages are on file at the Agency and will be made available on request. Throughout the performance of the Work, Contractor must comply with all applicable laws and regulations that apply to wages earned in performance of the Work. Contractor assumes all responsibility for such payments and shall defend, indemnify and hold the Agency harmless from any and all claims made by the State of California, the Department of Industrial Relations, any subcontractor, any worker or any other third party with regard thereto.

Additionally, in accordance with the California Administrative Code, Title 8, Group 3, Article 2, Section 16000, Publication of Prevailing Wage Rates by Awarding

Bodies, copies of the applicable determination of the Director can be found on the web at: <http://www.dir.ca.gov/DLSR/PWD/> and may be reviewed at any time.

Contractor shall be required to submit to the Agency during the contract period, copies of Public Works payroll reporting information per California Department of Industrial Relations, Form A- 1-131 (New 2-80) concerning work performed under this Agreement.

Contractor shall comply with applicable law, including Labor Code Sections 1774 and 1775. In accordance with Section 1775, Contractor shall forfeit as a penalty to Agency \$50.00 for each calendar day or portion thereof, for each worker paid less than the prevailing rates as determined by the Director of Industrial Relations for such work or craft in which such worker is employed for any Work done under the Agreement by Contractor or by any subcontractor under Contractor in violation of the provisions of the Labor Code and in particular, Labor Code Sections 1770 *et seq.* In addition to the penalty and pursuant to Section 1775, the difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor.

Section 8. TERMINATION AND MODIFICATION.

- 8.1 Termination.** Agency may cancel this Agreement at any time and without cause upon ten (10) days prior written notice to Contractor.

In the event of termination, Contractor shall be entitled to compensation for Work satisfactorily completed as of the effective date of termination; Agency, however, may condition payment of such compensation upon Contractor delivering to Agency any or all records or documents (as referenced in Section 9.1 hereof).

- 8.2 Amendments.** The Parties may amend this Agreement only by a writing signed by both of the Parties.

- 8.3 Survival.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between Agency and Contractor shall survive the termination of this Agreement.

- 8.4 Options upon Breach by Contractor.** If Contractor materially breaches any of the terms of this Agreement, including but not limited to those set forth in Section 4, Agency's remedies shall include, but not be limited to, the following:

8.4.1 Immediately terminate the Agreement;

8.4.2 Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Contractor pursuant to this Agreement;

- 8.4.3** Retain a different Contractor to complete the Work not finished by Contractor; and/or
- 8.4.4** Charge Contractor the difference between the costs to complete the Work that is unfinished at the time of breach and the amount that Agency would have paid Contractor pursuant hereto if Contractor had completed the Work.

Section 9. KEEPING AND STATUS OF RECORDS.

- 9.1 Records Created as Part of Contractor's Performance.** All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Contractor prepares or obtains pursuant to this Agreement and that relate to the matters covered hereunder shall be the property of the Agency. Contractor hereby agrees to deliver those documents to the Agency upon termination of the Agreement. Agency and Contractor agree that, unless approved by Agency in writing, Contractor shall not release to any non-parties to this Agreement any data, plans, specifications, reports and other documents.
- 9.2 Contractor's Books and Records.** Contractor shall maintain any and all records or other documents evidencing or relating to charges for Work or expenditures and disbursements charged to the Agency under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to the Contractor under this Agreement.
- 9.3 Inspection and Audit of Records.** Any records or documents that this Agreement requires Contractor to maintain shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of the Agency. Under California Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars (\$10,000.00), the Agreement shall be subject to the examination and audit of the State Auditor, at the request of Agency or as part of any audit of the Agency, for a period of three (3) years after final payment under this Agreement.
- 9.4 Confidential Information and Disclosure.**
- 9.4.1 Confidential Information.** The term "Confidential Information", as used herein, shall mean any and all confidential, proprietary, or trade secret information, whether written, recorded, electronic, oral or otherwise, where the Confidential Information is made available in a tangible medium of expression and marked in a prominent location as confidential, proprietary and/or trade secret information. Confidential Information shall not include information that: (a) was already known to the Receiving Party or is otherwise a matter of public knowledge, (b) was disclosed to Receiving Party by a third party without violating any confidentiality

agreement, (c) was independently developed by Receiving Party without reverse engineering, as evidenced by written records thereof, or (d) was not marked as Confidential Information in accordance with this section.

9.4.2 Non-Disclosure of Confidential Information. During the term of this Agreement, either party may disclose (the "Disclosing Party") Confidential Information to the other party (the "Receiving Party"). The Receiving Party: (a) shall hold the Disclosing Party's Confidential Information in confidence; and (b) shall take all reasonable steps to prevent any unauthorized possession, use, copying, transfer or disclosure of such Confidential Information.

9.4.3 Permitted Disclosure. Notwithstanding the foregoing, the following disclosures of Confidential Information are allowed. Receiving Party shall endeavor to provide prior written notice to Disclosing Party of any permitted disclosure made pursuant to Section 9.4.3.2 or 9.4.3.3. Disclosing Party may seek a protective order, including without limitation, a temporary restraining order to prevent or contest such permitted disclosure; provided, however, that Disclosing Party shall seek such remedies at its sole expense. Neither party shall have any liability for such permitted disclosures:

9.4.3.1 Disclosure to employees, agents, contractors, subcontractors or other representatives of Receiving Party that have a need to know in connection with this Agreement.

9.4.3.2 Disclosure in response to a valid order of a court, government or regulatory agency or as may otherwise be required by law; and

9.4.3.3 Disclosure by Agency in response to a request pursuant to the California Public Records Act.

9.4.4 Handling of Confidential Information. Upon conclusion or termination of the Agreement, Receiving Party shall return to Disclosing Party or destroy Confidential Information (including all copies thereof), if requested by Disclosing Party in writing. Notwithstanding the foregoing, the Receiving Party may retain copies of such Confidential Information, subject to the confidentiality provisions of this Agreement: (a) for archival purposes in its computer system; (b) in its legal department files; and (c) in files of Receiving Party's representatives where such copies are necessary to comply with applicable law. Party shall not disclose the Disclosing Party's Information to any person other than those of the Receiving Party's employees, agents, consultants, contractors and subcontractors who have a need to know in connection with this Agreement.

Section 10. PROJECT SITE.

- 10.1 Operations at the Project Site.** Each Project site may include the power plant areas, all buildings, offices, and other locations where Work is to be performed, including any access roads. Contractor shall perform the Work in such a manner as to cause a minimum of interference with the operations of the Agency; if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4; and other contractors at the Project site and to protect all persons and property thereon from damage or injury. Upon completion of the Work at a Project site, Contractor shall leave such Project site clean and free of all tools, equipment, waste materials and rubbish, stemming from or relating to Contractor's Work.
- 10.2 Contractor's Equipment, Tools, Supplies and Materials.** Contractor shall be solely responsible for the transportation, loading and unloading, and storage of any equipment, tools, supplies or materials required for performing the Work, whether owned, leased or rented. Neither Agency nor, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, will be responsible for any such equipment, supplies or materials which may be lost, stolen or damaged or for any additional rental charges for such. Equipment, tools, supplies and materials left or stored at a Project site, with or without permission, is at Contractor's sole risk. Anything left on the Project site an unreasonable length of time after the Work is completed shall be presumed to have been abandoned by the Contractor. Any transportation furnished by Agency or, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, shall be solely as an accommodation and neither Agency nor, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, shall have liability therefor. Contractor shall assume the risk and is solely responsible for its owned, non-owned and hired automobiles, trucks or other motorized vehicles as well as any equipment, tools, supplies, materials or other property which is utilized by Contractor on the Project site. All materials and supplies used by Contractor in the Work shall be new and in good condition.
- 10.3 Use of Agency Equipment.** Contractor shall assume the risk and is solely responsible for its use of any equipment owned and property provided by Agency and, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, for the performance of Work.

Section 11. WARRANTY.

- 11.1 Nature of Work.** In addition to any and all warranties provided or implied by law or public policy, Contractor warrants that all Work shall be free from defects in design and workmanship, and that Contractor shall perform all Work in accordance with applicable federal, state, and local laws, rules and regulations including engineering, construction and other codes and standards and prudent electrical utility standards, and in accordance with the terms of this Agreement.

11.2 Deficiencies in Work. In addition to all other rights and remedies which Agency may have, Agency shall have the right to require, and Contractor shall be obligated at its own expense to perform, all further Work which may be required to correct any deficiencies which result from Contractor's failure to perform any Work in accordance with the standards required by this Agreement. If during the term of this Agreement or the one (1) year period following completion of the Work, any equipment, supplies or other materials or Work used or provided by Contractor under this Agreement fails due to defects in material and/or workmanship or other breach of this Agreement, Contractor shall, upon any reasonable written notice from Agency, replace or repair the same to Agency's satisfaction.

11.3 Assignment of Warranties. Contractor hereby assigns to Agency all additional warranties, extended warranties, or benefits like warranties, such as insurance, provided by or reasonably obtainable from suppliers of equipment and material used in the Work.

Section 12. HEALTH AND SAFETY PROGRAMS. The Contractor shall establish, maintain, and enforce safe work practices, and implement an accident/incident prevention program intended to ensure safe and healthful operations under their direction. The program shall include all requisite components of such a program under Federal, State and local regulations and shall comply with all site programs established by Agency and, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4.

12.1 Contractor is responsible for acquiring job hazard assessments as necessary to safely perform the Work and provide a copy to Agency upon request.

12.2 Contractor is responsible for providing all employee health and safety training and personal protective equipment in accordance with potential hazards that may be encountered in performance of the Work and provide copies of the certified training records upon request by Agency. Contractor shall be responsible for proper maintenance and/or disposal of their personal protective equipment and material handling equipment.

12.3 Contractor is responsible for ensuring that its lower-tier subcontractors are aware of and will comply with the requirements set forth herein.

12.4 Agency, or its representatives, may periodically monitor the safety performance of the Contractor performing the Work. Contractors and its subcontractors shall be required to comply with the safety and health obligations as established in the Agreement. Non-compliance with safety, health, or fire requirements may result in cessation of work activities, until items in non-compliance are corrected. It is also expressly acknowledged, understood and agreed that no payment shall be due from Agency to Contractor under this Agreement at any time when, or for any Work performed when, Contractor is not in full compliance with this Section 12.

- 12.5** Contractor shall immediately report any injuries to the Agency site safety representative. Additionally, the Contractor shall investigate and submit to the Agency site safety representative copies of all written accident reports, and coordinate with Agency if further investigation is requested.
- 12.6** Contractor shall take all reasonable steps and precautions to protect the health of its employees and other site personnel with regard to the Work. Contractor shall conduct occupational health monitoring and/or sampling to determine levels of exposure of its employees to hazardous or toxic substances or environmental conditions. Copies of any sampling results will be forwarded to the Agency site safety representative upon request.
- 12.7** Contractor shall develop a plan to properly handle and dispose of any hazardous wastes, if any, Contractor generates in performing the Work.
- 12.8** Contractor shall advise its employees and subcontractors that any employee who jeopardizes his/her safety and health, or the safety and health of others, may be subject to actions including removal from Work.
- 12.9** Contractor shall, at the sole option of the Agency, develop and provide to the Agency a Hazardous Material Spill Response Plan that includes provisions for spill containment and clean-up, emergency contact information including regulatory agencies and spill sampling and analysis procedures. Hazardous Materials shall include diesel fuel used for trucks owned or leased by the Contractor.
- 12.10** If Contractor is providing Work to an Agency Member, SCPPA or SCPPA member (collectively "Member" solely for the purpose of this section) pursuant to Section 1.4 hereof, then that Member shall have the same rights as the Agency under Sections 12.1, 12.2, 12.4, 12.5, and 12.6 hereof.

Section 13. MISCELLANEOUS PROVISIONS.

- 13.1 Attorneys' Fees.** If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.
- 13.2 Venue.** In the event that either party brings any action against the other under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.
- 13.3 Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in

whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.

13.4 No Implied Waiver of Breach. The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.

13.5 Successors and Assigns. The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the Parties.

13.6 Conflict of Interest. Contractor may serve other clients, but none whose activities within the corporate limits of Agency or whose business, regardless of location, would place Contractor in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*

Contractor shall not employ any Agency official in the work performed pursuant to this Agreement. No officer or employee of Agency shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 *et seq.*

13.7 Contract Administrator. This Agreement shall be administered by Ken Speer, Assistant General Manager, or his/her designee, who shall act as the Agency's representative. All correspondence shall be directed to or through the representative.

13.8 Notices. Any written notice to Contractor shall be sent to:

Martech
Attention: Rick Leddy
142 N. Cluff Avenue
Lodi, CA 95240

Any written notice to Agency shall be sent to:

Randy S. Howard
General Manager
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

With a copy to:

Jane E. Luckhardt
General Counsel
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

- 13.9 Professional Seal.** Where applicable in the determination of the Agency, the first page of a technical report, first page of design specifications, and each page of construction drawings shall be stamped/sealed and signed by the licensed professional responsible for the report/design preparation.
- 13.10 Integration; Incorporation.** This Agreement, including all the exhibits attached hereto, represents the entire and integrated agreement between Agency and Contractor and supersedes all prior negotiations, representations, or agreements, either written or oral. All exhibits attached hereto are incorporated by reference herein.
- 13.11 Alternative Dispute Resolution.** If any dispute arises between the Parties that cannot be settled after engaging in good faith negotiations, Agency and Contractor agree to resolve the dispute in accordance with the following:
- 13.11.1** Each party shall designate a senior management or executive level representative to negotiate any dispute;
 - 13.11.2** The representatives shall attempt, through good faith negotiations, to resolve the dispute by any means within their authority.
 - 13.11.3** If the issue remains unresolved after fifteen (15) days of good faith negotiations, the Parties shall attempt to resolve the disagreement by negotiation between legal counsel. If the above process fails, the Parties shall resolve any remaining disputes through mediation to expedite the resolution of the dispute.
 - 13.11.4** The mediation process shall provide for the selection within fifteen (15) days by both Parties of a disinterested third person as mediator, shall be commenced within thirty (30) days and shall be concluded within fifteen (15) days from the commencement of the mediation.
 - 13.11.5** The Parties shall equally bear the costs of any third party in any alternative dispute resolution process.
 - 13.11.6** The alternative dispute resolution process is a material condition to this Agreement and must be exhausted as an administrative remedy prior to either Party initiating legal action. This alternative dispute resolution process is not intended to nor shall be construed to change the time periods for filing a claim or action specified by Government Code §§ 900 *et seq.*
- 13.12 Controlling Provisions.** In the case of any conflict between the terms of this Agreement and the Exhibits hereto, a Purchase Order, or Contractor's Proposal (if any), the Agreement shall control. In the case of any conflict between the Exhibits hereto and a Purchase Order or the Contractor's Proposal, the Exhibits shall control. In the case of any conflict between the terms of a Purchase Order and the Contractor's Proposal, the Purchase Order shall control.

13.13 Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

13.14 Construction of Agreement. Each party hereto has had an equivalent opportunity to participate in the drafting of the Agreement and/or to consult with legal counsel. Therefore, the usual construction of an agreement against the drafting party shall not apply hereto.

13.15 No Third Party Beneficiaries. This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any non-signator third parties. However, should Contractor provide Work to an Agency member, SCPPA or SCPPA member (collectively for the purpose of this section only "Member") pursuant to Section 1.4, the parties recognize that such Member may be a third party beneficiary solely as to the Purchase Order and Requested Work relating to such Member.

The Parties have executed this Agreement as of the date signed by the Agency.

NORTHERN CALIFORNIA POWER AGENCY

MECHANICAL ANALYSIS REPAIR, INC.
dba MARTECH

Date_____

Date_____

RANDY S. HOWARD,
General Manager

RICHARD LEDDY,
President

Attest:

Assistant Secretary of the Commission

Approved as to Form:

Jane E. Luckhardt, General Counsel

EXHIBIT A
SCOPE OF WORK

Mechanical Analysis/Repair, Inc. dba Martech ("Contractor") shall provide machining services as requested by the Northern California Power Agency ("Agency") at any facilities owned or operated by Agency, its Members, Southern California Public Power Authority (SCPPA) or SCPPA members.

Services to include, but not be limited to the following:

- Machining
- Balancing
- Hydroelectric Services
- AC/DC Motor Rewind and Rebuild
- Rebuild or Re-Manufacturing of Equipment
- Maintenance

EXHIBIT B

COMPENSATION SCHEDULE AND HOURLY FEES

Compensation for all work, including hourly fees and expenses, shall not exceed the amount set forth in Section 2 hereof. The hourly rates and or compensation break down and an estimated amount of expenses is as follows:

* Shop & Non-Prevailing Wage (PW) Rate Sheet, All PW work needs to be quoted

General Rate Sheet 2019

General Shop Labor

- Straight Time \$ 80.00
- Overtime \$120.00

Shop Services Machining and Balancing

- Straight Time \$ 85.00
- Overtime \$127.50

Field Superintendent/Foreman

- Straight Time \$ 85.00
- Overtime \$127.50

Field Balancing and Laser Alignment

- Straight Time \$100.00
- Overtime \$150.00
- Minimum of 4 hours will be billed

Crane plus Operator

- Straight Time \$185.00
- Overtime \$227.50
- Minimum of 4 hours will be billed

Health & Safety Coordinator

- Straight Time \$ 80.00
- Overtime \$120.00

Confined Space Team Member

- Straight Time \$ 80.00
- Overtime \$120.00

Rescue Team Member

- Straight Time \$105.00
- Overtime \$157.50

Millwright

- Straight Time \$ 75.00
- Overtime \$112.50
- Minimum of 4 hours will be billed

Field Engineering Services, Analytical Services

- Straight Time \$105.00
- Overtime \$157.50

Administrative Support

- Straight Time \$ 45.00
- Overtime \$ 67.50

Field Service Vehicle

- Daily Charge \$ 75.00

Notes:

- Rates are “Fully Loaded” –Mechanic’s/Millwrights arrive at jobsite fully equipped
- Prevailing Wage rates are as per county
- All field service billed at half and full day rates only
- Double time rates apply 12 hours, On all call out after hours, Saturdays after 8hrs, all Sundays and Holidays
- Mileage and fuel surcharges apply and are site/location specific
- Environmental and Hazardous Waste disposal charges apply
- Subsistence and lodging charges apply for all overnight stays

Pricing for services to be performed at NCPA Member or SCPPA locations will be quoted at the time services are requested.

NOTE: As a public agency, NCPA shall not reimburse Contractor for travel, food and related costs in excess of those permitted by the Internal Revenue Service.

EXHIBIT C
CERTIFICATION

Affidavit of Compliance for Contractors

I,

(Name of person signing affidavit)(Title)

do hereby certify that background investigations to ascertain the accuracy of the identity and employment history of all employees of

(Company name)

for contract work at:

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI, CA 95242

(Project name and location)

have been conducted as required by the California Energy Commission Decision for the above-named project.

(Signature of officer or agent)

Dated this _____ day of _____, 20 _____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

NOT APPLICABLE

EXHIBIT D

CERTIFICATION

Affidavit of Compliance for Hazardous Materials Transport Vendors

I, _____,

(Name of person signing affidavit)(Title)

do hereby certify that the below-named company has prepared and implemented security plans in conformity with 49 CFR 172, subpart I and has conducted employee background investigations in conformity with 49 CFR 172.802(a), as the same may be amended from time to time,

(Company name)

for hazardous materials delivery to:

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI, CA 95242

(Project name and location)

as required by the California Energy Commission Decision for the above-named project.

(Signature of officer or agent)

Dated this _____ day of _____, 20 ____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

EXHIBIT E

**ATTACHMENT A [from MLA]
AGREEMENT TO BE BOUND**

**MAINTENANCE LABOR AGREEMENT ATTACHMENT
LODI ENERGY CENTER PROJECT**

The undersigned hereby certifies and agrees that:

- 1) It is an Employer as that term is defined in Section 1.4 of the Lodi Energy Center Project Maintenance Labor Agreement ("Agreement" solely for the purposes of this Exhibit E) because it has been, or will be, awarded a contract or subcontract to assign, award or subcontract Covered Work on the Project (as defined in Section 1.2 and 2.1 of the Agreement), or to authorize another party to assign, award or subcontract Covered Work, or to perform Covered Work.
- 2) In consideration of the award of such contract or subcontract, and in further consideration of the promises made in the Agreement and all attachments thereto (a copy of which was received and is hereby acknowledged), it accepts and agrees to be bound by the terms and condition of the Agreement, together with any and all amendments and supplements now existing or which are later made thereto.
- 3) If it performs Covered Work, it will be bound by the legally established trust agreements designated in local master collective bargaining agreements, and hereby authorizes the parties to such local trust agreements to appoint trustees and successor trustee to administer the trust funds, and hereby ratifies and accepts the trustees so appointed as if made by the undersigned.
- 4) It has no commitments or agreements that would preclude its full and complete compliance with the terms and conditions of the Agreement.
- 5) It will secure a duly executed Agreement to be Bound, in form identical to this documents, from any Employer(s) at any tier or tiers with which it contracts to assign, award, or subcontract Covered Work, or to authorize another party to assign, award or subcontract Covered Work, or to perform Covered Work.

DATED: _____ Name of Employer _____

(Authorized Officer & Title)

(Address)



Commission Staff Report – *DRAFT*

Date: April 24, 2019

COMMISSION MEETING DATE: May 23, 2019

SUBJECT: KSB, Inc. – Five Year Multi-Task General Services Agreement for pump maintenance related services; Applicable to the following projects: All NCPA Facility Locations, Members, SCPPA, and SCPPA Members

AGENDA CATEGORY: Consent

FROM:	Ken Speer	METHOD OF SELECTION:
	Assistant General Manager	N/A
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Combustion Turbines	

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

RECOMMENDATION:

Approval of Resolution 19-XX authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with KSB, Inc. for pump maintenance related services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$1,000,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (“SCPPA”), or by SCPPA Members.

It is recommend that this item be placed on the Commission Consent Calendar.

BACKGROUND:

Pump maintenance related services are required from time to time related to project support at facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (“SCPPA”), or by SCPPA Members.

FISCAL IMPACT:

Upon execution, the total cost of the agreement is not to exceed \$1,000,000.00 over five years, to be used out of the NCPA approved budget. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures.

SELECTION PROCESS:

This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are required, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA has agreements in place with Ethos Energy and Sulzer Turbo for similar services and seeks bids from multiple qualified providers whenever services are needed. Bids are awarded to the lowest cost provider. NCPA will issue purchase orders based on cost and availability of the services needed at the time the service is required.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a “project” for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

Pending committee review.

Respectfully submitted,

RANDY S. HOWARD
General Manager

Attachments (2):

- Resolution
- Multi-Task General Services Agreement with KSB, Inc.

DRAFT

RESOLUTION 19-XX

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY APPROVING A MULTI-TASK GENERAL SERVICES AGREEMENT WITH KSB, INC.

(reference Staff Report #xxx:19)

WHEREAS, pump maintenance related services are periodically required at the facilities owned and/or operated by Northern California Power Agency (NCPA), its Members, the Southern California Public Power Authority (SCPPA), and SCPPA Members; and

WHEREAS, KSB, Inc. is a provider of these services; and

WHEREAS, NCPA seeks to enter into a Multi-Task General Services Agreement with KSB, Inc. to provide such services as needed at all NCPA Generation facility locations, Member, SCPPA, and SCPPA Member facilities in an amount not to exceed \$1,000,000 over five years; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager or his designee to enter into a Multi-Task General Services Agreement with KSB, Inc. with any non-substantial changes as approved by the NCPA General Counsel, which shall not exceed \$1,000,000 for pump maintenance related services for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (SCPPA), or by SCPPA Members.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2019 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
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			

ROGER FRITH
CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY



**MULTI-TASK
GENERAL SERVICES AGREEMENT BETWEEN
THE NORTHERN CALIFORNIA POWER AGENCY AND
KSB, INC.**

This Multi-Task General Services Agreement ("Agreement") is made by and between the Northern California Power Agency, a joint powers agency with its main office located at 651 Commerce Drive, Roseville, CA 95678-6420 ("Agency") and KSB, Inc., a New York corporation with an office located at 19234 Flightpath Way, Bakersfield, CA 93308 ("Contractor") (together sometimes referred to as the "Parties" and individually as a "Party") as of _____, 2019 ("Effective Date") in Roseville, California.

Section 1. SCOPE OF WORK. Subject to the terms and conditions set forth in this Agreement, Contractor is willing to provide to Agency the range of services (the "Services") and/or goods (the "Goods") described in the Scope of Work attached hereto as Exhibit A and incorporated herein ("Work").

- 1.1 Term of Agreement.** The term of this Agreement shall begin on the Effective Date and shall end when Contractor completes the Work, or no later than five (5) years from the date this Agreement was signed by Agency, whichever is longer.
- 1.2 Standard of Performance.** Contractor shall perform the Work in the manner and according to the standards observed by a competent practitioner of the profession in which Contractor is engaged and for which Contractor is providing the Work. Contractor represents that it is licensed, qualified and experienced to provide the Work set forth herein.
- 1.3 Assignment of Personnel.** Contractor shall assign only competent personnel to perform the Work. In the event that Agency, in its sole discretion, at any time during the term of this Agreement, requests the reassignment of any such personnel, Contractor shall, immediately upon receiving written notice from Agency of such request, reassign such personnel.
- 1.4 Work Provided.** Work provided under this Agreement by Contractor may include Work directly to the Agency or, as requested by the Agency and consistent with the terms of this Agreement, to Agency members, Southern California Public Power Authority ("SCPPA") or SCPPA members.
- 1.5 Request for Work to be Performed.** At such time that Agency, SCPPA, or any Agency or SCPPA member determines to have Contractor perform Work under this Agreement, Agency shall issue a Purchase Order. The Purchase Order shall identify the specific Work to be performed ("Requested Work"), may include a not-to-exceed cap on monetary cap on Requested Work and all related expenditures authorized by that Purchase Order, and shall include a time by which the Requested Work shall be completed. Contractor shall have seven (7) business days from the date of the Agency's issuance of the Purchase Order in which to respond in writing that Contractor chooses to perform the Requested

Work. If Contractor agrees to perform the Requested Work it shall acknowledge its agreement in writing within the seven day period specified, and Contractor will have agreed to perform the Requested Work on the terms set forth in the Purchase Order, this Agreement and its Exhibits.

Section 2. COMPENSATION. Agency hereby agrees to pay Contractor an amount **NOT TO EXCEED** ONE MILLION dollars (\$1,000,000.00) for the Work per Purchase Order, which shall include all fees, costs, expenses and other reimbursables, as set forth in Contractor's fee schedule, attached hereto and incorporated herein as Exhibit B. This dollar amount is not a guarantee that Agency will pay that full amount to the Contractor, but is merely a limit of potential Agency expenditures under any Purchase Order issued under this Agreement.

2.1 Invoices. Contractor shall submit invoices, not more often than once a month during the term of this Agreement, based on the Work performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain the following information:

- The beginning and ending dates of the billing period;
- Work performed;
- The Purchase Order number authorizing the Requested Work;
- At Agency's option, for each work item in each task, a copy of the applicable time entries or time sheets shall be submitted showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense, with supporting documentation, to Agency's reasonable satisfaction;
- At Agency's option, the total number of hours of work performed under the Agreement by Contractor and each employee, agent, and subcontractor of Contractor performing work hereunder.

Invoices shall be sent to:

Northern California Power Agency
651 Commerce Drive
Roseville, California 95678
Attn: Accounts Payable
AcctsPayable@ncpa.com

2.2 Monthly Payment. Agency shall make monthly payments, based on invoices received, for Work satisfactorily performed, and for authorized reimbursable costs incurred. Agency shall have thirty (30) days from the receipt of an invoice that complies with all of the requirements above to pay Contractor.

2.3 Payment of Taxes. Contractor is solely responsible for the payment of all federal, state and local taxes, including employment taxes for its personnel, it incurs for Work performed under this Agreement.

2.4 Authorization to Perform Work. The Contractor is not authorized to perform any Work or incur any costs whatsoever under the terms of this Agreement until receipt of a Purchase Order from the Contract Administrator.

2.5 Timing for Submittal of Final Invoice. Contractor shall have ninety (90) days after completion of the Requested Work to submit its final invoice for the Requested Work. In the event Contractor fails to submit an invoice to Agency for any amounts due within the ninety (90) day period, Contractor is deemed to have waived its right to collect its final payment for the Requested Work from Agency.

Section 3. FACILITIES AND EQUIPMENT. As agreed per Purchase Order, Contractor shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the Work.

Section 4. INSURANCE REQUIREMENTS. Before beginning any Work under this Agreement, Contractor, at its own cost and expense, shall procure the types and amounts of insurance listed below and shall maintain the types and amounts of insurance listed below for the period covered by this Agreement.

4.1 Workers' Compensation. If Contractor employs any person, Contractor shall maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Contractor with limits of not less than one million dollars (\$1,000,000.00) per accident.

4.2 Commercial General and Automobile Liability Insurance.

4.2.1 Commercial General Insurance. Contractor shall maintain commercial general liability insurance for the term of this Agreement, including products liability, covering any loss or liability, including the cost of defense of any action, for bodily injury, death, personal injury and broad form property damage which may arise out of the operations of Contractor. The policy shall provide a minimum limit of \$1,000,000 per occurrence/\$2,000,000 aggregate. Commercial general coverage shall be at least as broad as ISO Commercial General Liability form CG 0001 (current edition) on "an occurrence" basis covering comprehensive General Liability, with a self-insured retention or deductible of no more than \$100,000. No endorsement shall be attached limiting the coverage.

4.2.2 Automobile Liability. Contractor shall maintain automobile liability insurance form CA 0001 (current edition) for the term of this Agreement covering any loss or liability, including the cost of defense of any action, arising from the operation, maintenance or use of any vehicle (symbol 1), whether or not owned by the Contractor, on or off Agency premises. The policy shall provide a minimum limit of \$1,000,000 per each accident, with a self-insured retention or deductible of no more than \$100,000. This insurance shall provide contractual liability covering all motor vehicles and mobile equipment to the extent coverage may be excluded from general liability insurance.

- 4.2.3 General Liability/Umbrella Insurance.** The coverage amounts set forth above may be met by a combination of underlying and umbrella policies as long as in combination the limits equal or exceed those stated.
- 4.3 Professional Liability Insurance.** Not Applicable.
- 4.4 Pollution Insurance.** Not Applicable.
- 4.5 All Policies Requirements.**
- 4.5.1 Verification of coverage.** Prior to beginning any work under this Agreement, Contractor shall provide Agency with (1) a Certificate of Insurance that demonstrates compliance with all applicable insurance provisions contained herein and (2) policy endorsements to the policies referenced in Section 4.2 and in Section 4.4, if applicable, adding the Agency as an additional insured and declaring such insurance primary in regard to work performed pursuant to this Agreement.
- 4.5.2 Notice of Reduction in or Cancellation of Coverage.** Contractor shall provide at least thirty (30) days prior written notice to Agency of any reduction in scope or amount, cancellation, or modification adverse to Agency of the policies referenced in Section 4.
- 4.5.3 Higher Limits.** If Contractor maintains higher limits than the minimums specified herein, the Agency shall be entitled to coverage for the higher limits maintained by the Contractor.
- 4.5.4 Additional Certificates and Endorsements.** If Contractor performs Work for Agency members, SCPPA and/or SCPPA members pursuant to this Agreement, Contractor shall provide the certificates of insurance and policy endorsements, as referenced in Section 4.5.1, naming the specific Agency member, SCPPA and/or SCPPA member for which the Work is to be performed.
- 4.5.5 Waiver of Subrogation.** Contractor agrees to waive subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. In addition, the Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Agency for all work performed by Contractor, its employees, agents and subcontractors.
- 4.6 Contractor's Obligation.** Contractor shall be solely responsible for ensuring that all equipment, vehicles and other items utilized in the performance of Work are operated, provided or otherwise utilized in a manner that ensures they are and remain covered by the policies referenced in Section 4 during this Agreement. Contractor shall also ensure that all its workers involved in the provision of Work are properly classified as employees, agents or independent

contractors and are and remain covered by any and all workers' compensation insurance required by applicable law during this Agreement.

Section 5. INDEMNIFICATION AND CONTRACTOR'S RESPONSIBILITIES.

- 5.1 Effect of Insurance.** Agency's acceptance of insurance certificates and endorsements required under this Agreement does not relieve Contractor from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Contractor acknowledges and agrees to the provisions of this section and that it is a material element of consideration.
- 5.2 Scope.** Contractor shall indemnify, defend with counsel reasonably acceptable to the Agency, and hold harmless the Agency, and its officials, commissioners, officers, employees, agents and volunteers from and against all losses, liabilities, claims, demands, suits, actions, damages, expenses, penalties, fines, costs (including without limitation costs and fees of litigation), judgments and causes of action of every nature arising out of or in connection with any acts or omissions by Contractor, its officers, officials, agents, and employees, except as caused by the sole or gross negligence of Agency. Notwithstanding, should this Agreement be construed as a construction agreement under Civil Code section 2783, then the exception referenced above shall also be for the active negligence of Agency.
- 5.3 Transfer of Title.** Not Applicable.

Section 6. STATUS OF CONTRACTOR.

- 6.1 Independent Contractor.** Contractor is an independent contractor and not an employee of Agency. Agency shall have the right to control Contractor only insofar as the results of Contractor's Work and assignment of personnel pursuant to Section 1; otherwise, Agency shall not have the right to control the means by which Contractor accomplishes Work rendered pursuant to this Agreement. Notwithstanding any other Agency, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors performing Work under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any and all claims to, any compensation, benefit, or any incident of employment by Agency, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of Agency and entitlement to any contribution to be paid by Agency for employer contributions and/or employee contributions for PERS benefits.

Contractor shall indemnify, defend, and hold harmless Agency for the payment of any employee and/or employer contributions for PERS benefits on behalf of Contractor or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of Agency. Contractor and Agency acknowledge

and agree that compensation paid by Agency to Contractor under this Agreement is based upon Contractor's estimated costs of providing the Work, including salaries and benefits of employees, agents and subcontractors of Contractor.

Contractor shall indemnify, defend, and hold harmless Agency from any lawsuit, administrative action, or other claim for penalties, losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such claims, whether directly or indirectly, due to Contractor's failure to secure workers' compensation insurance as required by law for its employees, agents, or subcontractors related to their performance of the Work under this Agreement.

Contractor agrees that it is responsible for the provision of group healthcare benefits to its fulltime employees under 26 U.S.C. § 4980H of the Affordable Care Act, as amended (the "Act"). To the extent permitted by law, Contractor shall indemnify, defend and hold harmless Agency from any penalty issued to Agency under the Affordable Care Act resulting from Contractor's violation of the its obligations under the Act related to its performance of the Services by any employee, agent, or subcontractor of Contractor.

- 6.2 Contractor Not Agent.** Except as Agency may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of Agency in any capacity whatsoever as an agent. Contractor shall have no authority, express or implied, pursuant to this Agreement to bind Agency to any obligation whatsoever.
- 6.3 Assignment and Subcontracting.** This Agreement contemplates personal performance by Contractor and is based upon a determination of Contractor's unique professional competence, experience, and specialized professional knowledge. A substantial inducement to Agency for entering into this Agreement was and is the personal reputation and competence of Contractor. Contractor may not assign this Agreement or any interest therein without the prior written approval of the Agency. Contractor shall not subcontract any portion of the performance contemplated and provided for herein, other than to the subcontractors identified in Exhibit A, without prior written approval of the Agency. Where written approval is granted by the Agency, Contractor shall supervise all work subcontracted by Contractor in performing the Work and shall be responsible for all work performed by a subcontractor as if Contractor itself had performed such work. The subcontracting of any work to subcontractors shall not relieve Contractor from any of its obligations under this Agreement with respect to the Work and Contractor is obligated to ensure that any and all subcontractors performing any Work shall be fully insured in all respects and to the same extent as set forth under Section 4, to Agency's satisfaction.
- 6.4 Certification as to California Energy Commission.** If requested by the Agency, Contractor shall, at the same time it executes this Agreement, execute Exhibit C.

- 6.5 **Certification as to California Energy Commission Regarding Hazardous Materials Transport Vendors.** If requested by the Agency, Contractor shall, at the same time it executes this Agreement, execute Exhibit D.
- 6.6 **Maintenance Labor Agreement.** If the Work is subject to the terms of one or more Maintenance Labor Agreements, which are applicable only to certain types of construction, repair and/or maintenance projects, then Contractor shall execute Exhibit E and/or similar documentation as to compliance.

Section 7. LEGAL REQUIREMENTS.

- 7.1 **Governing Law.** The laws of the State of California shall govern this Agreement.
- 7.2 **Compliance with Applicable Laws.** Contractor and its subcontractors and agents, if any, shall comply with all laws applicable to the performance of the work hereunder.
- 7.3 **Licenses and Permits.** Contractor represents and warrants to Agency that Contractor and its employees, agents, and subcontractors (if any) have and will maintain at their sole expense during the term of this Agreement all licenses, permits, qualifications, and approvals of whatever nature that are legally required to practice their respective professions.
- 7.4 **Monitoring by DIR.** The Work is subject to compliance monitoring and enforcement by the Department of Industrial Relations.
- 7.5 **Registration with DIR.** During the term of this Agreement, Contractor warrants that it is registered with the Department of Industrial Relations and qualified to perform Work consistent with Labor Code section 1725.5.
- 7.6 **Prevailing Wage Rates.** In accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work as provided in the California Labor Code must be paid to all workers engaged in performing the Work. In accordance with California Labor Code Section 1770 and following, the Director of Industrial Relations has determined the general prevailing wage per diem rates for the locality in which the Work is to be performed; the Agency has obtained the general prevailing rate of per diem wages and the general rate for holiday and overtime work in the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the project; and copies of the prevailing rate of per diem wages are on file at the Agency and will be made available on request. Throughout the performance of the Work, Contractor must comply with all applicable laws and regulations that apply to wages earned in performance of the Work. Contractor assumes all responsibility for such payments and shall defend, indemnify and hold the Agency harmless from any and all claims made by the

State of California, the Department of Industrial Relations, any subcontractor, any worker or any other third party with regard thereto.

Additionally, in accordance with the California Administrative Code, Title 8, Group 3, Article 2, Section 16000, Publication of Prevailing Wage Rates by Awarding Bodies, copies of the applicable determination of the Director can be found on the web at: <http://www.dir.ca.gov/DLSR/PWD/> and may be reviewed at any time.

Contractor shall be required to submit to the Agency during the contract period, copies of Public Works payroll reporting information per California Department of Industrial Relations, Form A- 1-131 (New 2-80) concerning work performed under this Agreement.

Contractor shall comply with applicable law, including Labor Code Sections 1774 and 1775. In accordance with Section 1775, Contractor shall forfeit as a penalty to Agency \$50.00 for each calendar day or portion thereof, for each worker paid less than the prevailing rates as determined by the Director of Industrial Relations for such work or craft in which such worker is employed for any Work done under the Agreement by Contractor or by any subcontractor under Contractor in violation of the provisions of the Labor Code and in particular, Labor Code Sections 1770 *et seq.* In addition to the penalty and pursuant to Section 1775, the difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor.

Section 8. TERMINATION AND MODIFICATION.

- 8.1 Termination.** Agency may cancel this Agreement at any time and without cause upon ten (10) days prior written notice to Contractor.

In the event of termination, Contractor shall be entitled to compensation for Work satisfactorily completed as of the effective date of termination; Agency, however, may condition payment of such compensation upon Contractor delivering to Agency any or all records or documents (as referenced in Section 9.1 hereof).

- 8.2 Amendments.** The Parties may amend this Agreement only by a writing signed by both of the Parties.
- 8.3 Survival.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between Agency and Contractor shall survive the termination of this Agreement.
- 8.4 Options upon Breach by Contractor.** If, after written notice from Agency and a reasonable opportunity to commence to cure a breach of a material term, Contractor breaches any of the material terms of this Agreement, including but not limited to failure to procure and maintain insurance as required in Section 4, Agency's remedies shall include, but not be limited to, the following:

- 8.4.1** Immediately terminate the Agreement;
- 8.4.2** Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Contractor pursuant to a Purchase Order under this Agreement;
- 8.4.3** Retain a different Contractor to complete the Work not finished by Contractor pursuant to a Purchase Order; and/or
- 8.4.4** Charge Contractor the difference between the direct out of pocket costs to complete the Work that is unfinished at the time of breach and the amount that Agency would have paid Contractor pursuant hereto if Contractor had completed the Work.

Section 9. KEEPING AND STATUS OF RECORDS.

- 9.1 Records Created as Part of Contractor's Performance.** All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Contractor prepares as part of or obtains pursuant to this Agreement and that relate are prepared or directly pertain to the matters covered hereunder shall be the property of the Agency. Contractor hereby agrees to deliver those documents to the Agency upon termination of the Agreement. Agency and Contractor agree that, unless approved by Agency in writing, Contractor shall not release to any non-parties to this Agreement any data, plans, specifications, reports and other documents.
- 9.2 Contractor's Books and Records.** Contractor shall maintain any and all records or other documents evidencing or relating to charges for Work or expenditures and disbursements charged to the Agency under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to the Contractor under this Agreement.
- 9.3 Inspection and Audit of Records.** Any records or documents that this Agreement requires Contractor to maintain shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of the Agency. Under California Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars (\$10,000.00), the Agreement shall be subject to the examination and audit of the State Auditor, at the request of Agency or as part of any audit of the Agency, for a period of three (3) years after final payment under this Agreement.
- 9.4 Confidential Information and Disclosure.**
 - 9.4.1 Confidential Information.** The term "Confidential Information", as used herein, shall mean any and all confidential, proprietary, or trade secret

information, whether written, recorded, electronic, oral or otherwise, where the Confidential Information is made available in a tangible medium of expression and marked in a prominent location as confidential, proprietary and/or trade secret information. Confidential Information shall not include information that: (a) was already known to the Receiving Party or is otherwise a matter of public knowledge, (b) was disclosed to Receiving Party by a third party without violating any confidentiality agreement, (c) was independently developed by Receiving Party without reverse engineering, as evidenced by written records thereof, or (d) was not marked as Confidential Information in accordance with this section.

9.4.2 Non-Disclosure of Confidential Information. During the term of this Agreement, either party may disclose (the "Disclosing Party") Confidential Information to the other party (the "Receiving Party"). The Receiving Party: (a) shall hold the Disclosing Party's Confidential Information in confidence; and (b) shall take all reasonable steps to prevent any unauthorized possession, use, copying, transfer or disclosure of such Confidential Information.

9.4.3 Permitted Disclosure. Notwithstanding the foregoing, the following disclosures of Confidential Information are allowed. Receiving Party shall endeavor to provide prior written notice to Disclosing Party of any permitted disclosure made pursuant to Section 9.4.3.2 or 9.4.3.3. Disclosing Party may seek a protective order, including without limitation, a temporary restraining order to prevent or contest such permitted disclosure; provided, however, that Disclosing Party shall seek such remedies at its sole expense. Neither party shall have any liability for such permitted disclosures:

9.4.3.1 Disclosure to employees, agents, contractors, subcontractors or other representatives of Receiving Party that have a need to know in connection with this Agreement.

9.4.3.2 Disclosure in response to a valid order of a court, government or regulatory agency or as may otherwise be required by law; and

9.4.3.3 Disclosure by Agency in response to a request pursuant to the California Public Records Act.

9.4.4 Handling of Confidential Information. Upon conclusion or termination of the Agreement, Receiving Party shall return to Disclosing Party or destroy Confidential Information (including all copies thereof), if requested by Disclosing Party in writing. Notwithstanding the foregoing, the Receiving Party may retain copies of such Confidential Information, subject to the confidentiality provisions of this Agreement: (a) for archival purposes in its computer system; (b) in its legal department files; and (c) in files of Receiving Party's representatives where such copies are necessary to comply with applicable law. Party shall not disclose the

Disclosing Party's Information to any person other than those of the Receiving Party's employees, agents, consultants, contractors and subcontractors who have a need to know in connection with this Agreement.

Section 10. PROJECT SITE.

- 10.1 Operations at the Project Site.** Each Project site may include the power plant areas, all buildings, offices, and other locations where Work is to be performed, including any access roads. Contractor shall perform the Work in such a manner as to cause a minimum of interference with the operations of the Agency; if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4; and other contractors at the Project site and to protect all persons and property thereon from damage or injury. Upon completion of the Work at a Project site, Contractor shall leave such Project site clean and free of all tools, equipment, waste materials and rubbish, stemming from or relating to Contractor's Work.
- 10.2 Contractor's Equipment, Tools, Supplies and Materials.** Contractor shall be solely responsible for the transportation, loading and unloading, and storage of any equipment, tools, supplies or materials required for performing the Work, whether owned, leased or rented. Neither Agency nor, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, will be responsible for any such equipment, supplies or materials which may be lost, stolen or damaged or for any additional rental charges for such. Equipment, tools, supplies and materials left or stored at a Project site, with or without permission, is at Contractor's sole risk. Anything left on the Project site an unreasonable length of time after the Work is completed shall be presumed to have been abandoned by the Contractor. Any transportation furnished by Agency or, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, shall be solely as an accommodation and neither Agency nor, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, shall have liability therefor. Contractor shall assume the risk and is solely responsible for its owned, non-owned and hired automobiles, trucks or other motorized vehicles as well as any equipment, tools, supplies, materials or other property which is utilized by Contractor on the Project site. All materials and supplies used by Contractor in the Work shall be new and in good condition.
- 10.3 Use of Agency Equipment.** Contractor shall assume the risk and is solely responsible for its use of any equipment owned and property provided by Agency and, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, for the performance of Work.

Section 11. WARRANTY.

11.1 Nature of Work.

- 11.1.1** Subject to its limitation of liability, Contractor warrants that all Goods supplied by Contractor as part of the Work shall be free from defects in design (except to the extent that any design is specified by Agency), materials and workmanship as specified under 11.2.1 below, and
- 11.1.2** Subject to its limitation of liability, Contractor warrants that all Services performed by Contractor as part of the Work shall be performed in a good and workmanlike manner as specified under 11.2.1.2 below; and
- 11.1.3** Contractor shall perform all Work in accordance with applicable federal, state, and local laws, rules and regulations including engineering, construction and other codes and standards and prudent electrical utility standards, and in accordance with the terms of this Agreement.

11.2 Deficiencies in Work.

- 11.2.1** If, for a period of twelve (12) months from the date of placing Goods in operation or eighteen (18) months from the date of initial shipment, whichever shall occur first, any equipment, supplies or other materials used or provided by Contractor under this Agreement fails due to defects in material and/or workmanship, Contractor shall, upon any reasonable written notice from Agency but within the 12 or 18 month period, replace or repair the same at Contractor's option. The warranty period for repaired or replaced Goods shall extend for a period of twelve (12) months beyond the date the repair or replacement work is completed or to the end of the original warranty period, whichever occurs later. Contractor will not be liable for any repairs, replacements, or adjustments to the Goods performed by Agency or any party hired by Agency. Contractor shall be responsible for any direct, out of pocket costs incurred by Agency and including time spent by Agency personnel to affect such repairs, replacements or adjustments to the Goods performed. Any such work on Goods done by Agency or by third parties without pre-approval by Contractor shall be at Agency's cost and expense and shall void Contractor's Warranty under this Paragraph 11.2.1.
 - 11.2.1.2** If, for a period of thirty (30) days following completion of the Service performed under a Purchase Order, any Service fails due to defect in Services warranty as described under 11.1.2 above, Contractor shall upon any reasonable written notice from Agency but within the 30 day period re-perform the Service.

11.2.2 The effects of corrosion, erosion and normal wear and tear are specifically excluded from Contractor's Warranty. Contractor makes no performance warranty unless specifically stated within its proposal. In the event performance warranties are expressly included, .

11.3 **Assignment of Warranties.** Contractor hereby assigns to Agency all additional warranties, extended warranties, or benefits like warranties, such as insurance, provided by or reasonably obtainable from suppliers of equipment and material used in the Work.

11.4 **THE WARRANTIES MADE HEREIN BY CONTRACTOR ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED BY AGENCY OR ANY ENTITY ISSUING A PURCHASE ORDER UNDER THIS AGREEMENT. CONTRACTOR DISCLAIMS ANY AND ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

Section 12. HEALTH AND SAFETY PROGRAMS. The Contractor shall establish, maintain, and enforce safe work practices, and implement an accident/incident prevention program intended to ensure safe and healthful operations under their direction. The program shall include all requisite components of such a program under Federal, State and local regulations and shall comply with all site programs established by Agency and, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4.

12.1 Contractor is responsible for acquiring job hazard assessments as necessary to safely perform the Work and provide a copy to Agency upon request.

12.2 Contractor is responsible for providing all employee health and safety training and personal protective equipment in accordance with potential hazards that may be encountered in performance of the Work and provide copies of the certified training records upon request by Agency. Contractor shall be responsible for proper maintenance and/or disposal of their personal protective equipment and material handling equipment.

12.3 Contractor is responsible for ensuring that its lower-tier subcontractors are aware of and will comply with the requirements set forth herein.

12.4 Agency, or its representatives, may periodically monitor the safety performance of the Contractor performing the Work. Contractors and its subcontractors shall be required to comply with the safety and health obligations as established in the Agreement. Non-compliance with safety, health, or fire requirements may result in cessation of work activities, until items in non-compliance are corrected. It is also expressly acknowledged, understood and agreed that no payment shall be due from Agency to Contractor under this Agreement at any time when, or for any Work performed when, Contractor is not in full compliance with this Section 12.

12.5 Contractor shall immediately report any injuries to the Agency site safety representative. Additionally, the Contractor shall investigate and submit to the

Agency site safety representative copies of all written accident reports, and coordinate with Agency if further investigation is requested.

- 12.6** Contractor shall take all reasonable steps and precautions to protect the health of its employees and other site personnel with regard to the Work. Contractor shall conduct occupational health monitoring and/or sampling to determine levels of exposure of its employees to hazardous or toxic substances or environmental conditions. Copies of any sampling results will be forwarded to the Agency site safety representative upon request.
- 12.7** Contractor shall develop a plan to properly handle and dispose of any hazardous wastes, if any, Contractor generates in performing the Work.
- 12.8** Contractor shall advise its employees and subcontractors that any employee who jeopardizes his/her safety and health, or the safety and health of others, may be subject to actions including removal from Work.
- 12.9** Contractor shall, at the sole option of the Agency, develop and provide to the Agency a Hazardous Material Spill Response Plan that includes provisions for spill containment and clean-up, emergency contact information including regulatory agencies and spill sampling and analysis procedures. Hazardous Materials shall include diesel fuel used for trucks owned or leased by the Contractor.
- 12.10** If Contractor is providing Work to an Agency Member, SCPPA or SCPPA member (collectively "Member" solely for the purpose of this section) pursuant to Section 1.4 hereof, then that Member shall have the same rights as the Agency under Sections 12.1, 12.2, 12.4, 12.5, and 12.6 hereof.

Section 13. MISCELLANEOUS PROVISIONS.

- 13.1** **Attorneys' Fees.** If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.
- 13.2** **Venue.** In the event that either party brings any action against the other under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.
- 13.3** **Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.

13.4 No Implied Waiver of Breach. The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.

13.5 Successors and Assigns. The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the Parties.

13.6 Conflict of Interest. Contractor may serve other clients, but none whose activities within the corporate limits of Agency or whose business, regardless of location, would place Contractor in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*

Contractor shall not employ any Agency official in the work performed pursuant to this Agreement. No officer or employee of Agency shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 *et seq.*

13.7 Contract Administrator. This Agreement shall be administered by Ken Speer, Assistant General Manager, or his/her designee, who shall act as the Agency's representative. All correspondence shall be directed to or through the representative.

13.8 Notices. Any written notice to Contractor shall be sent to:

KSB, Inc.
Attention: Dean Brown, General Manager
19234 Flightpath Way
Bakersfield, CA 93308

With a copy to:

KSB, Inc.
Attention: Audrey Schumacher Turner, Regional Legal Counsel –KSB North America
4415 Sarellen Road
Henrico, VA 23231

Any written notice to Agency shall be sent to:

Randy S. Howard
General Manager
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

With a copy to:

Jane E. Luckhardt
General Counsel
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

- 13.9 Professional Seal.** Where applicable in the determination of the Agency, the first page of a technical report, first page of design specifications, and each page of construction drawings shall be stamped/sealed and signed by the licensed professional responsible for the report/design preparation.
- 13.10 Integration; Incorporation.** This Agreement, including all the exhibits attached hereto, represents the entire and integrated agreement between Agency and Contractor and supersedes all prior negotiations, representations, or agreements, either written or oral. All exhibits attached hereto are incorporated by reference herein.
- 13.11 Alternative Dispute Resolution.** If any dispute arises between the Parties that cannot be settled after engaging in good faith negotiations, Agency and Contractor agree to resolve the dispute in accordance with the following:
- 13.11.1** Each party shall designate a senior management or executive level representative to negotiate any dispute;
 - 13.11.2** The representatives shall attempt, through good faith negotiations, to resolve the dispute by any means within their authority.
 - 13.11.3** If the issue remains unresolved after fifteen (15) business days of good faith negotiations, the Parties shall attempt to resolve the disagreement by negotiation between legal counsel. If the above process fails, the Parties shall resolve any remaining disputes through mediation to expedite the resolution of the dispute.
 - 13.11.4** The mediation process shall provide for the selection within fifteen (15) days by both Parties of a disinterested third person as mediator, shall be commenced within thirty (30) days and shall be concluded within fifteen (15) days from the commencement of the mediation.
 - 13.11.5** The Parties shall equally bear the costs of any third party in any alternative dispute resolution process.
 - 13.11.6** The alternative dispute resolution process is a material condition to this Agreement and must be exhausted as an administrative remedy prior to either Party initiating legal action. This alternative dispute resolution process is not intended to nor shall be construed to change the time periods for filing a claim or action specified by Government Code §§ 900 *et seq.*

13.12 Controlling Provisions. In the case of any conflict between the terms of this Agreement and the Exhibits hereto, a Purchase Order, or Contractor's Proposal (if any), the Agreement shall control. In the case of any conflict between the Exhibits hereto and a Purchase Order or the Contractor's Proposal, the Exhibits shall control. In the case of any conflict between the terms of a Purchase Order and the Contractor's Proposal, the Purchase Order shall control.

13.13 Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

13.14 Construction of Agreement. Each party hereto has had an equivalent opportunity to participate in the drafting of the Agreement and/or to consult with legal counsel. Therefore, the usual construction of an agreement against the drafting party shall not apply hereto.

13.15 No Third Party Beneficiaries. This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any non-signator third parties. However, should Contractor provide Work to an Agency member, SCLPA or SCLPA member (collectively for the purpose of this section only "Member") pursuant to Section 1.4, the parties recognize that such Member may be a third party beneficiary solely as to the Purchase Order and Requested Work relating to such Member.

13.16 Limitation of Liability.

IN NO EVENT SHALL SELLER BE LIABLE-WHETHER OR AS A RESULT OF BREACH OF CONTRACT OR WARRANTY OR BY WAY OF INDEMNITY OR OTHERWISE- FOR ANY LOSS OF REVENUE, LOSS OF USE, LOSS OF TIME, INCONVENIENCE, COSTS OF CAPITAL, COMMERCIAL LOSS, COSTS CONNECTED WITH THE INTERRUPTION OF OPERATION, OR ANY FURTHER SPECIAL, INDIRECT, CONSEQUENTIAL, OR PUNITIVE DAMAGE.

Signatures on the Next Page

The Parties have executed this Agreement as of the date signed by the Agency.

NORTHERN CALIFORNIA POWER AGENCY

KSB, INC.

Date_____

Date_____

RANDY S. HOWARD,
General Manager

Dean Brown,
General Manager

Attest:

Assistant Secretary of the Commission

Approved as to Form:

Jane E. Luckhardt, General Counsel

EXHIBIT A SCOPE OF WORK

KSB, Inc. ("Contractor") shall provide pump maintenance related services related to project support and plant operations as requested by the Northern California Power Agency ("Agency") at any Facilities owned or operated by NCPA, its Members, Southern California Public Power Authority (SCPPA) or SCPPA members.

Services to include, but not be limited to the following:

- Pump Maintenance
- Mechanical Seal Maintenance
- Metal Fabrication
- Rotating Equipment Balancing
- Equipment Cleaning

No project under this Agreement shall include Work that would qualify as a Public Works Project under the California Public Contract Code.

EXHIBIT B COMPENSATION SCHEDULE AND HOURLY FEES

Compensation for all work, including hourly fees and expenses, shall not exceed the amount set forth in Section 2 hereof. The hourly rates and or compensation break down and an estimated amount of expenses is as follows:

2018 Service Rates

		Industry Standard Rate	API/Engineered Product
Hourly Rates	A. Shop & Field Technician Labor Rate 1.Overtimes applies to all labor in excess of eight up to twelve (8-12) (Monday – Friday) and Saturday up to twelve hours. 2. Double-time applies to all labor hours in excess of twelve (12) hours in one day, all work hours on Sunday and holidays; twelve hours maximum. 3. Normal operating hours are 7:00 am – 3:30 pm , Monday – Friday 4. Pump Shop requires two staff memebers after hours	\$90.00 / person	\$145/ person
	B. Machine Shop Labor Rate Machine Shop requires two staff members after hours (See 1,2,3,4)	\$90.00 / person	\$145/person
	C. Technical Field Advisor Rate (See 1,2,3,4)	\$208.00 / Person	\$208.00 / Person
	D. Quality Control or Safety Supervisor Rate (See 1,2,3,4)	\$130.00 / person	\$130.00 / person
Expenses	E. Travel Time Rate (including portal to portal) and Standby Time will include the applicable rates shown above	See (A, B, C, D)	See (A, B, C, D)
	F. Holdover Time Rate Charged time for Field Service Technician covers time (other than service and standby time) spend at jobsite area in lieu of return to point of origin at Customer request and will be billed at stated	\$720.00 / day	\$1160.00 / day
	G. Per Diem Covers meals and incidental expenses associated with being at the job site. Not including are lodging and travel expenses.	\$92.00 / per day	\$92.00 / per day
	H. Public Transporation and Lodging At receipted cost plus 18% admin. Expense. Includes, but not limited to, airfare, rental vehicle,	Cost + 18% admin. expense	Cost + 18% admin. expense
	I. Mileage Company and personal vehicles	\$0.85/mile	\$0.85/ mile
	J. Miscellaneous Includes, but not limited to, freight, postage, printing costs, consumables required to perform tasks	Cost + 18% admin. expense	Cost + 18% admin. expense
Fees	K. Transportation Charge For Pick-up/Delivery (2 hour Minimum)	3.60 per mile + 18% admin. Expense	3.60 per mile + 18% admin. Expense
	L. Laser Alignment	\$350.00 / day	\$350.00 / day

** Rate for skilled work shall be at the prevailing rate in effect at the time that work is performed.

All rates are in U.S. funds (dollars) and subject to change without notice.

Rates effective January 5, 2018 and supersede all previously published rates.

Pricing for services to be performed at NCPA Member or SCPPA locations will be quoted at the time services are requested.

NOTE: As a public agency, NCPA shall not reimburse Contractor for travel, food and related costs in excess of those permitted by the Internal Revenue Service.

EXHIBIT C
CERTIFICATION

Affidavit of Compliance for Contractors

I,

(Name of person signing affidavit)(Title)

do hereby certify that background investigations to ascertain the accuracy of the identity and employment history of all employees of

KSB, Inc.

(Company name)

for contract work at:

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI, CA 95242

(Project name and location)

have been conducted as required by the California Energy Commission Decision for the above-named project.

(Signature of officer or agent)

Dated this _____ day of _____, 20 _____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

NOT APPLICABLE

EXHIBIT D

CERTIFICATION

Affidavit of Compliance for Hazardous Materials Transport Vendors

I, _____,

(Name of person signing affidavit)(Title)

do hereby certify that the below-named company has prepared and implemented security plans in conformity with 49 CFR 172, subpart I and has conducted employee background investigations in conformity with 49 CFR 172.802(a), as the same may be amended from time to time,

(Company name)

for hazardous materials delivery to:

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI, CA 95242

(Project name and location)

as required by the California Energy Commission Decision for the above-named project.

(Signature of officer or agent)

Dated this _____ day of _____, 20 ____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

EXHIBIT E

**ATTACHMENT A [from MLA]
AGREEMENT TO BE BOUND**

**MAINTENANCE LABOR AGREEMENT ATTACHMENT
LODI ENERGY CENTER PROJECT**

The undersigned hereby certifies and agrees that:

- 1) It is an Employer as that term is defined in Section 1.4 of the Lodi Energy Center Project Maintenance Labor Agreement ("Agreement" solely for the purposes of this Exhibit E) because it has been, or will be, awarded a contract or subcontract to assign, award or subcontract Covered Work on the Project (as defined in Section 1.2 and 2.1 of the Agreement), or to authorize another party to assign, award or subcontract Covered Work, or to perform Covered Work.
- 2) In consideration of the award of such contract or subcontract, and in further consideration of the promises made in the Agreement and all attachments thereto (a copy of which was received and is hereby acknowledged), it accepts and agrees to be bound by the terms and condition of the Agreement, together with any and all amendments and supplements now existing or which are later made thereto.
- 3) If it performs Covered Work, it will be bound by the legally established trust agreements designated in local master collective bargaining agreements, and hereby authorizes the parties to such local trust agreements to appoint trustees and successor trustee to administer the trust funds, and hereby ratifies and accepts the trustees so appointed as if made by the undersigned.
- 4) It has no commitments or agreements that would preclude its full and complete compliance with the terms and conditions of the Agreement.
- 5) It will secure a duly executed Agreement to be Bound, in form identical to this documents, from any Employer(s) at any tier or tiers with which it contracts to assign, award, or subcontract Covered Work, or to authorize another party to assign, award or subcontract Covered Work, or to perform Covered Work.

DATED: _____ Name of Employer _____

(Authorized Officer & Title)

(Address)



Commission Staff Report - *DRAFT*

Date: April 24, 2019

COMMISSION MEETING DATE: May 23, 2019

SUBJECT: 2019 Steam Field Operation and Generation Forecast Report

AGENDA CATEGORY: Consent

FROM: Ken Speer

METHOD OF SELECTION:

Assistant General Manager

N/A

Division: Generation Services

If other, please describe:

Department: Geothermal

IMPACTED MEMBERS:

All Members ☐

City of Lodi ☒

City of Shasta Lake ☐

Alameda Municipal Power ☒

City of Lompoc ☒

City of Ukiah ☒

San Francisco Bay Area
Rapid Transit ☐

City of Palo Alto ☐

Plumas-Sierra REC ☒

City of Biggs ☒

City of Redding ☐

Port of Oakland ☐

City of Gridley ☒

City of Roseville ☒

Truckee Donner PUD ☐

City of Healdsburg ☒

City of Santa Clara ☒

Other ☐

If other, please specify

RECOMMENDATION:

Adopt Resolution 19-XX approving the 2019 Steam Field Operations and Forecast Report dated April 2019 as the Geothermal Operating Protocol effective July 1, 2019. This Operating Protocol is to remain in effect until replaced by the Commission.

It is recommended that this item be placed on the Commission Consent Calendar.

BACKGROUND:

The Steam Field Operations Forecast Report is an in depth study of The Geysers reservoir relative to the operation of NCPA's Geothermal facility and provides a generation forecast of the facility. This report will act as the Operating Protocol with the goal of maximizing the generation output.

The Operating Protocol currently uses a two-zone strategy with wells on the west side of the NCPA lease producing to both Plant #1, Units #1 and #2. Wells on the east side of the NCPA lease produce to Plant #2, Unit #4. This Protocol will maximize generation while allowing for scheduling flexibility and reduction of load under the proper economic conditions. For 2019, these conditions are:

- Day Ahead Market Prices are a minimum of negative \$25 per MWhr.
- The level of curtailment will be limited to 45 MW with discretion to adjust this level based on the steam field response.
- Duration of the curtailment is to be a minimum of 4 hours.
- Curtailments are limited to once per calendar day.

The Protocol establishes a 2019 annual generation target of 92.4 gross MW.

FISCAL IMPACT:

The 2019-20 approved Geothermal budget covers the proposed action.

SELECTION PROCESS:

Not applicable.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

Pending Committee review.

Respectfully submitted,

RANDY S. HOWARD
General Manager

Attachments: (2)

- Resolution
- 2019 Steam Field Operation and Generation Forecast Report

RESOLUTION 19-XX

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY APPROVING THE 2019 STEAM FIELD OPERATIONS FORECAST REPORT AS THE 2019 GEOTHERMAL OPERATING PROTOCOL

(reference Staff Report #xxx:19)

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 80 steam production and injection wells connected by roads; and

WHEREAS, the 2019 Steam Field Operations Forecast Report is an in depth study of The Geysers reservoir relative to the operation of NCPA's GEO facility and provides a generation forecast of the facility. This report will act as the Operating Protocol with the goal of maximizing the generation output. The Operating Protocol currently uses a two-zone strategy with wells on the west side of the NCPA lease producing to Plant 1, Units #1 and #2. Wells on the east side of the NCPA lease produce to Plant #2, Unit #4. This Protocol will maximize generation while allowing for scheduling flexibility and reduction of load under the proper economic conditions. For 2018, these conditions are:

- Day Ahead Market Prices are a minimum of negative \$25 per MWhr.
- The level of curtailment will be limited to 45 MW with discretion to adjust this level based on the steam field response.
- Duration of the curtailment is to be a minimum of 4 hours.
- Curtailments are limited to once per calendar day.

The Protocol establishes a 2019 annual generation target of 92.4 gross MW; and

WHEREAS, 2019-20 approved budget covers the proposed action; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED that the Commission of the Northern California Power Agency adopts the Steam Field Operations and Forecast Report dated April 2019 as the Geothermal Operating Protocol effective July 1, 2019, to remain in effect until replaced by the Commission.

PASSED, ADOPTED and APPROVED this_____ day of_____, 2019 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
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	_____	_____	_____

ROGER FRITH
CHAIR

ATTEST: CARY A. PADGETT
ASSISTANT SECRETARY



Steam Field Operations

Forecast Report – April 2019



NCPA
Generation Services – Geothermal Facilities
Steam Field Operations and Forecast Report

April 2019

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NCPA
Generation Services Business Unit
Steam Field Operations and Forecast Report

April 2019

Introduction

This report provides an update on the status of the NCPA Geothermal Project. There are two main sections:

- I. A review of steam field operations including annual production and injection volumes, the Geothermal Operating Plan, water injection program, and projects.
- II. A review of 2018 reservoir performance with a generation forecast for 2019.

Analysis of geothermal reservoir during 2018 indicates a continued 1.9% harmonic decline consistent with prior projections. The average generating capacity for 2018 was 99.8 MW gross or 91.8 MW net. Net generation for the year was 804.4 GWhrs.

Water injection continues to be essential in maintaining reservoir pressure and mitigating steam production decline rates. The Southeast Geysers Effluent Pipeline project brings an average of 5,600 gpm of wastewater to The Geysers. NCPA and a nearby power producer share the water. In 2018, NCPA received 41.2% of the wastewater delivered to the Geysers. Combined with steam condensate, 2018 water injection rates averaged 3,016 gpm and was a reduction from the previous year's rate of 3,608 gpm. The drop in injection rate was due to NCPA testing of the reservoir response to reduced injection for approximately three months.

The 2019 generation forecast projects the average generating capacity to be 92.4 MW gross or 82.4 MW net for the year. NCPA geothermal facilities are forecast to generate 716.9 GWhrs net in 2019. Generation levels in 2019 will be reduced due to extended overhauls of Units #1 and #2 of Plant #1 and also a reduction in steam production to Plant #2 due to well workovers on P-Site. The estimated 25 year projected net reserves are 15,311 GWhrs.

In terms of the fiscal year, the FY 2019 net generation is estimated to be 760.3 GWhrs. The net generation projected for FY 2020 is 731.9 GWhrs.

I. STEAM FIELD OPERATIONS

In This Section

- ▶ Overview of Annual Production and Injection
- ▶ Geothermal Operating Plan
- ▶ Water Injection Program
- ▶ Plant and Steam Field Projects

A. Overview of 2018 Production and Injection

NCPA continued to operate the Geothermal Project as a base load facility in 2018. Steam production for the year was 14.65 Glbs with water injection of 13.19 Glbs for an annual mass replacement ratio of 90%. Water injection on the NCPA lease is a combination of steam condensate recovered from the cooling towers and wastewater from the Southeast Geysers Effluent Pipeline (SEGEP). The water from the SEGEP pipeline is shared between NCPA and a nearby power producer. NCPA received 41.2% of the wastewater in 2018. The average total injection rate for NCPA decreased from 3,608 gpm in 2017 to 3,016 gpm in 2018.

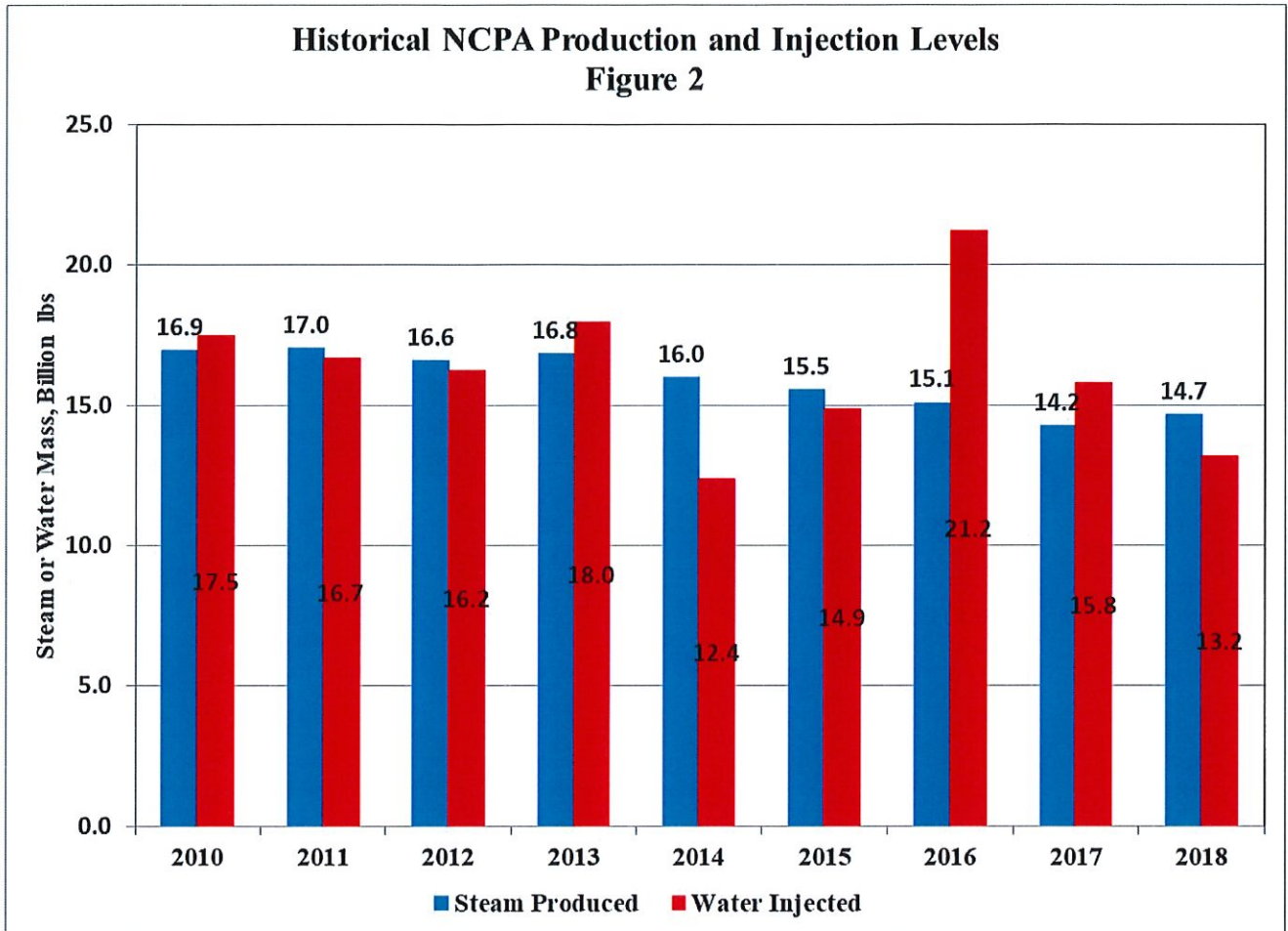
The main reason for the reduction was NCPA curtailed wastewater injection for approximately three months to determine if the reservoir was being harmed by too much injection and see if generation would improve by drying out the reservoir. During this period water injection was reduced from approximately 2,100 gpm to 919 gpm. The test showed that the reservoir was not being harmed by too much water injection and generation levels remained steady.

The cumulative mass replacement ratio from plant startup in 1983 through 2018 was 66.7% (*Figure 1*). The net mass withdrawal of steam from the reservoir (Mass Produced less Mass Injected) through 2018 is 223.2 billion lbs.

The average generation level for 2018 was 99.1 MW gross or 91.8 MW net. Generation was slightly lower than forecast due to several transmission line outages mandated by Pacific Gas & Electric in 2018. In 2019, generation capacity is forecast to be 92.4 MW gross or 82.4 MW net. The significant drop in average generation level is due to Units #1 and #2 of Plant #1 being down for overhaul in 2019.

Production Highlights during 2018 include:

- ▶ Annual gross generation level in 2018 was 99.8 MW or 91.8 MW net.
- ▶ Average annual mass replacement (i.e., the percentage of steam production replaced by water injection) was 90% in 2018. The 2018 average injection rate was 3,016 gpm and was a 16% decrease over the previous year. The decrease was due to NCPA testing the reservoir response to reduced injection.
- ▶ In 2019, the generation capacity is forecast to be 92.4 MW or 82.4 MW net.



B. Geothermal Operating Plan

The Geothermal Project Operating Agreement requires the NCPA Commission to establish an Operating Plan and an annual operating level for the Geothermal Units. The purpose of the plan is to maximize the efficient use of the geothermal resource, protect the power plants and equipment, and meet all regulatory and permitting requirements.

A Geothermal Operating Plan, effective July 1, 2018, was approved and recommended by the Coordinated Operating Group (COG), the Generation Services Business Unit, and the NCPA Commission during the May 24, 2018 meeting. The Plan establishes an Operating Protocol that maintains a Two Zone operation within the NCPA lease. The Two Zone Operation was implemented to improve operational response time during a unit trip at Plant #1 and maximize generation on the NCPA lease while minimizing reservoir communication with nearby competitor operations.

Under this Protocol, the Geothermal Units have normally operated in a baseload condition. Steam production from the west side of the lease, Zone 1, is directed to Units #1 and #2 at Plant #1. Steam production from the east side of the lease, Zone 2, is directed to Plant #2, Unit #4 (*Figure 5*).

While the Protocol maximizes generation, it does allow for scheduling flexibility and reduction of load under the proper economic conditions. The increase in renewable energy in the electrical market has resulted in economic incentives where daily curtailment of the Geothermal Units is being considered. It is recommended that the Operating Protocol allow curtailments to occur under the following conditions.

- Day Ahead Market Prices are a minimum of negative \$25 per MWhr.
- The level of curtailment will be limited to 45 MW with discretion to adjust this level based on the steam field response.
- Duration of the curtailment is to be a minimum of 4 hours.
- Curtailments are limited to once per calendar day.

The flexibility to adjust generating loads under these conditions will allow NCPA to take advantage of economic incentives while protecting the power plant equipment, steam field infrastructure and reservoir.

C. Water Injection Program

NCPA continues to operate the steam field in the manner intended to maximize the recovery of injected water. In order to maximize recovery, it is important to have sufficient water and distribute it over the widest possible area of the field. It is also necessary to inject water at the lowest possible rate to maximize the heat transfer between the reservoir rock and water. Other factors that weigh into water injection strategy are targeting hotter zones of the field and higher gas concentrations within the reservoir. The water injection program discusses NCPA's supplemental water source, the Southeast Geysers Effluent Pipeline (SEGEP), current injection operations, micro-earthquake activity and non-condensable gas trends.

1. Southeast Geysers Effluent Pipeline (SEGEP)

The Southeast Geysers Effluent Pipeline (SEGEP) project is a pipeline bringing water to The Geysers for the purpose of supplementing water injection in the field. During normal years, NCPA receives an average 2,700 gpm out of 5,600 gpm water that is delivered. Injection of this water into The Geysers reservoir helps mitigate reservoir pressure declines and increases steam reserves. *Figure 6* shows the historical SEGEP deliveries for NCPA and the total for the project.

SEGEP deliveries were reduced for approximately three months in 2018 to determine if the reservoir was being harmed by too much water injection and see if generation levels would increase by allowing the reservoir to dry out. Wastewater injection was reduced from approximately 2,100 gpm to 919 gpm during this period. No change in steam production was observed, so water injection was returned to normal levels.

2. Injection Operations

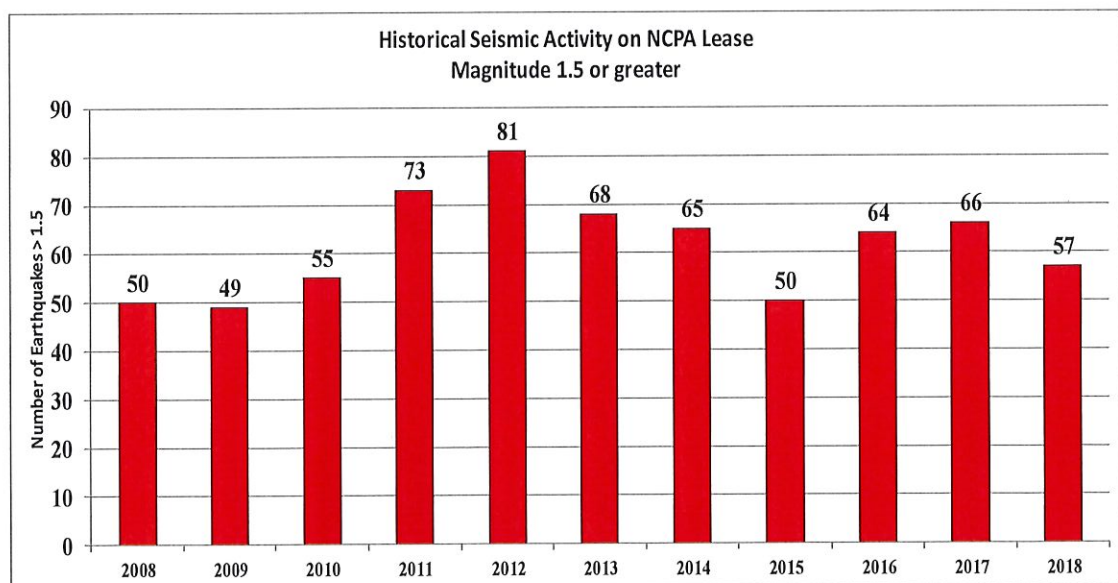
There were 10 different wells used for injection in 2018. The injection strategy continues to be an effort to spread water over large geographic area and limit injection rates down individual wells as much as possible. The 2018 overall injection rate of combined steam condensate and wastewater was 3,017 gpm. This is a reduction from 2017 when the overall injection rate was 3,608 gpm.

Figure 7 shows the relative location of the 10 injection wells on the NCPA lease. Five of these wells, E-8, H-4, Q-1, Q-4, and Q-10 were only connected to the SEGEP pipeline and therefore received only effluent or wastewater. One well, J-6, is a dedicated condensate injection well receiving water from Plant #2. The remaining four wells received a combination of condensate and wastewater. Figure 8 and Table 1 show the relative amounts and type of water each well received in 2018.

3. Micro-earthquake Activity

Studies by the United States Geological Survey (USGS) and others have demonstrated that the steam production and water injection at The Geysers can cause frequent micro seismic events to occur. As a result, NCPA and the other operators are required to continuously monitor and report on the earthquakes that occur within The Geysers geothermal field. Figure 9 is a map showing the locations of the 771 seismic events of magnitude 1.5 and larger that occurred within The Geysers field during 2018. Eleven of these events had an earthquake magnitude of 3.0 or greater. The largest seismic event was a magnitude 4.28 on a competitor lease.

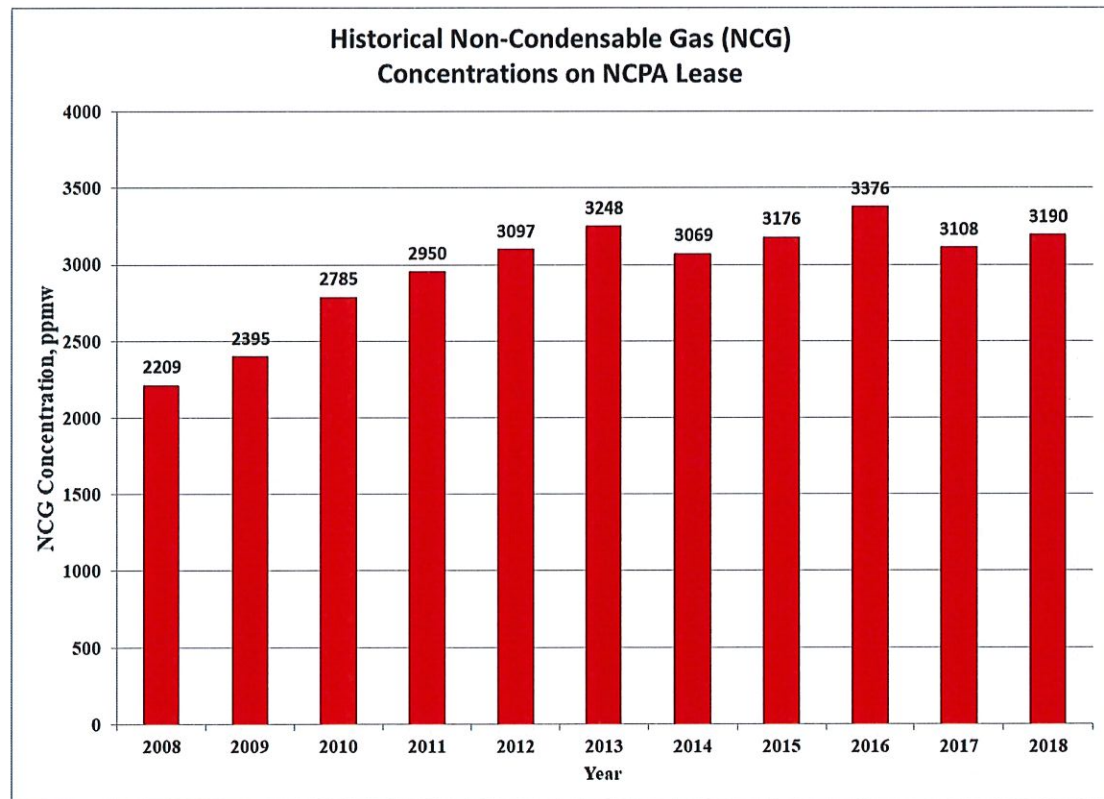
On the NCPA lease, there were 57 events of M=1.5 or greater. The largest event was a magnitude of 3.09. The figure below shows the historical seismic activity for the NCPA lease from 2008 through 2018. The seismic activity for 2018 was lower than the activity in 2017.



4. Non-condensable Gas (NCG) Trends

Non-Condensable Gas (NCG) is a natural product of the reservoir and may be present in varying concentrations within the steam that is produced at The Geysers. NCG production reduces plant efficiency and increases chemical treatment costs. The values vary significantly based on operating guidelines for the field, plant outages, or injection strategy. Water injection in areas of high gas concentration generally reduces NCG production and improves plant efficiency.

Table 4 shows an annual sampling of all the producing wells in the field and the analysis for NCG's. These values can vary somewhat based on daily operational changes and the adjustment of injection strategies within the field, but are considered to be typical concentrations of NCG's for these wells. NCG concentrations were up slightly from the 2017, but have been relatively stable over the last five years. Figure 10 shows a comparison of the relative changes throughout the field.



D. Geothermal Facility Projects

Major projects completed in 2018 were:

- NCPA Main Road Repair – The main road to NCPA’s geothermal facility is on private property and NCPA shares the maintenance cost with the nearby lessee Calpine. Approximately two miles of road was asphalt repaired, chip sealed, and striped in preparation for the winter months. The total cost of the project was \$301,327 with NCPA’s share of the cost \$202,000.
- Plant #2 Fire Line Replacement – The Plant #2 Fire Line Replacement was completed in 2018 and approved for service by the California Energy Commission. The fire line had previously developed leaks and in continual need of repair. A functioning fire line was required for the Permit to Operate and insurance reasons.

In 2019, the planned major projects are:

- Plant #1 Overhaul – Plant #1, Unit #2 is currently going through overhaul which started on April 1 and scheduled to run through May 10, 2019. Unit #1 will be coming out for overhaul on April 22 and return to service on May 26, 2019. The scope of work is to pull and inspect the both turbines, the Unit #2 generator, clean the condensers and Stretford gas processing equipment, and repair the balance of plant equipment. The total budgeted cost for the Plant #1 overhaul \$4.8 million which includes the following projects.
 - Plant #1 Ejector Upgrade – Steam ejectors at both Plants #1 and #2 are used to remove non-condensable gases from the steam condensers. The steam ejectors at Plant #1 are to be upgraded to operate at a lower pressure and use less steam.
 - Ball Cleaning System Upgrade – Ball cleaning systems are used to keep scale and debris from building up in the tubes of the steam condenser. Both ball cleaning systems at Plant #1 and #2 are over thirty years old and do not operate efficiently. They will be gradually replaced with systems that are more efficient.
- P-Site Well Workovers – A drilling program to workover wells P-4, P5, P-7, and abandon well P-9 is planned to start in June 2019. The wells have partially collapsed casing that is inhibiting flow from these wells. The workovers will remove the restriction and restore full flow from the wells. The P-Site workovers will cost an estimated \$9 million.

II. 2018 RESERVOIR PERFORMANCE REVIEW

In This Section

- ▶ Reservoir Pressure Distribution
- ▶ Reservoir Pressure and Flowrate Decline
- ▶ 2018 Generation Review
- ▶ 2019 Generation Forecast

Reservoir performance can be affected by a number of factors such as changes in the location or amount of water injected, the operating pressure of the field, gain or loss of production wells, or changes in the operation of nearby competitor leases. The effects of these changes on the reservoir are normally monitored by conducting pressure build-up tests on production wells, tracer tests on injection wells, and a continuous review of pressure, temperature, and flowrate data from the field. This section will discuss recent changes in reservoir pressure distribution, reservoir pressure decline, and steam field flowrate decline.

A. Reservoir Pressure Distribution

One of the most important parameters in predicting and explaining reservoir performance is static reservoir pressure. *Figure 11* shows areal pressure distributions of static reservoir pressures for January 2017 and April 2018. In general, wells on the west side of the field have the lowest reservoir pressures (< 80 psig) and the east side of the field continues to be the higher pressure area.

B. Reservoir Pressure and Flowrate Decline

Changes in reservoir pressure over time are a function of the mass-replacement ratio. By injecting steam condensate and supplementing it with run-off fresh water and secondary treated wastewater from the Southeast Geysers Project, the decline in reservoir pressures has moderated or slowed with time.

In 2019, pressure build-up tests were only done on 33 wells due to overhaul work at Plant #1. Shut-in pressures for another 31 wells were estimated based on past data. The estimated average wellhead shut-in pressure is 75.6 psig. The average well on the NCPA lease flows 24,300 lb/hr at 40.8 psig.

The projected flowrate decline is shown in *Figure 13*. In 2018, the overall steam field flow rate averaged 1,761 klbs/hr. This flow rate is projected to be 1,682 klbs/hr in 2019. The overall steam field decline is a harmonic 1.9%. Continued and strategic injection of water over a wide area of the reservoir is expected to enhance recovery and provide better reservoir pressure support in future years.

C. 2018 Generation Review

Net generation for the NCPA Geo Facilities in 2018 was 804.4 GWhr. For FY 2019, net generation is estimated to be 760.3 GWhrs. The 2018 gross generation level was an average of 99.8 MW while net generation level averaged 91.8 MW.

D. 2019 Generation Forecast

The updated forecast of future reservoir performance, and the resulting energy generation forecast for the NCPA geothermal plants, was developed using decline curve analysis. Included in the forecast are:

1. Operation of the steam field in a two-zone operation.
2. The continued benefits being derived from the Southeast Geysers Effluent Pipeline Project.

The most recently developed forecast of steam field operations is illustrated in *Figure 12*. This graph shows NCPA's 35 year historical data for both steam production and water injection, and forecasts of production and injection out to year 2043. With the startup of the Effluent Pipeline in September 1997, and with its continuous operation projected thereafter, the average annual mass replacement is approximately 100%. Water injection should continually exceed production in the future and a gradual decline in the level of steam production will approach a near-sustainable level of 80% of the mass of water injected.

The total amount of steam capable of being produced by NCPA through year 2043 is currently estimated at 297.2 billion pounds. Remaining net generation reserves are estimated to be 15,311 GWhr. *Figures 14* and *15* respectively show the projected net generation capacity and total net generation amount for 2019 through 2043. *Table 4* details the annual gross and net generation. A more detailed monthly five year forecast can be found in *Table 5*.

In 2019, it is estimated that the Geo Facilities will generate 716.9 GWhrs net. Respective gross and net generation capacity for the year are projected to be 92.4 MW gross and 82.4 MW net. Average generation levels will be reduced for two reasons. Units #1 and #2 of Plant #1 will be shut down for overhaul during the months of April and May 2019. Further, steam production to Plant #2 will be reduced approximately 195 kph for three months for well workovers on P-Site. For FY 2020, the net generation amount is projected to be 731.9 GWhrs.

SUMMARY

Steam Field Operations

- The NCPA lease produced 14.7 Glbs steam while injecting 13.2 Glbs of water resulting in an average mass replacement of 90% for the year.
- The average gross generation level for 2018 was 99.8 MW gross while the net generation level was 91.8 MW net.
- The average water injection decreased from 3,608 in 2017 to 3,016 gpm in 2018. The drop in injection rate was mainly due to a three month testing of the reservoir response to reduced injection levels and whether generation levels would increase as a result of increased temperatures in the reservoir. No increase in generation was observed due to the reduced injection and rates were later returned to normal.

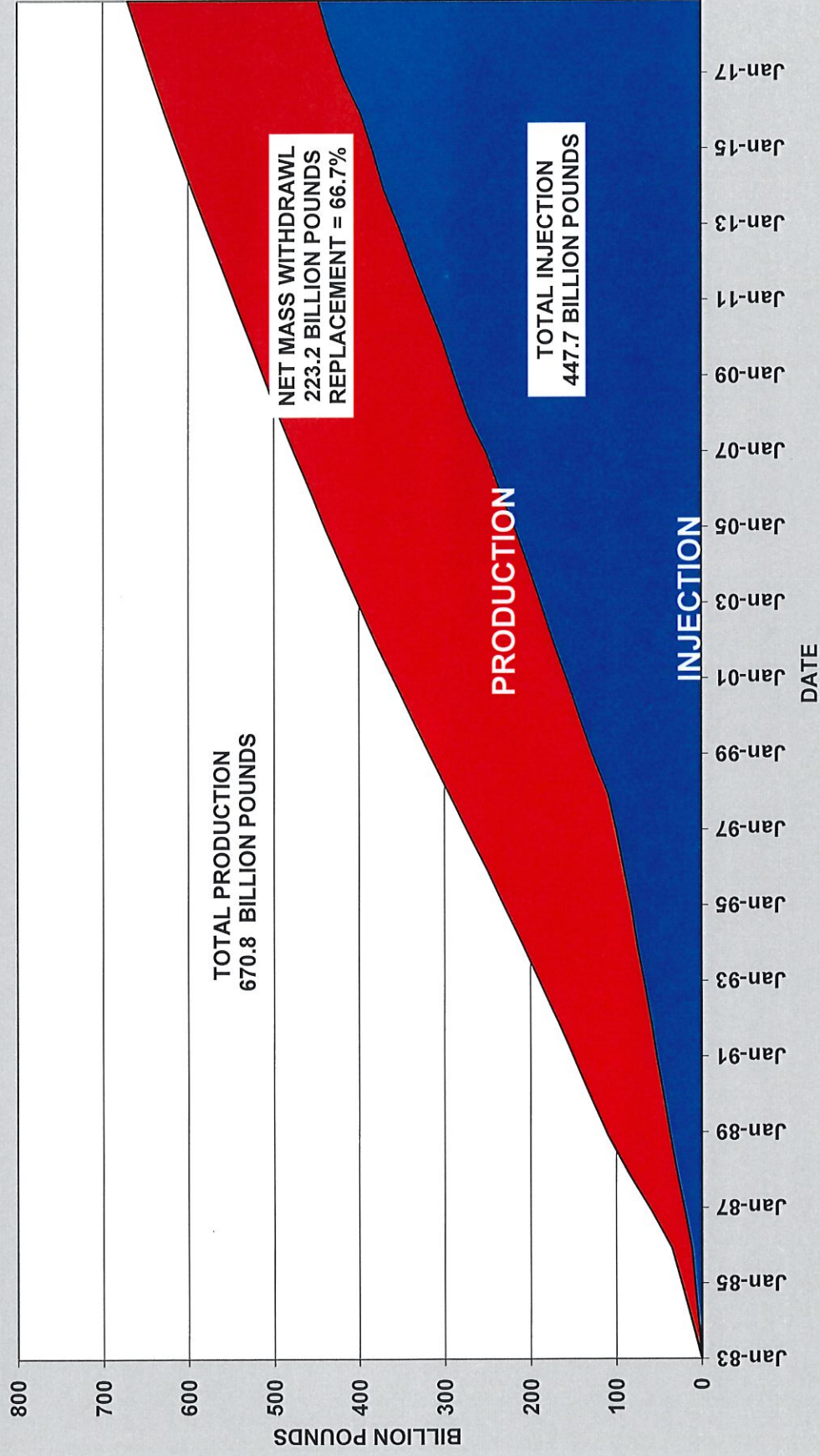
2018 Reservoir Performance Review

- Average shut-in wellhead pressure for the NCPA lease was 75.6 psig. The average well produces 24.3 kph at 40.8 psig.
- The steam field deliverability was 1,761 klbs/hr in 2018. The projected 2019 deliverability is 1,682 klbs/hr. The projected harmonic decline rate going forward is 1.9%.

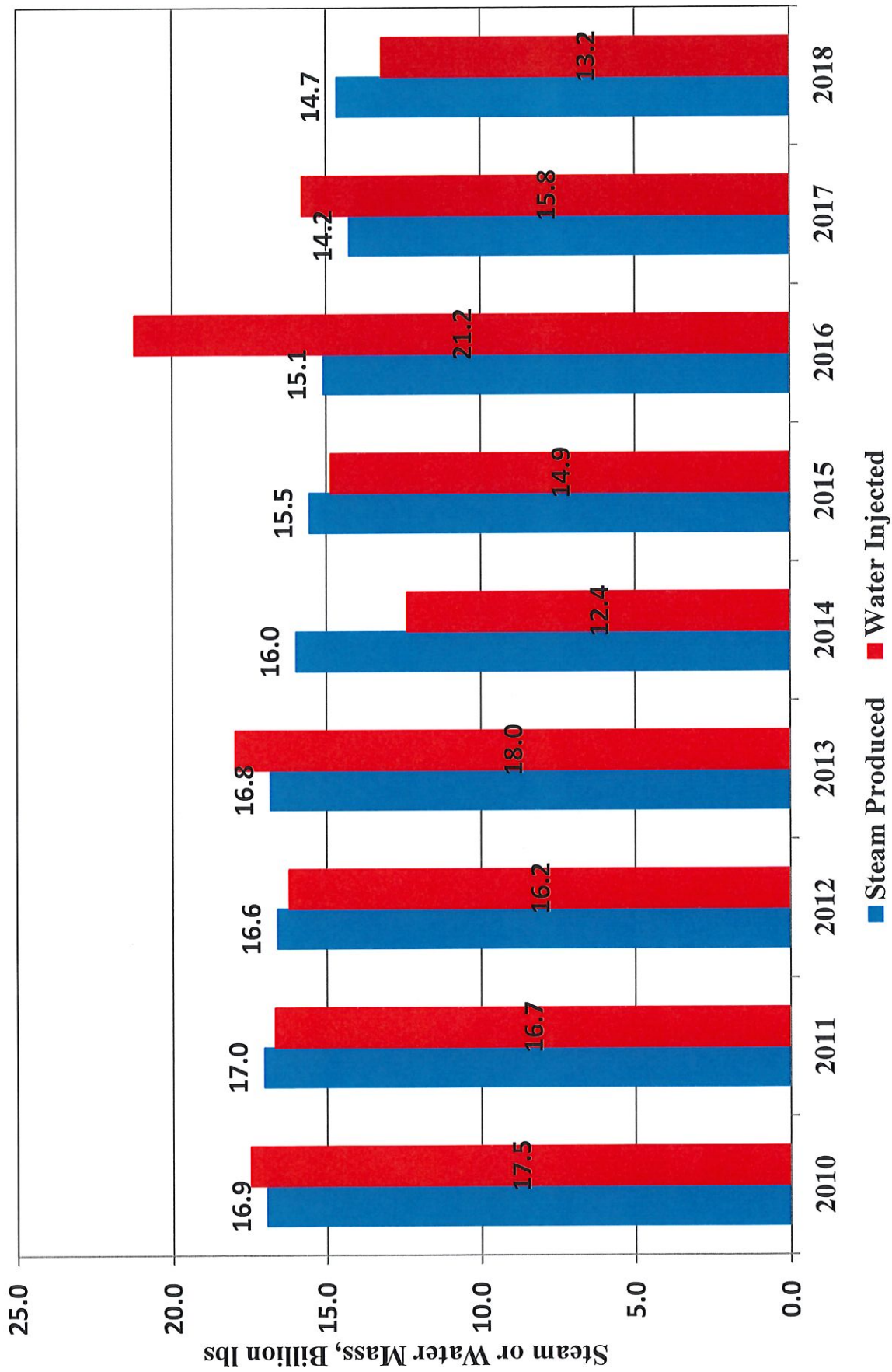
2018 Generation Review and 2019 Generation Forecast

- Net generation for 2018 was 804.4 GWhrs. For FY 2019, net generation is projected to be 760.3 GWhrs.
- The generation forecast covers the period from 2019-2043. Recoverable steam reserves are 297.2 billion pounds with the total amount of remaining net generation estimated at 15,311 GWhr.
- The gross generation capacity for 2019 is expected to be 92.4 MW or 82.4 MW net. Average generation levels will be reduced for two reasons. Units #1 and #2 of Plant #1 will be undergoing overhauls in April and May 2019. In addition, steam production to Plant #2 will be reduced approximately 195 kph for three months while workovers will be conducted on P-Site.
- The net generation forecast for year 2019 is 716.9 GWhr net. For FY 2020, the net generation amount is projected to be 731.9 GWhrs.

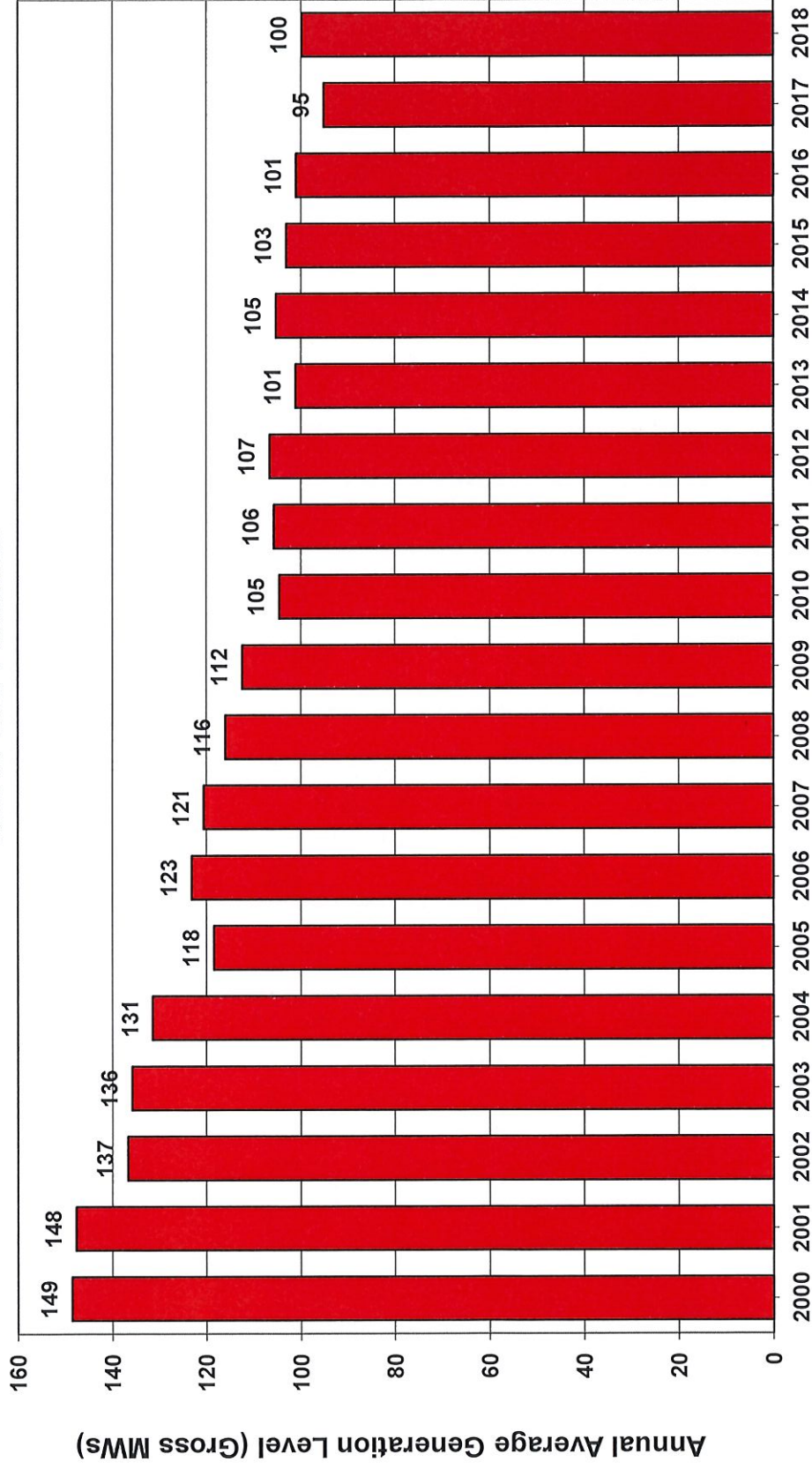
FIGURE 1
NCPA STEAMFIELD
CUMULATIVE PRODUCTION AND INJECTION



Historical NCPA Production and Injection Levels Figure 2



**Figure 3. Historical Power Generation Levels
NCPA Geo Facilities**



*Generation levels include downtime for unit outages and overhauls

2018 Gross Steam Utilization

Figure 4

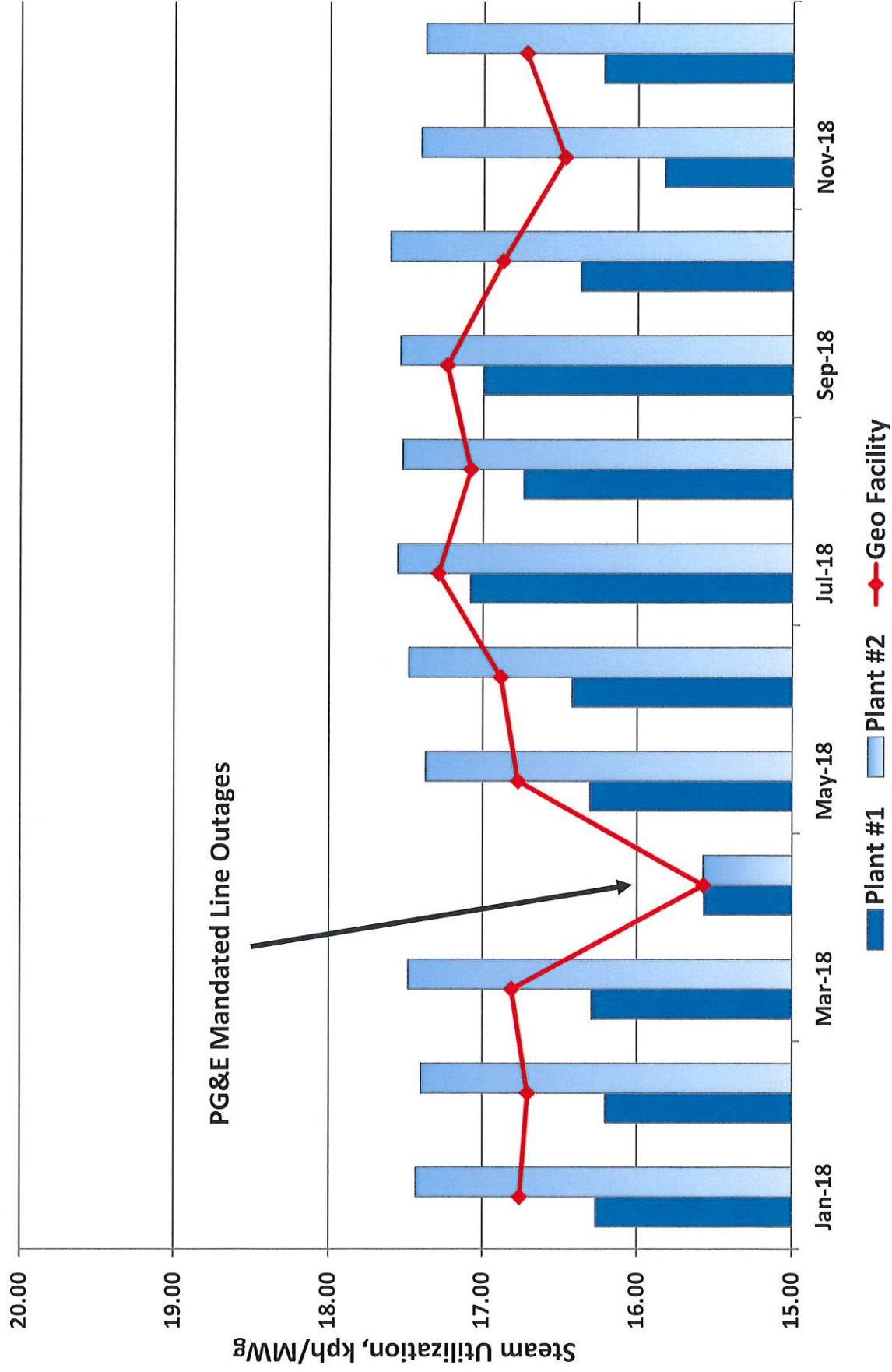
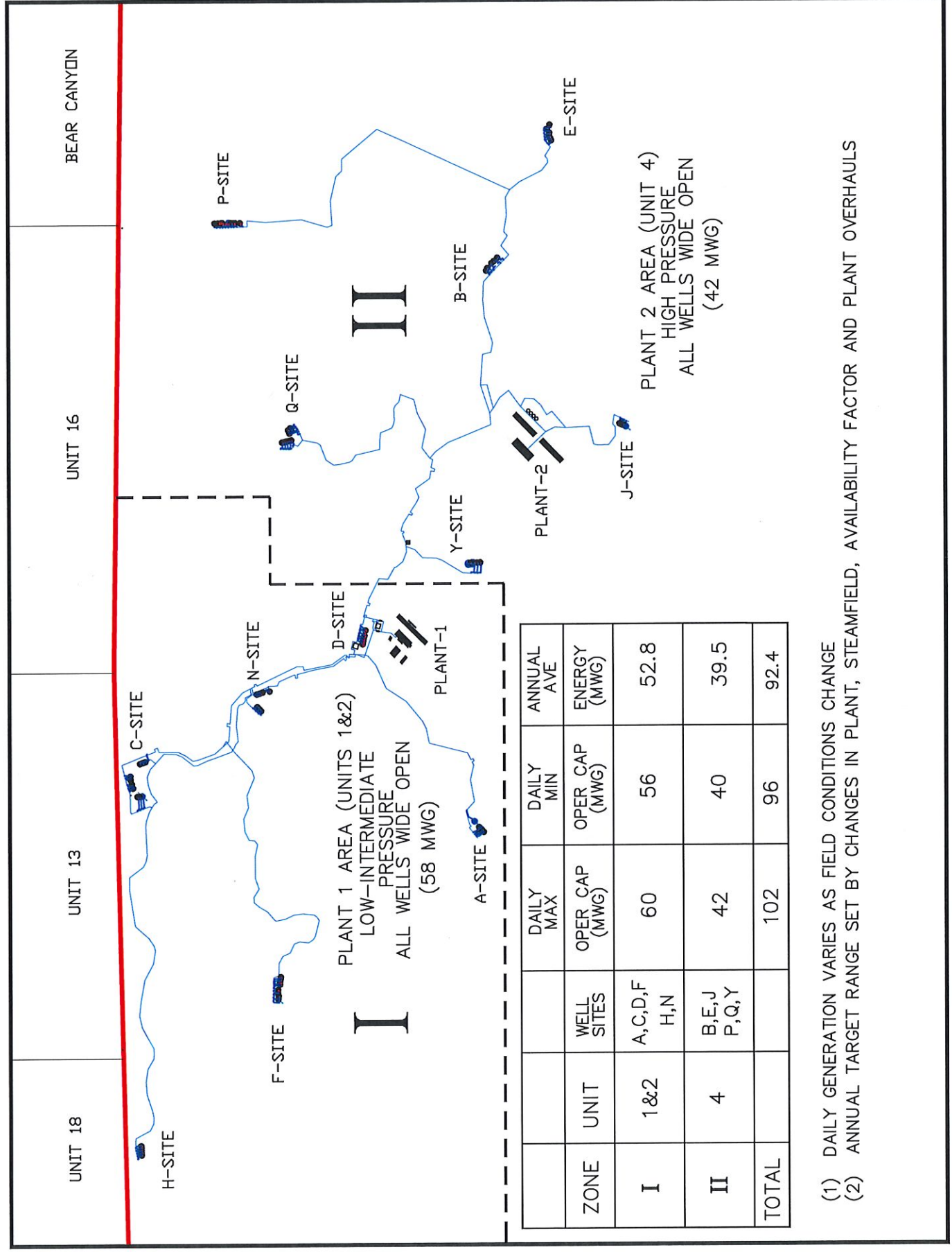


Figure 5. GEOTHERMAL OPERATIONAL PLAN 2019



- (1) DAILY GENERATION VARIES AS FIELD CONDITIONS CHANGE
- (2) ANNUAL TARGET RANGE SET BY CHANGES IN PLANT, STEAMFIELD, AVAILABILITY FACTOR AND PLANT OVERHAULS

**Figure 6. History of SEGEP Deliveries Total and NCPA
(Annual Average GPM)**

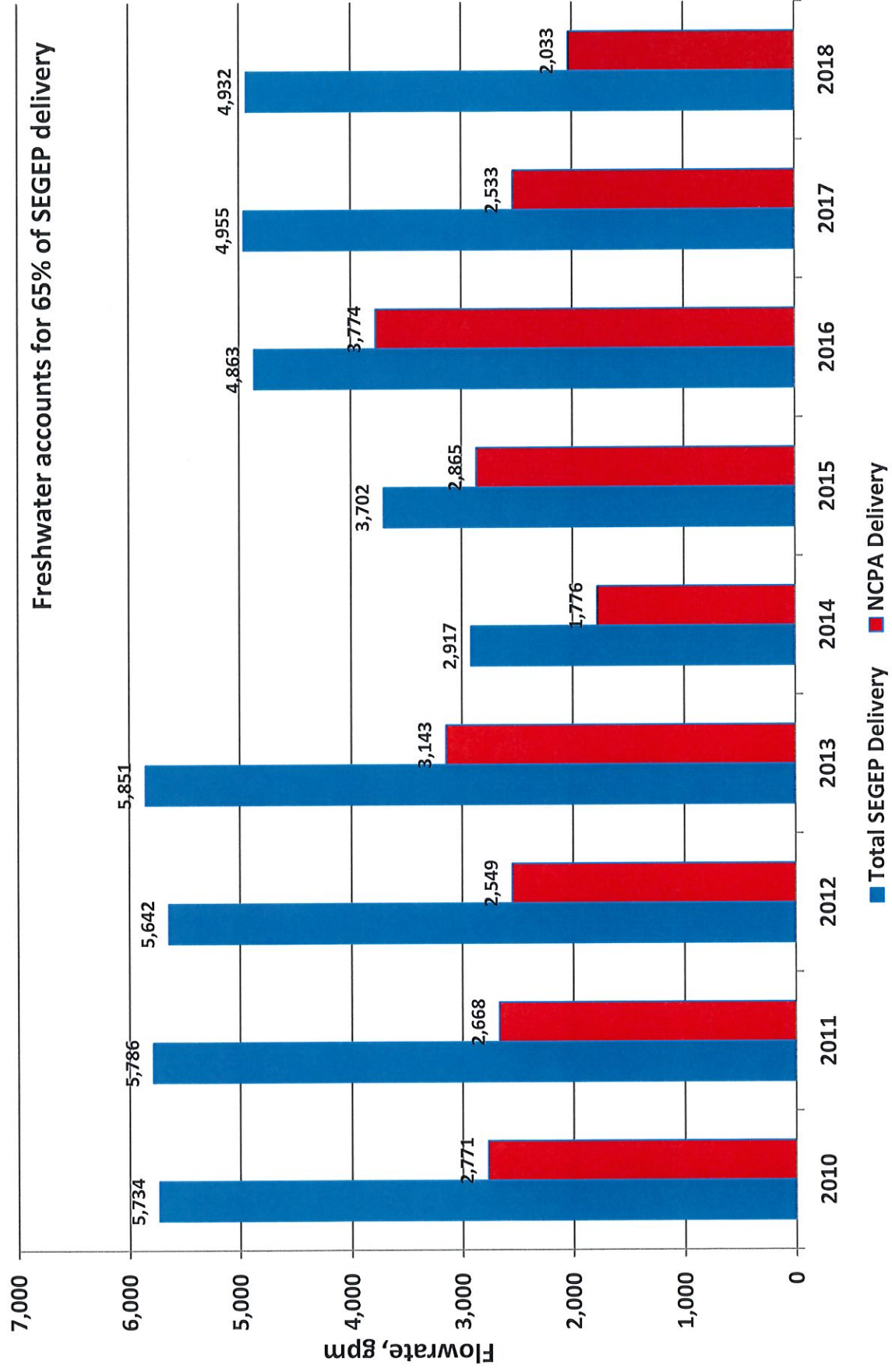


FIGURE 7 MODIFIED PLAN OF INJECTION

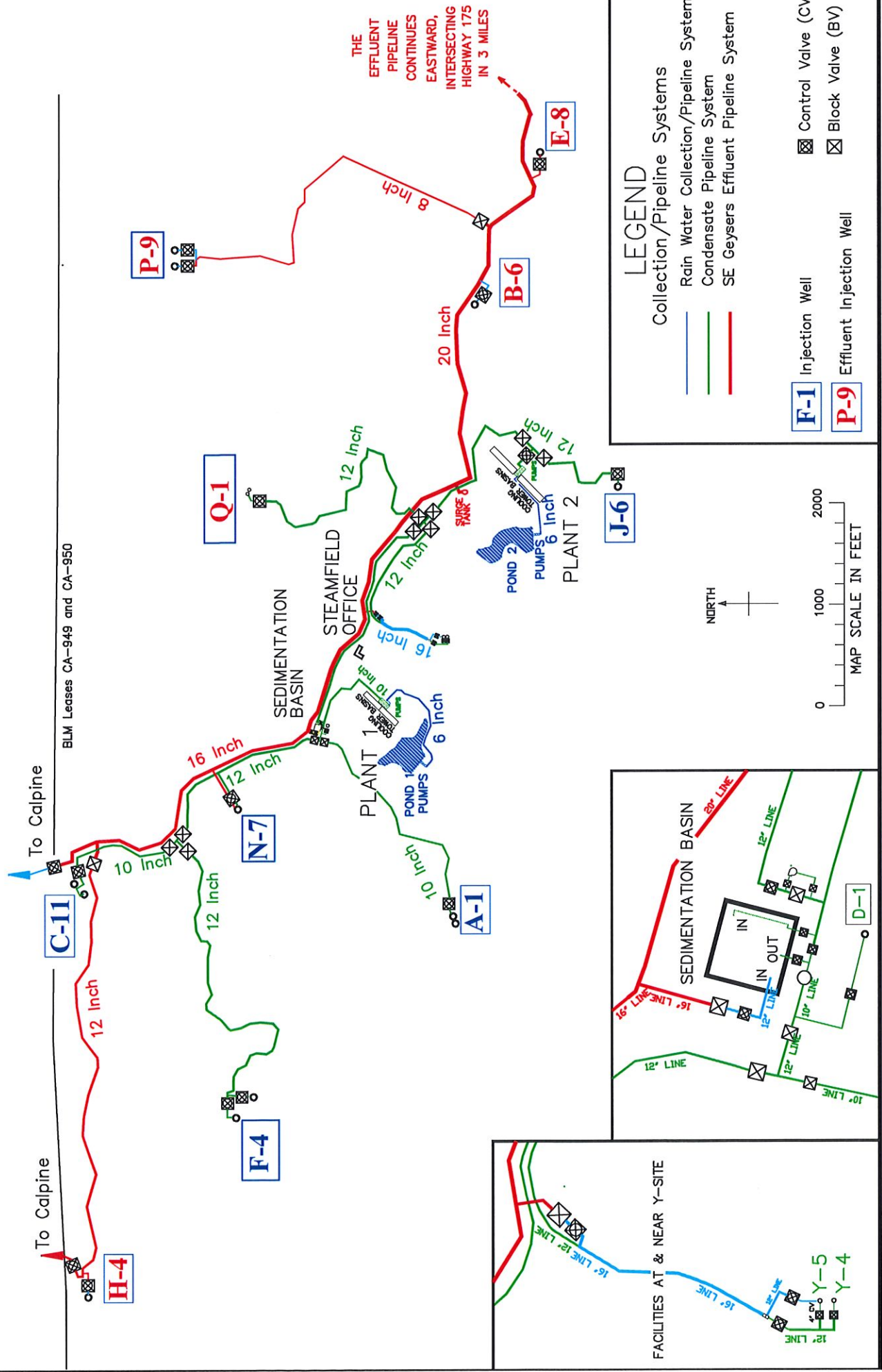
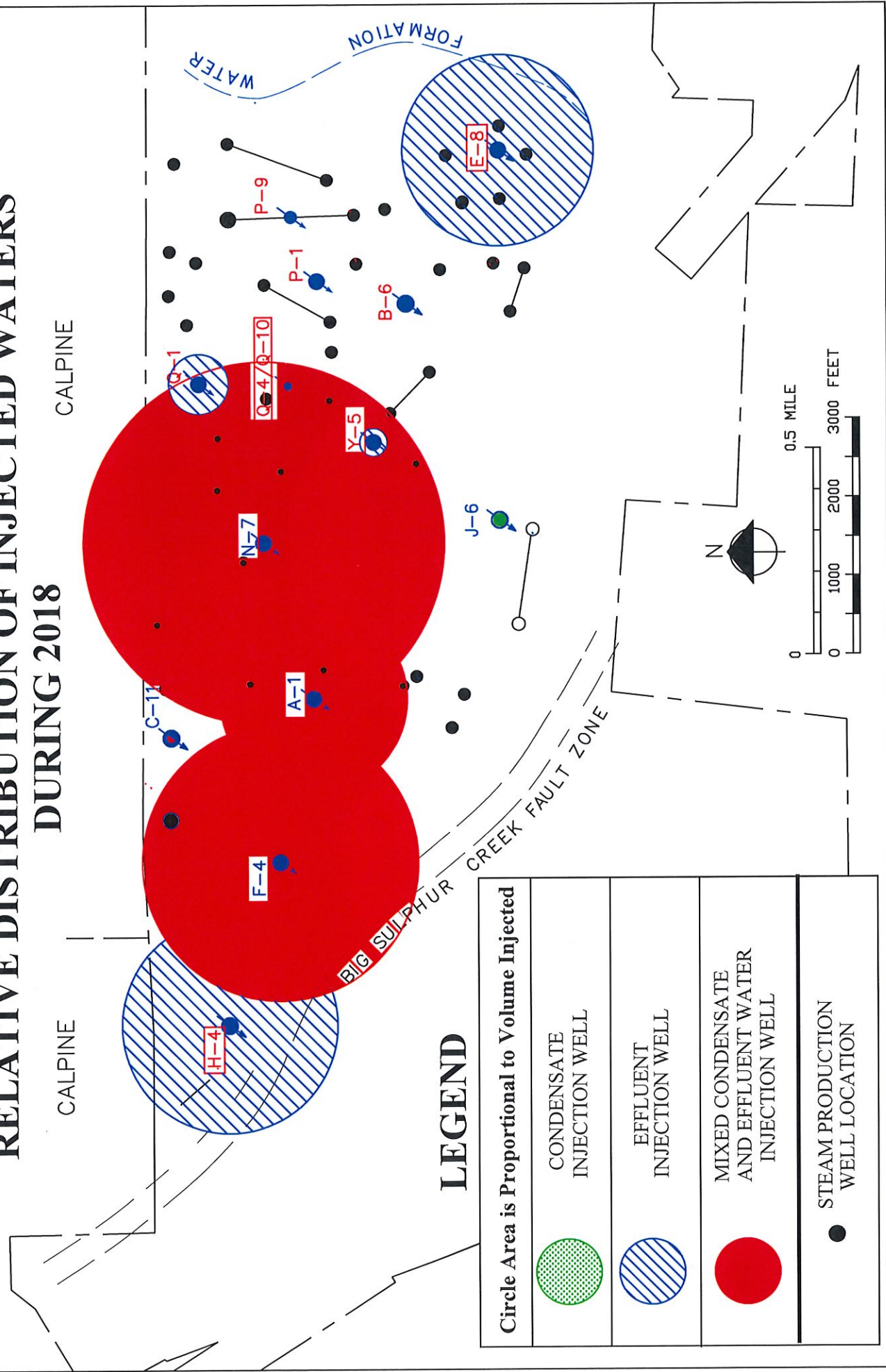


FIGURE 8
NCPA STEAM FIELD
RELATIVE DISTRIBUTION OF INJECTED WATERS
DURING 2018



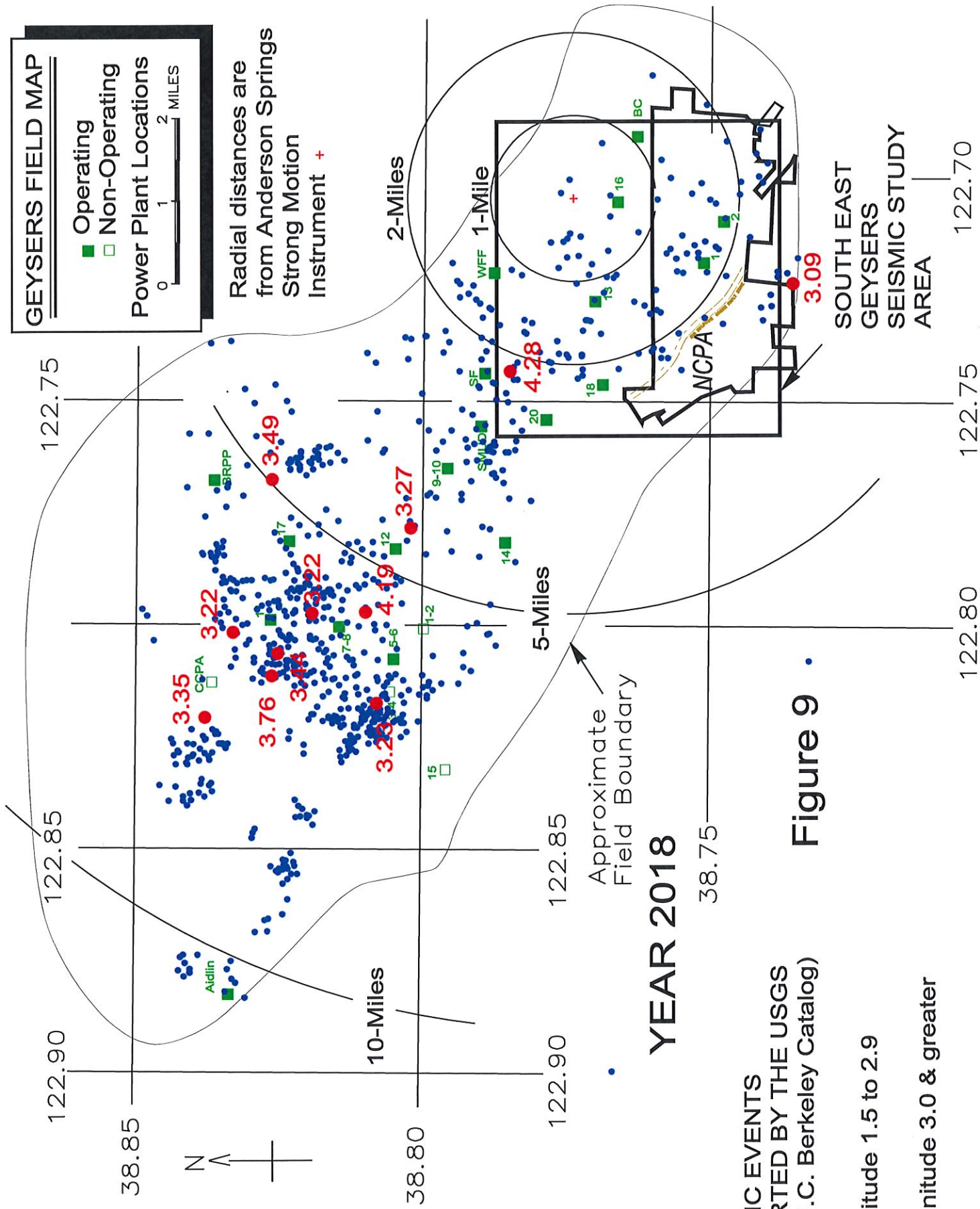


Figure 9

FIGURE 10
NONCONDENSABLE GAS CONCENTRATIONS
IN NCPA STEAM (ppm)

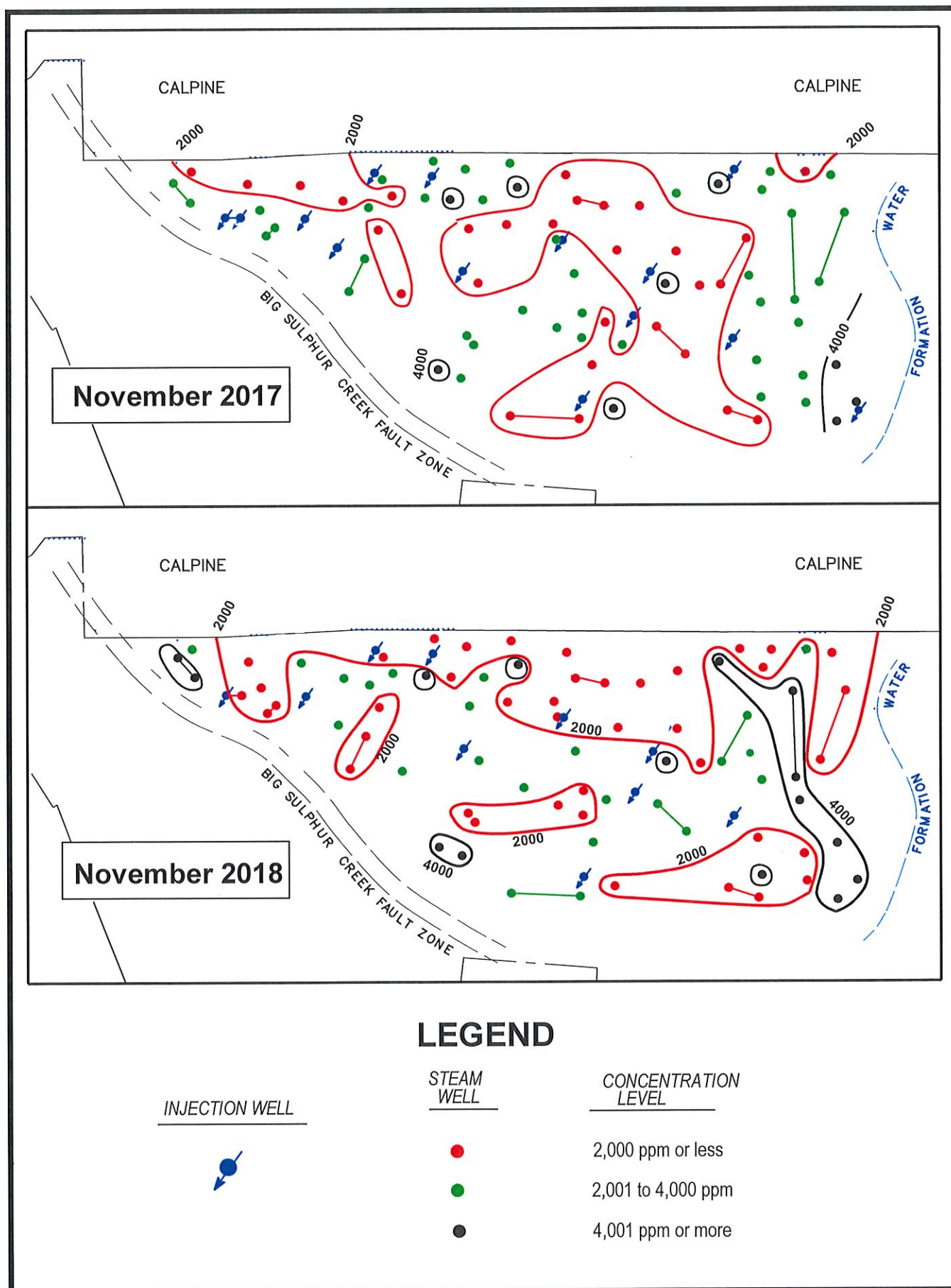
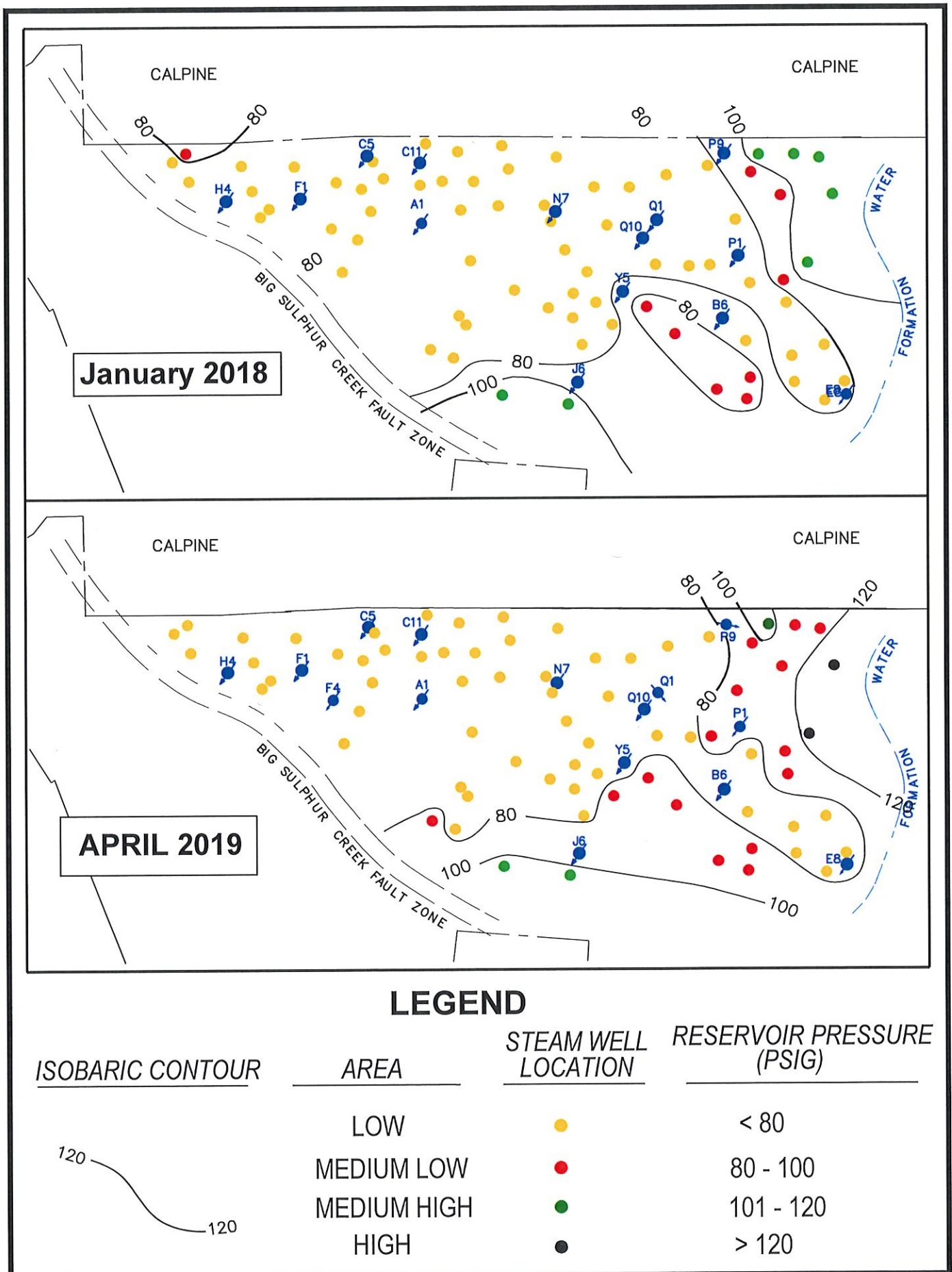


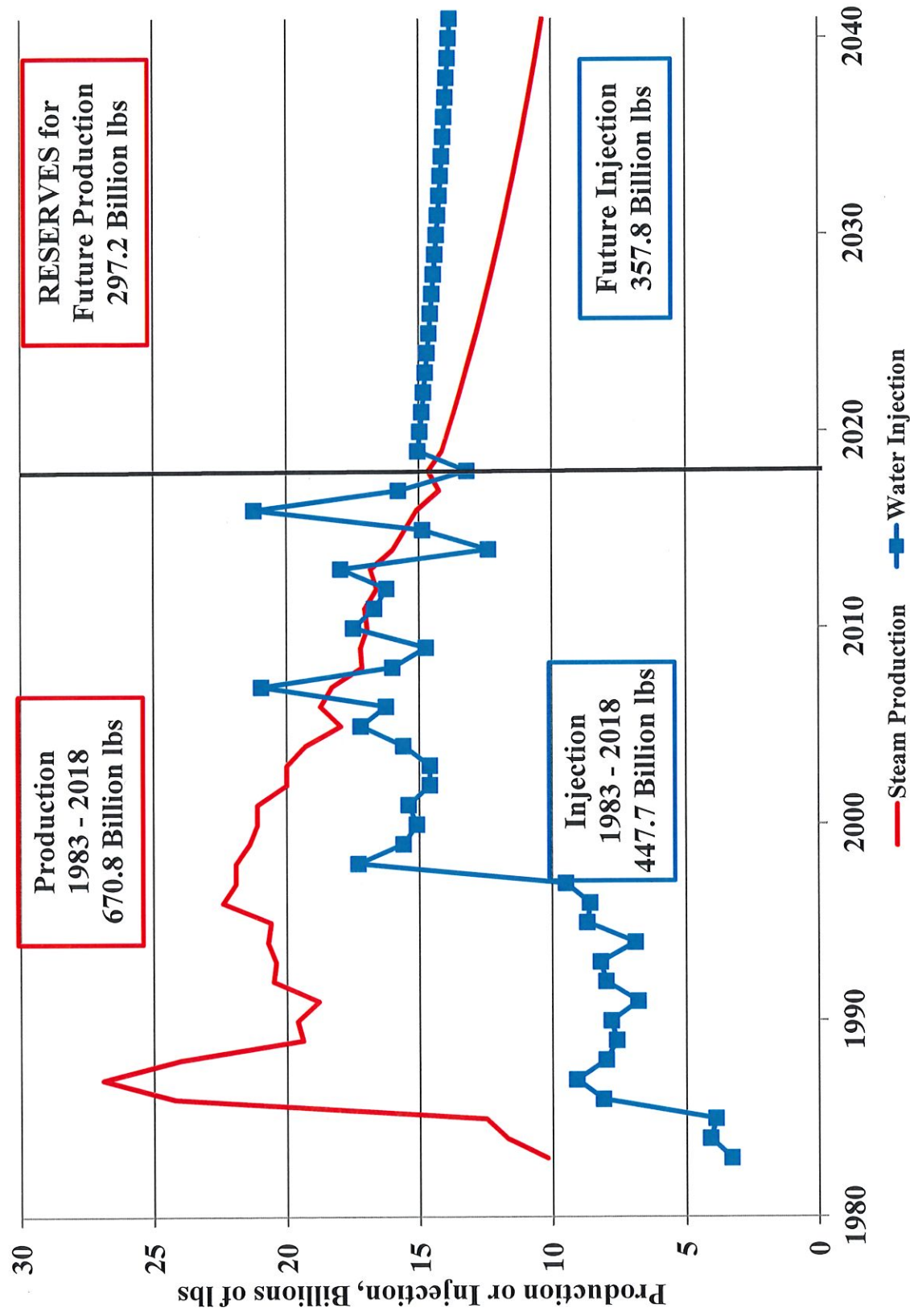
FIGURE 11

NCPA STEAM FIELD RESERVOIR PRESSURE



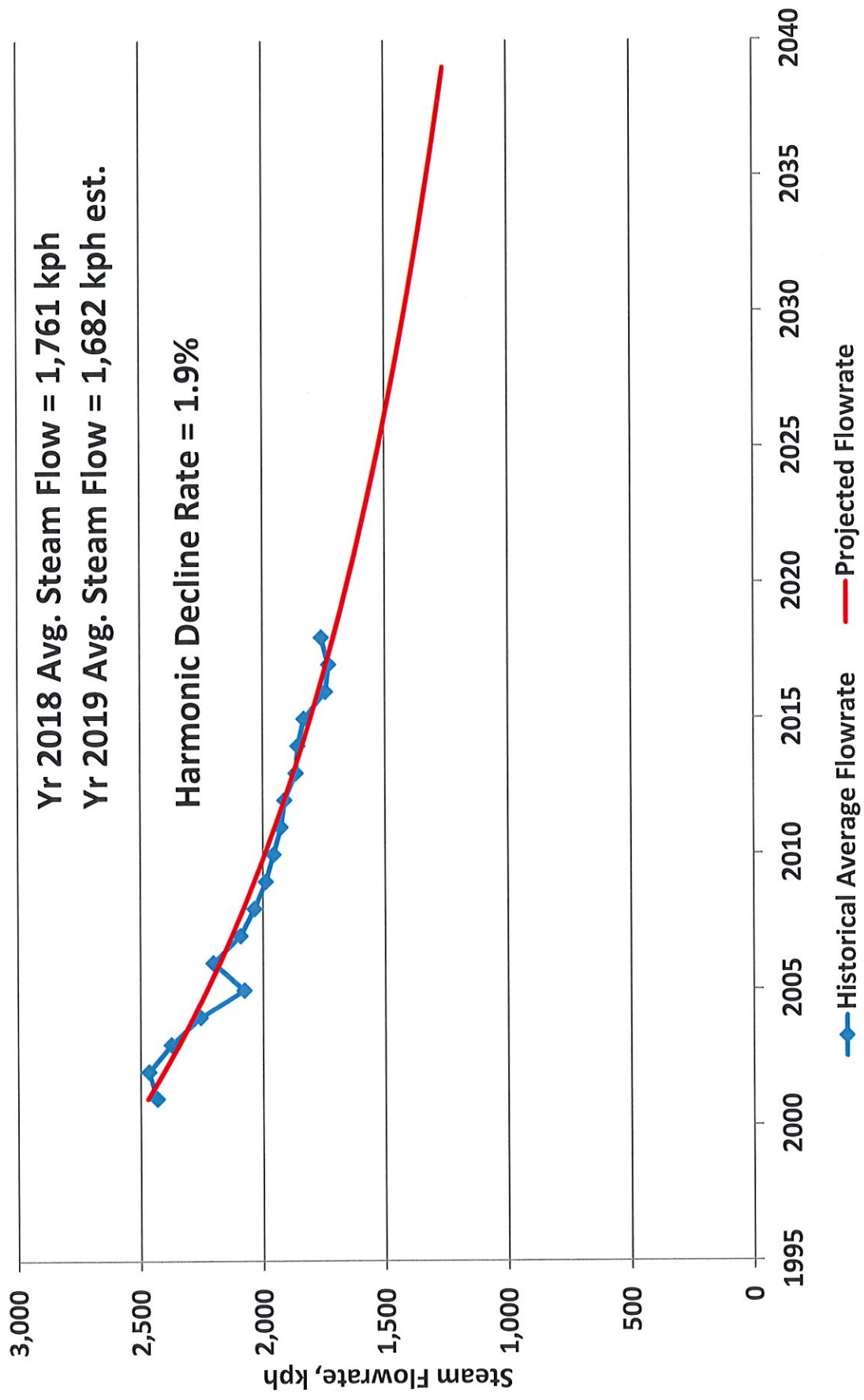
Historical and Forecast Steam Production & Water Injection

Figure 12



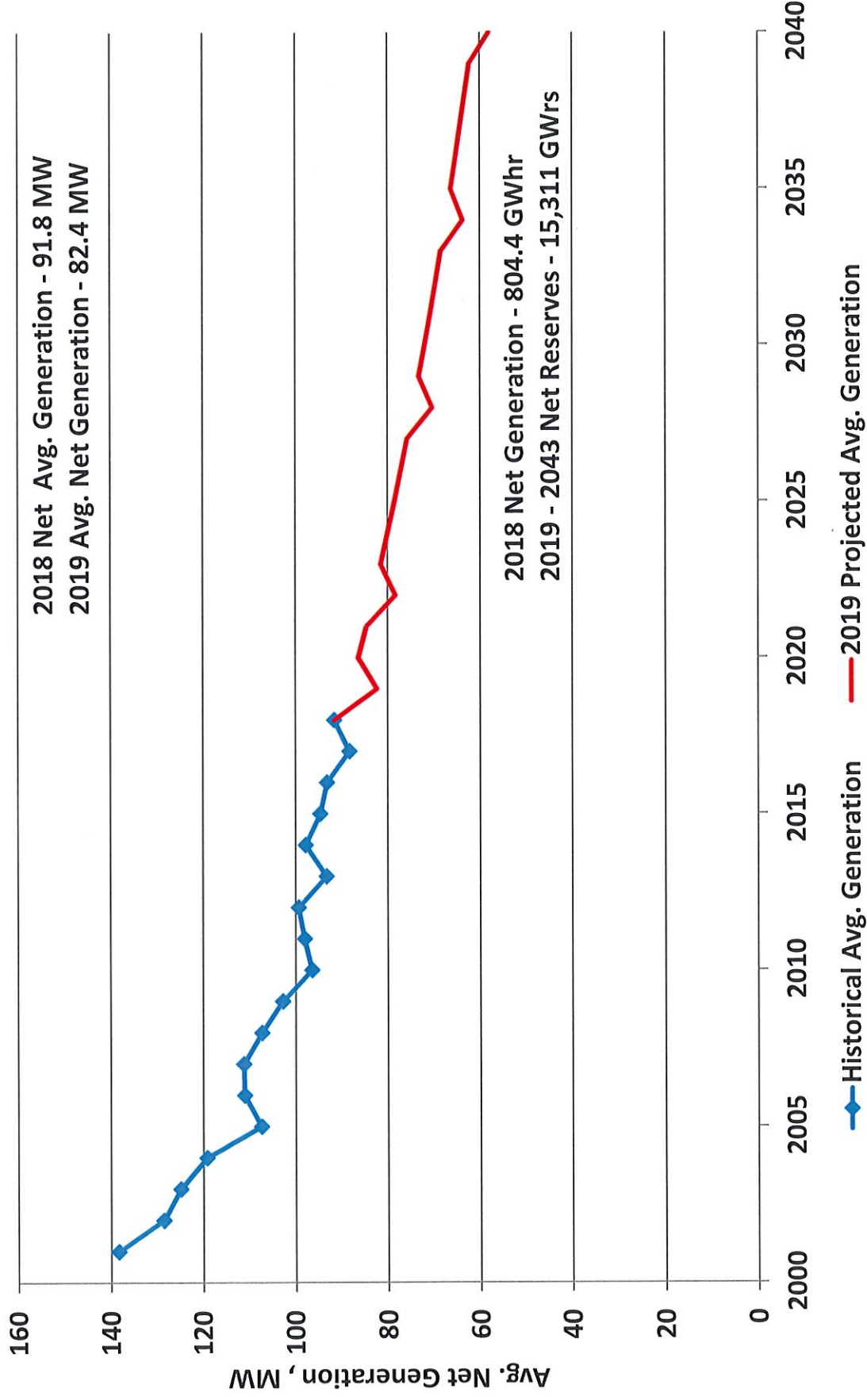
Historical and Projected Steam Flowrates Combined
NCPA Plant #1 & #2

Figure 13



Historical and Projected Average Net Generation Level Combined NCPA Plants #1 & #2

Figure 14



Historical and Projected Net Generation Combined NCPA Plants #1 & #2

Figure 15

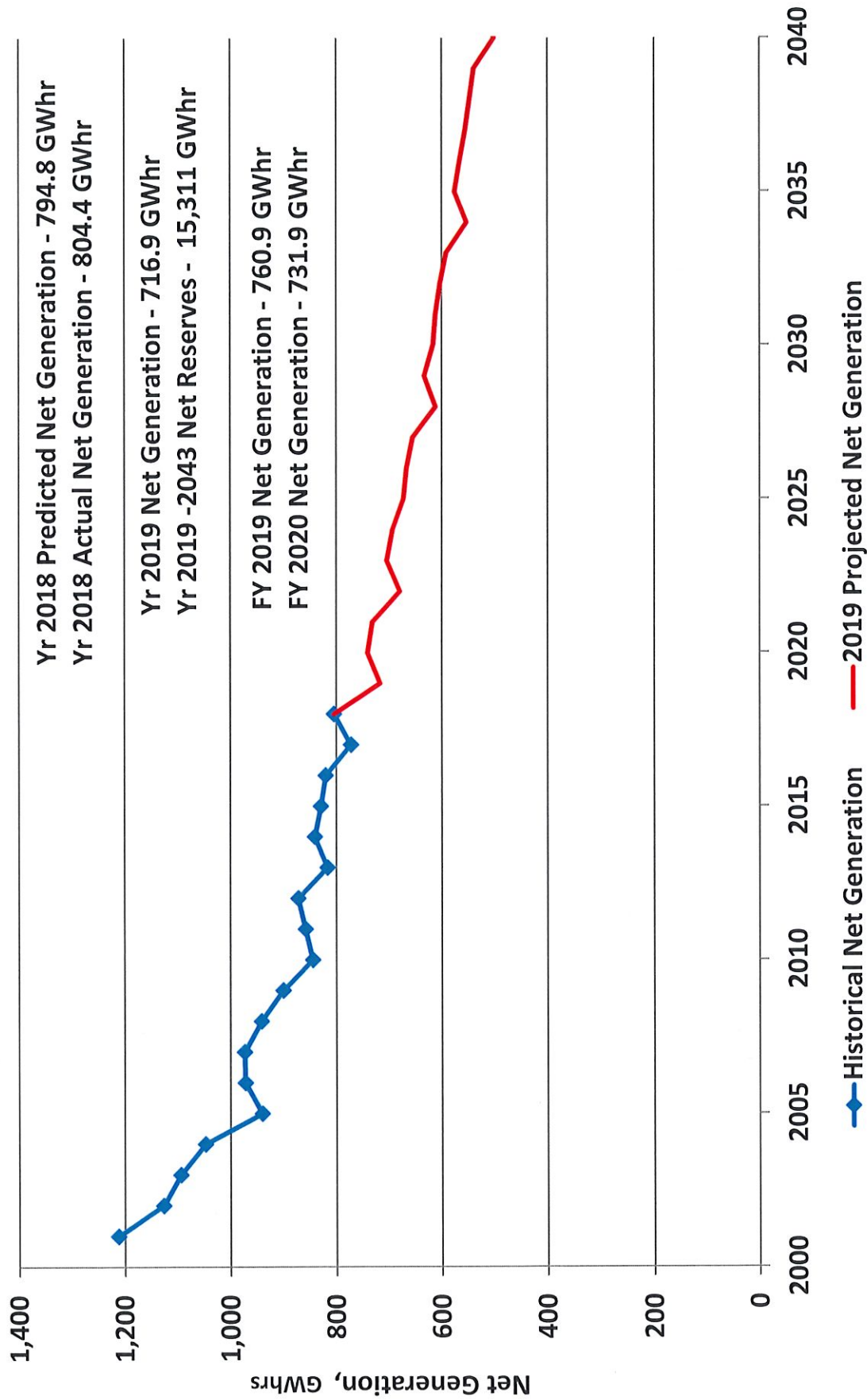


Table 1. ANNUAL REPORT OF NCPA INJECTION AT THE GEYSERS STEAM FIELD
for Year 2018 (in 1000 Gallons)

[illegible]

TABLE 2. GEOTHERMAL FACILITIES
Summary Table

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<u>Generation (gross)</u> (MWh)	981,100	916,437	926,368	936,868	886,004	922,995	903,299	887,299	833,211	874,403
(MW)	112.0	104.6	105.7	106.7	101.1	105.4	103.1	101.0	95.1	99.8
<u>Generation (net)</u> (MWh)	900,599	844,642	858,747	872,422	816,824	862,842	837,379	819,149	772,398	804,425
(MW)	102.8	96.4	98.0	99.3	93.2	98.5	95.6	93.3	88.2	91.8
<u>Protocol</u> (MW gross)	113	108	108	108	108	107	107	107	105	105
<u>Steam Conversion</u> (Lbs / Kw)	17.53	18.33	18.39	17.72	18.99	17.33	17.20	17.00	17.10	16.76
<u>Steam Delivered</u> (Billion Lbs)	17.2	16.8	17.04	16.60	16.83	16.00	15.54	15.08	14.24	14.65
<u>Load Flexibility (gross)</u> Monthly High (MW)	117	109	109	110	109	110	110	109.78	103.10	105.31
Monthly Low (MW)	108	63	106	105	82	104	104	103.00	76.70	82.79
<u>Injection</u> Total (Billion Lbs)	14.74	17.45	16.66	16.22	17.96	12.39	14.86	21.21	15.78	13.19
Condensate (Billion Lbs)	2.87	4.96	4.79	5.00	4.21	4.62	4.20	4.94	4.64	4.36
Effluent (Billion Lbs)	9.82	12.13	11.82	11.18	13.75	7.77	12.50	16.27	11.13	8.83
<u>Mass Replacement</u> Annual (%)	85.7%	103.9%	97.8%	97.7%	106.7%	77.5%	95.6%	140.6%	110.8%	90.0%
Cumulative (%)	57.2%	58.6%	59.8%	60.9%	62.2%	62.6%	63.4%	65.2%	66.2%	66.7%
<u>Wells Used For Injection</u>	8	11	15	15	13	12	13	11	10	10
<u>NCPA Micro-seismic Activity M>= 1.5</u>	49	55	73	81	68	58	50	64	66	57
<u>NCPA Micro-seismic Activity Maximum Magnitude Event</u>	2.64	2.99	3.3	2.91	3.76	4.38	2.99	3.37	2.92	3.09
<u>NCG Concentration</u> (ppmw)	2,395	2,785	2,950	3,097	3,248	3,069	3,176	3,376	3,108	3,356

Table 3
RESERVOIR PRESSURE
BY WELL 2019

WELL	PRESS	WELL	PRESS	WELL	PRESS	WELL	PRESS
A-3	82.5	D-1	65.1			P-1	
A-4	74.1	D-2	77.8	H-1	71.3	P-2	106.5
A-5	77.6	D-6	74.3	H-2	83.6	P-4	81.1
A-6	74.2	D-7	66.7	H-3	72.3	P-5	96.1
A-SITE	77.1	D-8	76.6	H-4		P-6	85.3
		D-SITE	72.1	H-5	69.3	P-7	84.5
B-2	75.4			H-SITE	74.1	P-8	146.5
B-3	76.6	E-1	73.4			P-9	
B-4	74.1	E-2	76.5	J-2	80.6	P-SITE	100.0
B-5	72.9	E-3	85.5	J-3	92.1		
B-6		E-4	72.9	J-4	100.2	Q-1	
B-SITE	74.8	E-5	74.8	J-5	114.7	Q-3	65.4
		E-6	74.4	J-SITE	96.9	Q-4	64.4
C-1	63.3	E-8				Q-5	72.2
C-2	64.9	E-SITE	76.6			Q-6	71.5
C-4	65.8			N-1	66.2	Q-7	70.5
C-5	63.8	F-1	68.8	N-2	79.8	Q-8	72.0
C-6	62.2	F-2	71.4	N-3	68.6	Q-9	83.2
C-7	62.2	F-3	72.3	N-4	67.6	Q-SITE	68.8
C-8	70.1	F-4	74.8	N-5	67.7		
C-9	69.0	F-5	71.2	N-6	68.9	Y-1	68.7
C-10	54.5	F-6	69.5	N-SITE	69.8	Y-2	66.9
C-SITE	64.0	F-7				Y-3	75.1
		F-SITE	71.3			Y-4	
						Y-5	
						Y-SITE	70.2

WELLS NOTED IN RED ARE ESTIMATED VALUES FROM PAST DATA

VALUES ARE FROM PRESSURE BUILD- UP TESTS

AVE. WELL PRESS EQUALS 75.6 psig

AVE SITE PRESS EQUALS 76.3 psig

AVE. FLOWRATE = 24.3 kph at 40.8 psig

TABLE 4 NCG CONCENTRATIONS (PPMW) 2018 BY WELL, AND SITE AND PROJECT									
WELL		WELL		WELL		WELL		WELL	
A-3	7667	D-1	2504	H-1	2536	P-1			
A-4	2958	D-2	2589	H-2	1041	P-2		2937	
A-5	1762	D-6	2993	H-3	4689	P-4		1673	
A-6	2380	D-7	745	H-4		P-5		1382	
A-SITE	3692	D-8	1917	H-5	3426	P-6		2739	
		D-SITE	1805	H-SITE	2923	P-7		4344	
B-2	3472					P-8		3657	
B-3	4736	E-1	9621	J-2	4159	P-9			
B-4	3135	E-2	2872	J-3	920	P-SITE		2789	
B-5	2168	E-3	4154	J-4	2553				
B-6		E-4	4873	J-5	852	Q-1			
B-SITE	3378	E-5	8104	J-SITE	2121	Q-3		4898	
		E-6	3547			Q-4		2481	
C-1	2784	E-SITE	5529	N-1	2511	Q-5		2563	
C-2	4151			N-2	1555	Q-6		2225	
C-4	3786	F-1	1203	N-3	1302	Q-7		9723	
C-5	13976	F-2	2319	N-4	2233	Q-8		2616	
C-6	3766	F-3	3812	N-5	1777	Q-9		3025	
C-7	3847	F-4		N-6	3815	Q-A			
C-8	1646	F-5	622	N-SITE	2199	Q-SITE		3933	
C-9	5824	F-6	1629						
C-A	3370	F-7	1847			Y-1		2455	
C-SITE	4794	F-SITE	1905			Y-2		4741	
						Y-3		3650	
						Y-4		2895	
						Y-5			
						Y-SITE		3435	
VALUES ARE FROM NCPA CHEM LAB ANALYSIS									
Number of wells samples wells sampled=								65	
AVG. WELL NCG =								3356	
AVG. SITE NCG =								3209	
NCG Flow Weighted Avg. =								3190	

2019 Generation - 25 Year Forecast

Table 5

Year	Total Geo Facilities		Plant #1		Plant #2	
	Gross	Net	Gross	Net	Gross	Net
	Generation GWhr	Generation GWhr	Generation GWhr	Generation GWhr	Generation GWhr	Generation GWhr
2019	804.0	716.9	461.5	396.6	342.5	320.3
2020	827.8	740.8	480.0	415.0	347.8	325.8
2021	818.9	731.7	472.2	407.4	346.7	324.3
2022	764.6	679.1	466.0	401.2	298.6	277.9
2023	795.5	704.5	463.8	395.1	331.8	309.4
2024	784.7	693.4	459.0	390.2	325.7	303.2
2025	759.2	672.4	448.1	383.3	311.0	289.1
2026	754.1	666.9	442.5	377.6	311.7	289.3
2027	742.4	655.2	436.9	372.1	305.5	283.1
2028	700.9	611.6	436.3	367.7	264.6	243.9
2029	723.6	632.8	429.8	361.4	293.8	271.4
2030	703.0	616.2	421.0	356.2	282.0	260.1
2031	699.0	611.8	416.0	351.1	283.0	260.6
2032	690.9	603.4	412.1	347.1	278.7	256.2
2033	682.6	592.0	409.6	341.4	273.0	250.6
2034	641.1	552.2	404.8	336.6	236.3	215.6
2035	662.7	575.3	396.8	332.0	265.9	243.3
2036	653.3	565.8	393.3	328.3	260.0	237.5
2037	642.8	555.5	387.8	323.0	255.0	232.6
2038	637.5	547.1	386.7	318.7	250.8	228.4
2039	629.2	538.8	382.4	314.4	246.8	224.4
2040	585.2	500.4	375.0	310.2	210.2	190.3
2041	611.8	524.3	371.9	306.9	239.8	217.3
2042	602.4	515.2	366.9	302.1	235.5	213.1
2043	598.0	507.7	366.0	298.2	231.9	209.5

Notes:

1. Assumes 3 unit operation.
2. Steam Reserves: 297.2 Billion lb.
3. Gross Reserves: 17,515 GWhr
4. Net Reserves: 15,311 GWhr
5. Plant #1 Auxiliary Load is fixed at 7.5 MW.
Plant #2 Auxiliary Load is fixed at 2.58 MW.
6. Plant availability is 99.5% or a forced outage rate of 43.8 hrs per year.
7. See Table 5B for scheduled outages.

2019 Generation Capacity - 25 Year Forecast
Table 5A

Year	Plant #1		Plant #2		Total	
	Avg. Gross	Avg. Net	Avg. Gross	Avg. Net	Avg. Gross	Avg. Net
	Gen.	Gen.	Gen.	Gen.	Gen.	Gen.
	MW	MW	MW	MW	MW	MW
2019	52.8	45.4	39.5	36.9	92.4	82.4
2020	55.4	47.9	41.0	38.4	96.4	86.3
2021	54.6	47.1	40.1	37.5	94.7	84.7
2022	53.9	46.4	34.3	31.9	88.2	78.3
2023	53.2	45.7	38.4	35.8	91.6	81.5
2024	52.5	45.0	37.6	35.0	90.1	80.0
2025	51.8	44.3	36.8	34.2	88.6	78.6
2026	51.2	43.7	36.1	33.5	87.2	77.2
2027	50.5	43.0	35.3	32.8	85.9	75.8
2028	49.9	42.4	30.3	27.9	80.2	70.3
2029	49.3	41.8	34.0	31.4	83.3	73.2
2030	48.7	41.2	33.4	30.8	82.1	72.0
2031	48.1	40.6	32.7	30.2	80.9	70.8
2032	47.5	40.0	32.2	29.6	79.7	69.6
2033	47.0	39.5	31.6	29.0	78.6	68.5
2034	46.4	38.9	27.1	24.8	73.6	63.7
2035	45.9	38.4	30.5	27.9	76.4	66.3
2036	45.4	37.9	30.0	27.4	75.4	65.3
2037	44.9	37.4	29.5	26.9	74.4	64.3
2038	44.4	36.9	29.0	26.4	73.4	63.3
2039	43.9	36.4	28.6	26.0	72.4	62.3
2040	43.4	35.9	24.6	22.2	68.0	58.1
2041	42.9	35.4	27.7	25.1	70.6	60.5
2042	42.4	34.9	27.2	24.7	69.7	59.6
2043	42.0	34.5	26.8	24.2	68.8	58.7

* Average generation levels plants are capable of achieving.

2019 Scheduled Outages - 25 Year Forecast

Table 5B

Year	Plant #1		Plant #2
	Unit 1	Unit 2	Unit 4
	Scheduled	Scheduled	Scheduled
	Outages	Outages	Outages
	hrs	hrs	hrs
2019	672	672	72
2020	72	72	72
2021	72	72	72
2022	72	72	1008
2023	72	72	72
2024	72	72	72
2025	672	672	72
2026	72	72	72
2027	72	72	72
2028	72	72	1008
2029	72	72	72
2030	72	72	72
2031	672	672	72
2032	72	72	72
2033	72	72	72
2034	72	72	1008
2035	72	72	72
2036	72	72	72
2037	672	672	72
2038	72	72	72
2039	72	72	72
2040	72	72	1008
2041	72	72	72
2042	72	72	72
2043	672	672	72

2018 Generation - 5 Year Forecast
Table 6

Date	Total Geo Facilities		Plant #1		Plant #2	
	Gross	Net	Gross	Net	Gross	Net
	Generation GWhr	Generation GWhr	Generation GWhr	Generation GWhr	Generation GWhr	Generation GWhr
Jan-19	77.7	67.8	44.8	36.7	32.9	31.1
Feb-19	68.7	60.2	39.1	32.2	29.6	28.0
Mar-19	75.3	65.7	45.9	38.0	29.4	27.7
Apr-19	52.2	48.8	22.0	20.5	30.2	28.4
May-19	54.8	50.7	23.6	21.5	31.2	29.3
Jun-19	62.4	55.2	40.2	34.9	22.1	20.3
Jul-19	64.4	56.9	41.5	36.0	22.8	20.9
Aug-19	64.2	56.8	41.5	35.9	22.8	20.8
Sep-19	70.0	62.8	40.1	34.7	29.9	28.1
Oct-19	72.3	64.8	41.4	35.8	30.9	29.0
Nov-19	69.8	62.6	40.0	34.6	29.8	28.0
Dec-19	72.1	64.6	41.3	35.7	30.8	28.8
Jan-20	71.9	64.5	41.2	35.7	30.7	28.8
Feb-20	67.2	60.2	38.5	33.3	28.7	26.9
Mar-20	71.7	64.3	41.2	35.6	30.6	28.7
Apr-20	54.5	48.5	35.8	31.0	18.7	17.5
May-20	71.5	64.1	41.1	35.5	30.5	28.5
Jun-20	69.1	61.9	39.7	34.3	29.4	27.6
Jul-20	71.3	63.8	41.0	35.4	30.3	28.4
Aug-20	71.2	63.7	40.9	35.4	30.3	28.4
Sep-20	68.8	61.6	39.6	34.2	29.3	27.4
Oct-20	71.0	63.5	40.8	35.3	30.2	28.3
Nov-20	68.6	61.4	39.5	34.1	29.1	27.3
Dec-20	70.8	63.3	40.7	35.2	30.1	28.1
Jan-21	70.7	63.2	40.7	35.1	30.0	28.1
Feb-21	63.8	57.0	36.7	31.7	27.0	25.3
Mar-21	67.6	60.3	40.6	35.1	27.0	25.3
Apr-21	64.2	57.5	35.3	30.5	28.9	27.0
May-21	70.3	62.8	40.5	35.0	29.8	27.9
Jun-21	67.9	60.7	39.2	33.8	28.8	26.9
Jul-21	70.1	62.6	40.4	34.9	29.7	27.7
Aug-21	70.0	62.5	40.4	34.8	29.6	27.7
Sep-21	67.6	60.4	39.0	33.7	28.6	26.7
Oct-21	69.8	62.3	40.3	34.7	29.5	27.6
Nov-21	67.4	60.2	38.9	33.6	28.5	26.6
Dec-21	69.6	62.1	40.2	34.6	29.4	27.5
Jan-22	69.5	62.0	40.2	34.6	29.3	27.4
Feb-22	62.7	55.9	36.2	31.2	26.4	24.7
Mar-22	40.1	34.5	40.1	34.5	0.0	0.0
Apr-22	49.0	42.3	34.8	30.0	14.1	12.3
May-22	69.1	61.6	40.0	34.4	29.1	27.2
Jun-22	66.8	59.5	38.6	33.3	28.1	26.3
Jul-22	68.9	61.4	39.9	34.3	29.0	27.1
Aug-22	68.8	61.3	39.8	34.3	29.0	27.0
Sep-22	66.5	59.3	38.5	33.1	28.0	26.1
Oct-22	68.6	61.1	39.8	34.2	28.9	26.9
Nov-22	66.3	59.1	38.4	33.1	27.9	26.0
Dec-22	68.4	60.9	39.7	34.1	28.7	26.8
Jan-23	68.3	60.9	39.6	34.1	28.7	26.8
Feb-23	61.6	54.9	35.7	30.7	25.9	24.1
Mar-23	65.4	58.1	39.5	34.0	25.8	24.1
Apr-23	65.8	55.3	38.2	29.6	27.6	25.8
May-23	68.0	60.5	39.5	33.9	28.5	26.6
Jun-23	65.7	58.4	38.1	32.8	27.5	25.7
Jul-23	67.8	60.3	39.4	33.8	28.4	26.5
Aug-23	67.7	60.2	39.3	33.8	28.3	26.4
Sep-23	65.4	58.2	38.0	32.6	27.4	25.5
Oct-23	67.5	60.0	39.2	33.7	28.2	26.3
Nov-23	65.2	58.0	37.9	32.6	27.3	25.4
Dec-23	67.3	59.8	39.2	33.6	28.1	26.2

2019 Generation Capacity - 5 Year Forecast*

Table 6A

Year	Plant #1		Plant #2		Total	
	Avg. Gross	Avg. Net	Avg. Gross	Avg. Net	Avg. Gross	Avg. Net
	Gen. MW	Gen. MW	Gen. MW	Gen. MW	Gen. MW	Gen. MW
Jan-19	60.2	49.3	44.3	41.8	104.4	91.1
Feb-19	58.2	48.0	44.1	41.6	102.3	89.6
Mar-19	61.7	51.1	42.3	39.7	104.0	90.8
Apr-19	30.5	28.4	42.2	39.6	72.7	68.0
May-19	31.8	28.9	42.1	39.5	73.9	68.4
Jun-19	56.2	48.7	30.9	28.3	87.1	77.0
Jul-19	56.1	48.6	30.8	28.2	86.9	76.8
Aug-19	56.0	48.5	30.7	28.2	86.8	76.7
Sep-19	56.0	48.5	41.8	39.2	97.8	87.7
Oct-19	55.9	48.4	41.7	39.1	97.6	87.5
Nov-19	55.8	48.3	41.6	39.0	97.5	87.4
Dec-19	55.8	48.3	41.6	39.0	97.3	87.2
Jan-20	55.7	48.2	41.5	38.9	97.2	87.1
Feb-20	55.7	48.2	41.4	38.8	97.0	87.0
Mar-20	55.6	48.1	41.3	38.7	96.9	86.8
Apr-20	55.5	48.0	41.2	38.6	96.8	86.7
May-20	55.5	48.0	41.2	38.6	96.6	86.5
Jun-20	55.4	47.9	41.1	38.5	96.5	86.4
Jul-20	55.3	47.8	41.0	38.4	96.3	86.2
Aug-20	55.3	47.8	40.9	38.3	96.2	86.1
Sep-20	55.2	47.7	40.8	38.2	96.1	86.0
Oct-20	55.2	47.7	40.8	38.2	95.9	85.8
Nov-20	55.1	47.6	40.7	38.1	95.8	85.7
Dec-20	55.0	47.5	40.6	38.0	95.6	85.5
Jan-21	55.0	47.5	40.5	37.9	95.5	85.4
Feb-21	54.9	47.4	40.4	37.9	95.4	85.3
Mar-21	54.9	47.4	40.4	37.8	95.2	85.1
Apr-21	54.8	47.3	40.3	37.7	95.1	85.0
May-21	54.7	47.2	40.2	37.6	95.0	84.9
Jun-21	54.7	47.2	40.1	37.6	94.8	84.7
Jul-21	54.6	47.1	40.1	37.5	94.7	84.6
Aug-21	54.5	47.0	40.0	37.4	94.5	84.4
Sep-21	54.5	47.0	39.9	37.3	94.4	84.3
Oct-21	54.4	46.9	39.8	37.3	94.3	84.2
Nov-21	54.4	46.9	39.8	37.2	94.1	84.0
Dec-21	54.3	46.8	39.7	37.1	94.0	83.9
Jan-22	54.2	46.7	39.6	37.0	93.9	83.8
Feb-22	54.2	46.7	39.6	37.0	93.7	83.6
Mar-22	54.1	46.6	0.0	0.0	54.1	46.6
Apr-22	54.1	46.6	19.7	17.1	73.8	63.7
May-22	54.0	46.5	39.3	36.7	93.3	83.2
Jun-22	53.9	46.4	39.3	36.7	93.2	83.1
Jul-22	53.9	46.4	39.2	36.6	93.1	83.0
Aug-22	53.8	46.3	39.1	36.5	92.9	82.9
Sep-22	53.8	46.3	39.0	36.5	92.8	82.7
Oct-22	53.7	46.2	39.0	36.4	92.7	82.6
Nov-22	53.6	46.1	38.9	36.3	92.5	82.5
Dec-22	53.6	46.1	38.8	36.2	92.4	82.3
Jan-23	53.5	46.0	38.8	36.2	92.3	82.2
Feb-23	53.5	46.0	38.7	36.1	92.2	82.1
Mar-23	53.4	45.9	38.6	36.0	92.0	81.9
Apr-23	53.4	45.9	38.6	36.0	91.9	81.8
May-23	53.3	45.8	38.5	35.9	91.8	81.7
Jun-23	53.2	45.7	38.4	35.8	91.7	81.6
Jul-23	53.2	45.7	38.4	35.8	91.5	81.4
Aug-23	53.1	45.6	38.3	35.7	91.4	81.3
Sep-23	53.1	45.6	38.2	35.6	91.3	81.2
Oct-23	53.0	45.5	38.1	35.6	91.1	81.1
Nov-23	52.9	45.4	38.1	35.5	91.0	80.9
Dec-23	52.9	45.4	38.0	35.4	90.9	80.8

* Average generation levels plants are capable of achieving.

TABLE 7
2019 FORECAST OF GEOTHERMAL PRODUCTION AND
INJECTION

TIME STEP	DATE			
		STEAM PROD. BLBS	COND INJ BLBS	WATER INJ BLBS
1	2019	14.1	4.5	15.0
2	2020	13.9	4.4	15.0
3	2021	13.7	4.4	14.9
4	2022	13.5	4.3	14.8
5	2023	13.2	4.2	14.7
6	2024	13.0	4.2	14.7
7	2025	12.8	4.1	14.6
8	2026	12.6	4.0	14.6
9	2027	12.5	4.0	14.5
10	2028	12.3	3.9	14.4
11	2029	12.1	3.9	14.4
12	2030	11.9	3.8	14.3
13	2031	11.8	3.8	14.3
14	2032	11.6	3.7	14.2
15	2033	11.4	3.7	14.2
16	2034	11.3	3.6	14.1
17	2035	11.1	3.6	14.1
18	2036	11.0	3.5	14.0
19	2037	10.9	3.5	14.0
20	2038	10.7	3.4	13.9
21	2039	10.6	3.4	13.9
22	2040	10.5	3.3	13.9
23	2041	10.3	3.3	13.8
24	2042	10.2	3.3	13.8
25	2043	10.1	3.2	13.7

NOTES :

1. CUM. PRODUCTION AND INJECTION 1983-2018 670.8 Billion Lbs Steam
447.7 Billion Lbs Water
2. TOTAL WATER IS CONDENSATE + EFFLUENT + LAKE + POND
3. FUTURE STEAM PRODUCTION 2019-2043 = 297.2 Billion Lbs
4. FUTURE WATER INJECTION 2019-2043 = 357.8 Billion Lbs