



*April*  
*2023*

---

BUSINESS PROGRESS  
REPORT



Northern California Power Agency  
651 Commerce Drive | Roseville, California 95678  
(916) 781-3636 | [www.ncpa.com](http://www.ncpa.com)

---

---

# Table of Contents

---

---

Generation Costs & Reliability .....	1
Environmental, Health & Safety Projects .....	4
Power Management/NCPA Market Results.....	5
Debt & Financial Management .....	12
Schedule Coordination Goals.....	13
NCPA Bills & Settlements.....	14
Political Arena State/Federal/Western Programs .....	15
Human Resources.....	15
Annual Budget FY to Date.....	16
Budget vs. Actual by Major Area .....	17
Generation Resources Analysis by Source .....	18
Management Services Analysis by Source .....	19
Third Party Revenue Analysis by Source .....	21
Generation Detail Analysis by Plant .....	23

# Generation Costs & Reliability

## Combustion Turbine Project

### Unit Operation for March 2023

Unit	Availability		Production		Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	94.0 MWh	COMMISSIONING / COMMISSIONING
	24.4%	24.4%	Unit 2	94.6 MWh	
Curtailments, Outages, and Comments:					
Unit 1:	3/01 @ 00:00 - 3/24 @ 09:53; Annual maintenance and excitation replacement, OMS 12421586				
Unit 2:	3/01 @ 00:00 - 3/24 @ 09:53; Annual maintenance and excitation replacement, OMS 12421596				
Unit	Availability		Production		Reason for Run
CT1 Lodi	99.13%		122.4 MWh		TESTING
Curtailments, Outages, and Comments:					
3/25 @ 07:00 - 13:30; Excitation system tuning, OMS 13301984					
Unit	Availability		Production		Reason for Run
CT2 STIG	100.0%		0.0 MWh		CAISO
Curtailments, Outages, and Comments:					
Normal Operation.					
Unit	Availability		Production		Reason for Run
LEC	100.0%		140,239 MWh		CAISO
Curtailments, Outages, and Comments:					
Normal operation.					

**Maintenance Summary – Specific per asset above.**

## Geothermal Facilities

### Availability/Production for March 2023

Unit	Availability		Net Electricity Generated/Water Delivered		Out-of-Service/Descriptors
<b>Unit 1</b>	0	%	0	MWh	U1 down for outage
<b>Unit 2</b>	100	%	2,438	MWh	U2 down for outage, came back online 3/28/23
<b>Unit 3</b>	N/A	%	N/A	-	Unit 3 remains out of service.
<b>Unit 4</b>	100	%	35,481	MWh	U 4 in service
<b>Southeast Geysers Effluent Pipeline</b>	71	%	145.5	mgallons	Average flow rate: 3,170 gpm
<b>Southeast Solar Plant</b>	N/A			KWh	Year-to-date KWh: 1,567,922
<b>Bear Canyon Pump Station Zero Solar</b>	N/A			KWh	Year-to-date KWh: 1,151,395

\* Accounts for an additional 1,367 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

## Hydroelectric Project

### Availability/Production for March 2023

Units	Availability	Net Electricity Generated	Out-of-Service
<b>Collierville Unit 1</b>	100%	67910 MWh	CV Unit 1 – No Outages
<b>Collierville Unit 2</b>	97.85%	66647 MWh	CV Unit 2 – Out of Service on 3/13/23 from 054 to 1513 for CB 1422 Trouble and on 3/17/23 from 2102 to 2246 for water in oil in turbine bearing.
<b>Spicer Unit 1</b>	67.26%	1022 MWh	NSM1- Out of Service on 3/1/23 to 3/3/23 from 0000 to 1215 for Comm Trouble and on 3/9/23 to 3/17/23 from 2225 to 1341 for Comm Trouble
<b>Spicer Unit 2</b>	84.23%	1227 MWh	NSM2- Out of Service on 3/1/23 from 0000 to 1011 for Comm Trouble and on 3/9/23 to 3/14/23 from 2225 to 0932 for Comm Trouble
<b>Spicer Unit 3</b>	67.57%	145 MWh	NSM3- Out of Service on 3/1/23 to 3/3/23 from 0000 to 1104 for Comm Trouble and on 3/9/23 to 3/17/23 from 2225 to 1237 for Comm Trouble

### Operations & Maintenance Activities:

- CMMS work orders
- Winter Access Issues
- FEMA Reimbursement process for Storm Damage

## Environmental, Health & Safety (EH&S) Projects Incident Reports

- There were no vehicle, Lost Time, or Cal OSHA Recordable accidents in the month of February.
- Find below a Safety Report that highlights the following areas: recordable incidents and lost time accidents (LTAs) reported this period and this calendar year; the number of days since last recordable or LTA; the number of work hours since last recordable or LTA; and vehicle accidents reported this month and this calendar year. In September of 2012, Generation Services completed an internal audit of its records with the results reflected in this report and was updated through the payroll period ended March 25, 2023.
- The “CT Group” column reflects the combined safety numbers of all CT employees. Beginning with the November 2009 report, the CT Group Column also includes Lodi Energy Center staff.

### March 2023 Generation Services Safety Report

	Hydro	GEO	CT Group *	NCPA HQ **
Cal OSHA Recordable (this month)	0	0	0	0
Cal OSHA Recordable (calendar year)	0	1	0	0
Days since Recordable	865	54	2,910	3,894
Work Hours Since Last Recordable	75,968	11,764	438,267	2,929,562
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	5,644	2,773	10,814	6,907
Work Hours without LTA	508,537	274,738	849,811	2,551,580
Vehicle Incident (month)	0	0	0	0
Vehicle Incident (calendar year)	0	1	1	0

\* CT Group: Combines CT-1, CT-2 and LEC Operations

\*\* NCPA HQ: Roseville employees at the Main Office

Data originates from OSHA logs, HR records and payroll information.  
Days and Hours are calculated through pay period ended March 25, 2023.

## Power Management/NCPA Market Results

### Dispatch and Schedule Coordination

- NCPA Dispatch and Schedule Coordination Center safely, reliably, and economically schedules, monitors, and manages NCPA and NCPA member power resources and loads 24 hours per day, 7 days per week on a continuous basis. This process includes balancing MSSA loads and resources on a 5-minute basis, optimizing NCPA resources and minimizing ISO costs.
- NCPA MSSA Load Data:

#### **Current Year 2023 Data**

	<b>March 2023</b>		<b>Calendar Year 2023</b>	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	325.32 3/9 @ 1900	190,225	331.16 2/27 @ 1200	564,619
SVP	565.65 3/9 @ 1300	383,880	571.76 2/28 @ 1200	1,118,826
MSSA	879.02 3/9 @ 1900	574,105	896.9 2/27 @ 1200	1,683,445

#### **Last Year 2022 Data\***

	<b>March 2022</b>		<b>Calendar Year 2022</b>	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	299.91 3/3 @ 1900	180,190	511.56 9/6 @ 1600	540,769
SVP	555.71 3/22 @ 1700	368,925	687.74 9/6 @ 1300	1,069,298
MSSA	843.17 3/22 @ 1800	549,115	1176.2 9/6 @ 1400	1,610,067

\*Last year's data added for comparison purposes only

#### **System Peak Data**

	<b>All Time Peak Demand</b>	<b>2023 Peak Demand</b>
NCPA Pool	517.83 MW on 7/24/06 @ 1500	331.16 2/27 @ 1200
SVP	687.74 MW on 9/6/22 @ 1300	571.76 2/28 @ 1200
MSSA	1176.20 MW on 9/6/22 @ 1400	896.9 2/27 @ 1200

- NCPA MSSA has a Deviation Band with the CAISO, which is used as a performance measure by the CAISO. The ability to stay within this Deviation Band is a measure of NCPA Dispatch's ability to balance the MSSA Loads and Resources on a 5-minute basis. The following NCPA Deviation Band Performance table includes all deviations, including deviations from unit forced outages, metering and load outages, COTP, Western, and WECC curtailments.

<b>NCPA Deviation Band Performance</b>		
	<b>March 2023</b>	<b>Calendar Year 2023</b>
MSSA % Within the Band	99.01%	98.79%

## **CAISO Grid TEST NOTICE 2023-03-06 09:00:00**

This is the monthly test of the California ISO Alert, Warning & Emergency (AWE) Notification System.

This is only a test - NO ACTION REQUIRED.

## **Northern CA Region TRANSMISSION EMERGENCY Notice 2023-03-10 09:22:00**

The California ISO hereby issues a Northern CA Region TRANSMISSION EMERGENCY Notice effective 03/10/2023 09:21 through 03/10/2023 23:59 based on conditions as of 03/10/2023 09:22.

Reason:

Transmission Emergency declared in the Humboldt region due to storm conditions.

## **Northern CA Region TRANSMISSION EMERGENCY Notice 2023-03-11 00:06:00**

The California ISO hereby issues a Northern CA Region TRANSMISSION EMERGENCY Notice effective 03/11/2023 00:03 through 03/11/2023 23:59 based on conditions as of 03/11/2023 00:06.

Reason:

Transmission Emergency declared in the Humboldt region due to storm conditions.

## **Pooling, Portfolio Planning & Forecasting**

- NCPA Pool loads during March 2023 were 190,226 MWh versus the budget forecast of 187,154 MWh, resulting in a forecast error of 1.61%. The current weather outlook for April 2023 is for near normal temperatures and below normal rainfall. The Pool's April load forecast is 178,444 MWh compared with extrapolated actuals of 178,802 MWh as of April 18, 2023.
- Lodi Energy Center (LEC) ran 561 hours out of a possible 743 producing 140,240 MWh. Natural gas and power prices are significantly higher than a year ago due to gas basis difference between PG&E City and Henry Hub.
- During March 2023, 13.54" of rain was recorded at the Big Trees gauge. March average rainfall at Big Trees is 6.93". New Spicer Meadows storage decreased by just over 10,600 acre feet in March.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been reduced to \$90/MWh. Releases from NSMR have been increased to make room for the substantially above average snowpack. The Central Sierra snowpack peaked ~237% of April 1<sup>st</sup> average.
- New Spicer Meadows storage as of March 31, 2023 was 51,751 acre feet. The historical average storage at the end of March is 78,719 acre feet. As of April 18<sup>th</sup>,



storage was 47,602 acre feet.

- Combined Calaveras Project generation for the Pool in March 2023 totaled 69,637MWh, up from 44,084MWh in February 2023.
- Western Base Resource (BR) deliveries for the Pool during March 2023 were 2,721 MWh. Displacement program energy totaled 0 MWh. The Pool's share of expected total delivery from the Western Base Resource for April 2023 is 30,792 MWh, with 20,015 MWh having been delivered through April 19, 2023.
- The PG&E Citygate gas index averaged \$7.89/ MMBtu during the month of March as compared to an average of \$7.75 for February. April 2023 average price is \$5.99 through the 19<sup>th</sup>. The May 2023 PG&E Citygate forward price is \$5.48 / MMBtu.
- Day-Ahead PG&E DLAP electricity prices for March averaged \$80.25 / MWh On-Peak and \$6.72 Off-Peak, with a high of \$132.73 and a low of -\$5.02. DLAP prices have averaged \$66.83 On-Peak and \$64.90 Off-Peak for the period April 1<sup>st</sup> through the 19<sup>th</sup>, with a low price of -\$4.42. The forward power prices for May are \$50.78 On-Peak and \$47.69 Off-Peak.

## **Industry Restructuring, Contracts and Interconnection Affairs**

### **Resource Adequacy Compliance Filings**

- NCPA made the following Resource Adequacy compliance filings with the CAISO for the compliance period of June 2023:
  - Monthly System Resource Adequacy Demonstration (filed April 17, 2023)
  - Monthly Supply Plan (filed April 17, 2023)

### **Industry Restructuring**

NCPA is actively participating in a number of CAISO stakeholder initiatives on behalf of the Members. The following is a brief description of key active initiatives:

#### CPUC RA Slice of Day Proposed Decision

CAISO initiated Resource Adequacy enhancements in 2018. One of two phases were implemented. The first phase implemented substitution obligations for most outages and set forth minimum state of charge requirements for storage shown as RA in order to ensure such resources were available during stressed conditions. Phase two contemplated changes to Flex RA requirements, must offer obligations, and bid insertion. Proposals also included updates to net qualifying capacity (NQC) adjustments to account for forced outages (UCAP). While phase 2 proposals were being reviewed, CAISO encountered its first stage emergency in nearly 15 years in 2020. CPUC determined that it was going to rethink its RA program and report back to CAISO effectively putting RAE Phase 2 on hold indefinitely.

Between 2020 and 2022, CPUC held multiple workshops where stakeholder presented proposals. The CPUC settled on SCE 24-hour "Slice of Day" proposal and released a Proposed Decision in March. This framework requires each CPUC jurisdictional load-serving entity (LSE) to demonstrate it has enough capacity to satisfy its specific gross

load profile (including planning reserve margin) in all 24 hours on the CAISO's "worst day" in that month. 2024 will be a test year requiring annual filings and sets of monthly filings. Go live is slated for 2025.

The components of the SoD will be selecting the "worst day" by adapting current CEC load forecasting process, selecting one planning reserve margin for all months and hours, capacity to offset storage usage, and Cost Allocation Mechanism and DR allocations.

General requirements and counting for RA capacity:

- Resource attributes and capabilities and will continue to remain bundled across each compliance month.
- Full-capability must offer requirement
- Resources must be deliverable to provide RA
- Solar and Wind will utilize hourly profiles; others will have single monthly NQC.

Wind and Solar Counting:

- Assigned monthly 24-hour profiles based on the Public Advocates Office's exceedance methodology
- PG&E's Top 56 days data set will be modified to add any days on which CAISO called a Flex Alert.
- The exceedance methodology will be applied to historical data to generate technology (solar fixed/tracking/solar thermal) and regional profiles
- Six years of production data will be used as the basis for the exceedance methodology, with updates every year.

Tools Required for Implementation

- RA Master Resource Database
- LSE Requirement Database
- LSE Showing Tool
- Commission Verification Tool

Impact to non-CPUC Jurisdictional entities (NCPA):

- Unknown at this time
- PD acknowledges that there could be discrepancies between SOD and CAISO RA frameworks: "proposal would mean CAISO and the Commission use different counting methodologies, which may result in discrepancies for compliance, where an LSE could pass CAISO's compliance and not the Commission's compliance, or vice versa.)"
- PD states "it is important to align the Commission's and CAISO's compliance processes at the coincident peak hour to the extent possible."
- CAISO comments that proposed VER QC could result in discrepancies between the Commission and CAISO compliance checks at peak, where solar resources in particular could count for significantly more towards system peak requirements at the CAISO than in peak hours at the Commission
- CAISO to resume RA Enhancements initiative later this year
  - Revisit Flex RA requirements and any adjustment necessary to adapt to Day Ahead Market Enhancements Imbalance Reserve Product.
  - Revisit UCAP
  - No mention of Slice of Day.

## Western

Western Base Resource Tracking - NCPA Pool							
	Actual			Costs & Rates			
	BR Forecast <sup>1</sup> (MWh)	BR Delivered (MWh)	Difference (MWh)	Base Resource & Restoration Fund (\$)	Monthly Cost of BR <sup>2</sup> (\$/MWh)	CAISO LMP Differential <sup>3</sup> (\$/MWh)	12-Mo Rolling Avg. Cost of BR <sup>4</sup> (\$/MWh)
Jul-22	51,082	26,633	(24,449)	\$1,733,503	\$ 65.09	\$ (0.41)	\$ 68.38
Aug-22	33,542	18,632	(14,910)	\$1,733,503	\$ 93.04	\$ 2.72	\$ 80.68
Sep-22	20,613	7,893	(12,720)	\$1,605,598	\$ 203.42	\$ (0.55)	\$ 92.15
Oct-22	8,931	10,637	1,706	\$609,688	\$ 57.32	\$ 0.67	\$ 100.68
Nov-22	-	4,164	4,164	\$609,688	\$ 146.42	\$ 0.04	\$ 102.78
Dec-22	-	3,591	3,591	\$609,688	\$ 169.78	\$ 0.28	\$ 99.99
Jan-23	12,388	4,782	(7,606)	\$609,688	\$ 127.50	\$ (0.03)	\$ 96.36
Feb-23	18,712	1,578	(17,134)	\$609,688	\$ 386.37	\$ 0.13	\$ 98.51
Mar-23	12,955	2,721	(10,234)	\$609,688	\$ 224.07	\$ 0.26	\$ 103.34
Apr-23	41,280	-	0	\$1,349,908	\$ 32.70	\$ -	\$ 83.87
May-23	74,195	-	0	\$1,349,908	\$ 18.19	\$ -	\$ 61.72
Jun-23	78,807	-	0	\$1,349,908	\$ 17.13	\$ -	\$ 47.36
1/ As forecasted in NCPA 22/23 Budget							
2/ = (Western Cost + Restoration Fund)/BR Delivered, for Pool Participants only.							
3/ = (MEEA LMP - PG&E LAP LMP) using public market information (i.e. not settlement quality).							
4/ Based on BR Delivered (Actual) when available and BR Forecast in all other cases. Includes CAISO LMP impact.							

- NCPA Pool received 2,721 MWh of Base Resource (BR) energy in March 2023 with an estimated MEEA savings of \$700. There was zero displaced energy in March as the program was suspended through end of March 2023.

## Displacement Agreement

- The existing Displacement Agreement has an end date of December 31, 2024. During the 2023 Annual CVP Displacement Working Group Meeting, WAPA proposed to extend the Displacement Contract Term for 2 years, through December 31, 2026. The CVP Corp contract will also need to be amended to extend for an additional 2 years.
- WAPA requested customers to respond whether they are in agreement to extend the Displacement contract by April 1st. If majority of the customers are supportive, WAPA will draft an amendment for customer's review and comment. Update: Four customers supported extending the Displacement contract. There were not any responses to the contrary. WAPA sent out the draft amendment for customer's review and comment. Comments are due by April 21st.

## CVP Rate Case (Rate Order No. WAPA-207)

- WAPA intends to file a 5-Year Power Formula Rate under Rate Order No. WAPA-207 for Central Valley Project (CVP) Power, Transmission, and Ancillary Services; and the California-Oregon Transmission Project (COTP) Transmission. This is for rate schedules that are set to expire on September 30, 2024 and December 31,

2024. A separate rate case will be conducted for the Pacific Alternating Current Intertie (PACI) rate schedule as the Transmission Exchange Agreement (TEA) is set to expire on December 31, 2024.

WAPA has held three informal meetings so far.

- Key points: No changes to the existing formula rate. No material changes to the redlined rate schedules. WAPA is proposing one rate period for COTP, current rate schedule has four rates, one for each season.
- WAPA will provide an overview for Formal Process. Formal Process will start in June/July 2023.

### **Interconnection Affairs**

#### **CAISO Initiative - Subscriber Participating Transmission Owner Model – NCPA Comments Summary**

- Supported the SPTO model for the subscribers to pay for the transmission, energy, losses, and congestion up to the point where the SPTO line connects to the CAISO grid
  - Endorsed the concept of not increasing TAC
- Opposed out of state Interconnection Customers being reimbursed for network upgrades on the CAISO system
- Supported out of state projects being part of the cluster interconnection process
- Opposed CAISO approving projects which expand the grid for out of state wind in the TPP process

#### **CAISO Initiative – 2023 Interconnection Process Enhancements – NCPA Comments Summary**

- Opposed delaying the cluster process by one year
- Noted non-CPUC jurisdictional LSE's should have portfolio needs considered in the TPP
- Opposed considering specific generation such as offshore wind only

### **Meter Maintenance Program Development**

#### *Background*

- In the past, NCPA administered a Meter Maintenance Program on behalf of select members
- The program is now expired
- CAISO Certified Meters must be certified and repaired in short order

- NCPA staff has been experiencing growing number of challenges without Meter Maintenance Program
- Staff received bids from two (2) vendors
  - Trimark Associates, Inc. – Final Bid - \$247K Annually
  - Ulteig Engineers, Inc. – Final Bid - \$148K Annually

- Scope Capability

	Trimark	Ulteig
Provide Routine Preventative Meter Maintenance	Yes	Yes
Provide Unplanned Emergency Repair/Replacement (both metering and telecomm equipment )	Included	T&M
Oversee ISP Repairs	Included	T&M
Able to Travel and Service 49 Total Meters throughout Northern CA	Yes	Yes

- September 2022 Facilities Meeting
  - Staff recommended and Committee directed developing a General Services Agreement with Ulteig Engineers, Inc.
- April 2023 Facilities Meeting
  - Committee directed moving Pooling Schedule 14 (payment by Members for Meter Maintenance) of the Second Amended and Restated Pooling Agreement to Commission

*Next Steps*

- Present both the Ulteig Engineers, Inc. GSA and Pooling Schedule 14 for approval at the April Commission meeting

NERC Standard TOP-003-5 Data Required by CAISO Generator Owners

- California ISO has issued a data request to incorporate cold weather data required by NERC Standard TOP-003-5.
- Generator Owners or their designees shall provide requested data via a CIDI ticket or by submitting the raw data in the CAISO website under Contact Us by July 1, 2023.
- Data request can be provided by using the Extreme Weather Template posted on the CAISO website under Market & Operations > Network and Resource and Modeling > Resource Data Submission section
- Generating unit(s) minimum:
  - Design temperature; or
  - Historical operating temperature; or
  - Current cold weather performance temperature determined by an engineering analysis.

- Temperatures will be communicated in degrees Fahrenheit (F).
- NCPA can submit on Members behalf
  - NCPA Generator cold weather data was accepted by the CAISO on April 12, 2023

### Rate Case Update – TO18 Refunds

#### *Background*

- PG&E calculated refund amount to be \$234M
- PG&E's compliance filing stated ISO is responsible for administering the refunds
- JI protested the refunds calculation citing three issues
- ISO stated it will not issue refunds until there is a FERC Order on PG&E's compliance filing

#### *Current Status*

- JI and PG&E have settled two of the three outstanding issues

#### *Next Steps*

- Mid October – JI and PG&E make a joint filing describing the settlement of two of the three remaining issues and ask FERC to issue an order. This hopefully should allow ISO to issue refunds.

### **Debt and Financial Management**

- The Consumer Price Index (CPI) rose at the slowest pace since May 2021 as inflation showed further signs of easing in March but is still significantly above the Federal Reserve's 2% target. The index revealed headline inflation rose 0.1% over last month and 5.0% over the prior year in March, a slowdown from February's 0.4% month-over-month increase and 6% annual gain.
- At their March 2023 meeting, the Federal Reserve raised interest rates by a quarter point, to a new range of 4.75% - 5%, the highest since October 2007, as it attempts to fight stubbornly high inflation while addressing risks to financial stability. In its statement, the Fed said inflation remains elevated and the central bank remains focused on inflation risks. Fed officials left unchanged how high they see raising rates keeping peak interest rates for this year in a range of 5.00% - 5.25%.
- US employers added just 236,000 jobs in March, coming in below expectations and indicating that the labor market is cooling off amid the Federal Reserve's yearlong rate-hiking campaign to chill inflation. The unemployment rate dropped to 3.5%, according to the March jobs report released by the Bureau of Labor Statistics. Economists were expecting a net gain of 239,000 jobs for the month and a jobless rate of 3.6%. This is the first jobs report in 12 months that came in below expectations.

## **Schedule Coordination Goals**

### **Software Development**

- Applications and Enhancements under development
  - Development of the Renewable Portfolio Standards application continues and data validation continues. Rollout delayed pending completion of other higher priority projects
  - North Spicer Meadows water release schedule automation currently being tested, anticipated rollout by end of March 2023
  - Development of a prototype for a Logging application for Dispatch and Scheduling is underway. Pause in development, a project team will be formed to develop a project plan and evaluate viable options.
- Integrations
  - Anticipating various new resource integrations for EBCE, the Pool, and SJCE for end of Q2 COD
  - LCFS transactions integrated into the All Resource Bill
  - Software updates on Base Resource integration with the new WAPA Web Services API
- IS currently working in collaboration with Accounting and the consultants to streamline the agency's Budgeting Process and Accounting Reports. Project team consisting of Accounting, IS and consultants are working on a project plan.

### **Network**

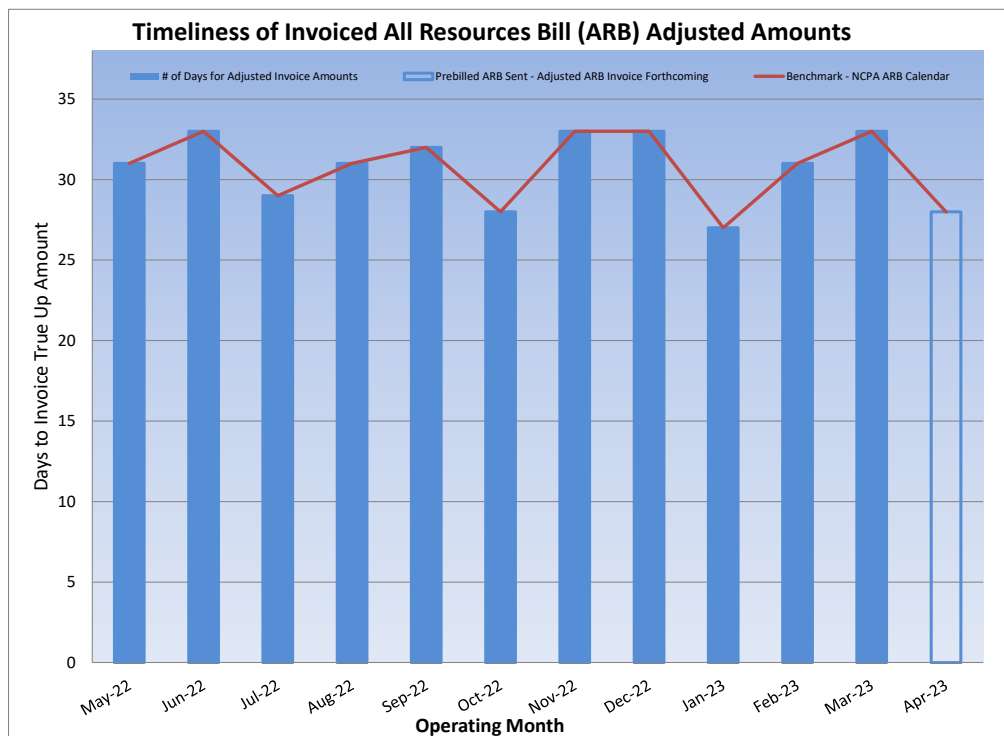
- SCADA and Networking team is currently working with EBCE and consultants to configure and integrate Daggett Solar and Battery resource into the power portfolio. Go live is expected in Spring of 2023.
- IS continues the work toward preparing the HQ and DRC Control Centers to be compliant with the NERC CIP Medium standards. Working with AESI to review draft CIP-007, CIP-009 and CIP-010 procedures.
- IS has advertised for a SCADA Analyst position to backfill the vacancy. Anticipate interviews and candidate selection to be completed by May.
- Operations and Support has successfully cutover the CTs to the new Enterprise VOIP system. Plans to cutover and migrate Hydro is scheduled for late April early May.
- IS has purchased new Firewalls to replace hardware that will soon be off support. Firewalls are scheduled to be put in place at HQ/DRC and the plants over the next few months.

## NCPA Bills & Settlements Progress Against the Strategic Plan

*Adjusted Power bills, which include CAISO transactions, invoiced to members the following month subsequent to the monthly pre-billed ARB month. Timely ARB settlements adjustments help improve members' cash flow and reconciliation of their budget performance.*

The April 2023 NCPA All Resources Bill (ARB) monthly invoice sent to members on March 26, 2023 contains:

- April 2023 monthly pre-billed budget/forecast amounts;
- February 2023 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- January 2023 (2nd Adjustment) NCPA Project settlement true-up and T+20 business day recalculated CAISO settlement true-up allocations;
- November 2022 (3rd Adjustment) T+70 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- March 2022 (4th Adjustment) T+11-month recalculated CAISO settlement true-up allocations;
- February 2021 (6th Adjustment) T+24-month recalculated CAISO settlement true-up;
- April 2020 (6th Adjustment) T+33-month recalculated CAISO settlement true-up;
- January 2020 (7th Adjustment) T+36-month CAISO settlement true-up;





## **Legislative & Regulatory**

### **Customer Programs Update:**

- On April 7, 2023, NCPA, CMUA, and SCPA submitted joint comments on the California Air Resources Board's (CARB) 15-day changes to the Advanced Clean Fleets (ACF) regulation to request additional changes prior to adoption. The Joint POU's comments call for CARB to address two critical issues: first, the exemptions are limited to vehicles 13 model years or older, and second, the daily usage exemption has a flawed energy determination formula. The comments additionally urge CARB to open a subsequent rulemaking to address other remaining issues as well as issues that arise during implementation. The Board will consider adoption of the ACF regulation at the Board hearing on April 27, 2023.

### **Legislative Update:**

- In April, NCPA hosted a delegation of members from APPA's DEED board for a tour of the Lodi Energy Center and the work being done by NCPA to promote the use of hydrogen for power generation. The DEED program or "Demonstration of Energy Efficient Developments" provides grants to APPA member utilities across the country to explore R&D opportunities and innovation. DEED is providing NCPA with a \$100,000 grant to support the creation of a hydrogen development strategy that will serve as a model for other APPA members across the study. This is the second grant provided by APPA to support NCPA's hydrogen efforts.

## **Human Resources**

### **Hires:**

Lauren Giordano joined NCPA Headquarters as an Engineer I, Generation Services, effective April 3, 2023. Lauren joins us from the California Energy Commission, where she was a Student Assistant in the Office of Compliance. In this role, she audited companies for non-compliance issues and conducted a series of tests on provided that verified total watt-hour usage and measured power. In 2022, Lauren was NCPA's Generation Services Intern, where she assisted in the development of the Inter-Agency Resource Plan (IARP). Lauren will graduate this spring with a Bachelor's degree in Electrical and Electronics Engineering (Power Certificate) from Sacramento State University.

Scott Paradise joined NCPA's Geothermal Facility as an Operator Technician III (Steam Field Operator), effective April 3, 2023. Scott joins us from Calpine, where he was an Operator Technician III. In this role, he was responsible for performing standard mechanical and electrical troubleshooting, monitoring, and recording data, assisting in the development of plant standards, diagnosing steam field equipment, and working safely around hazardous energy and chemicals. Scott brings 8 years of plant operations experience.

### **Intern Hires:**

None.

### **Promotions:**

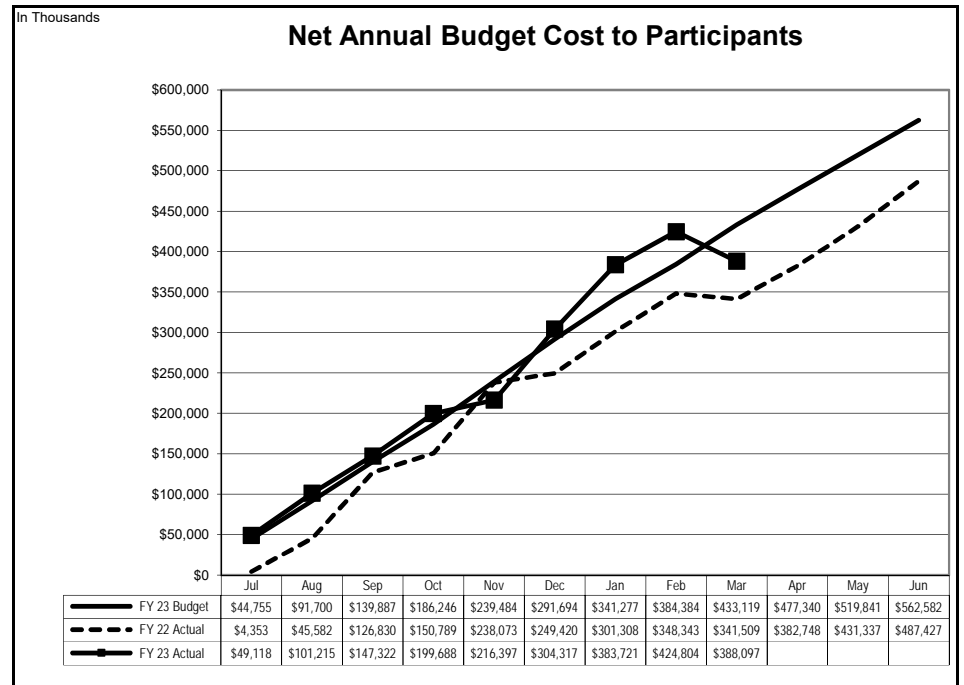
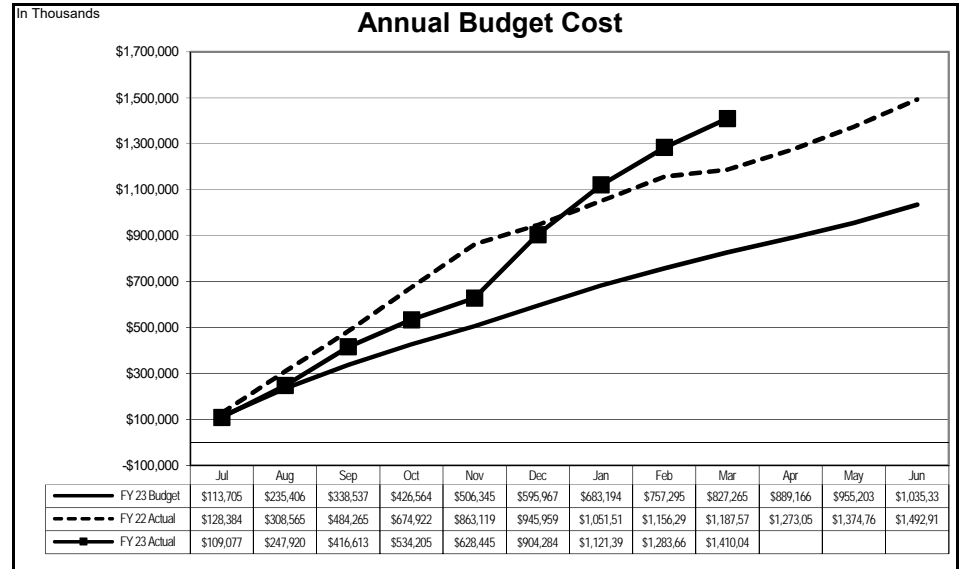
None.

### **Separations:**

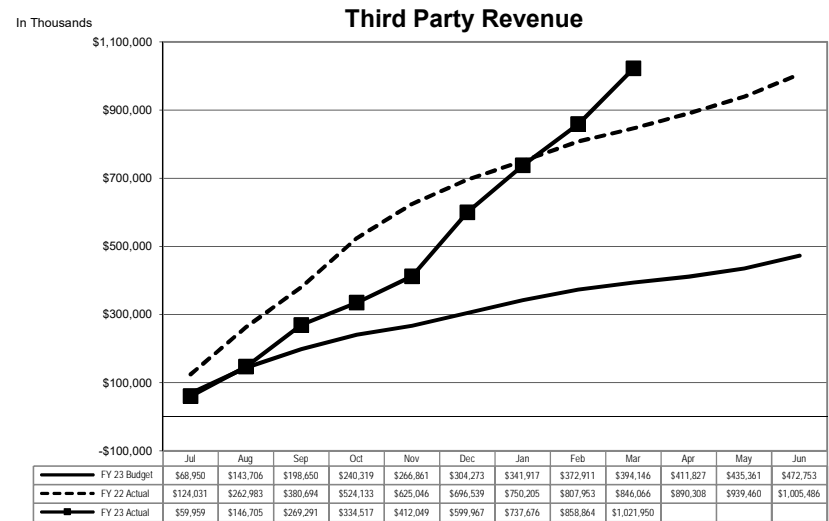
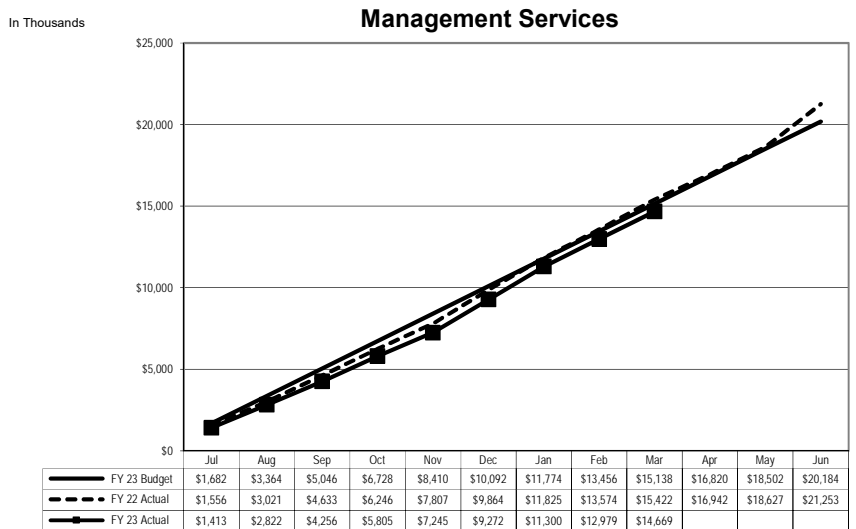
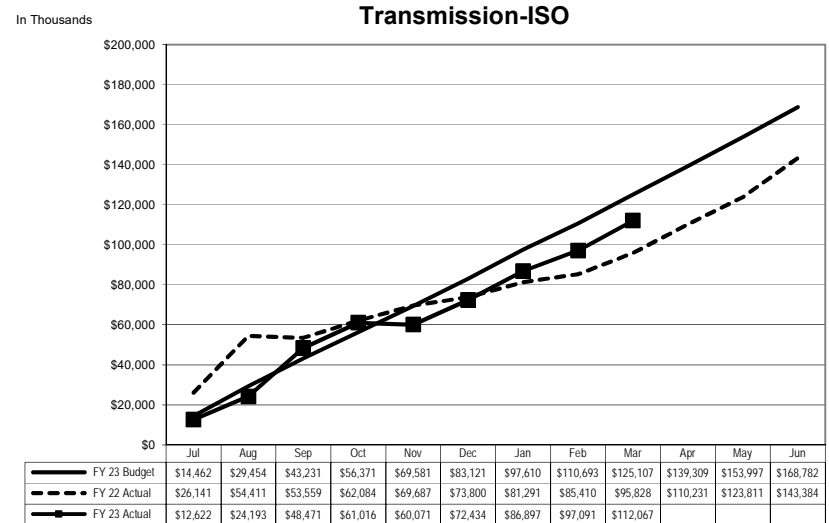
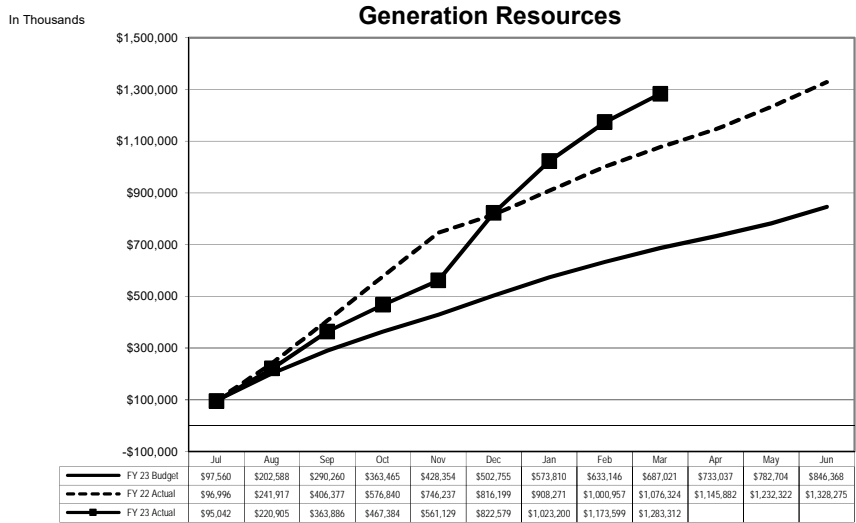
Dan Hess retired from his position as a Hydro Tech Operator at NCPA's Hydroelectric Facility on March 30, 2023, after 12 years of service.

**Annual Budget  
2022-2023 Fiscal Year To Date  
As of March 31, 2023**

In Thousands	Program			
	Annual Budget	Actual	Under(Ovr) Budget	YTD % Remaining
<b>GENERATION RESOURCES</b>				
<b>NCPA Plants</b>				
Hydroelectric	55,514	47,366	\$ 8,149	15%
Geothermal Plant	41,633	31,303	10,330	25%
Combustion Turbine No. 1	5,602	4,421	1,181	21%
Combustion Turbine No. 2 (STIG)	10,361	7,244	3,117	30%
Lodi Energy Center	137,737	176,008	(38,271)	-28%
	250,847	266,341	(15,494)	-6%
<b>Member Resources - Energy</b>	63,024	69,553	(6,529)	-10%
<b>Member Resources - Natural Gas</b>	2,474	2,318	156	6%
<b>Western Resource</b>	26,100	15,860	10,240	39%
<b>Market Power Purchases</b>	35,533	45,603	(10,070)	-28%
<b>Load Aggregation Costs - ISO</b>	467,469	880,132	(412,663)	-88%
<b>Net GHG Obligations</b>	921	3,505	(2,584)	-281%
	846,368	1,283,312	(436,944)	-52%
<b>TRANSMISSION</b>				
<b>Independent System Operator</b>	168,782	112,067	56,716	34%
<b>MANAGEMENT SERVICES</b>				
<b>Legislative &amp; Regulatory</b>				
Legislative Representation	2,231	1,351	881	39%
Regulatory Representation	715	533	181	25%
Western Representation	723	203	520	72%
Customer Programs	615	372	243	40%
	4,284	2,459	1,825	43%
<b>Judicial Action</b>				
<b>Power Management</b>	460	509	(49)	-11%
System Control & Load Dispatch	7,504	5,319	2,185	29%
Forecasting & Prescheduling	3,044	2,060	985	32%
Industry Restructuring	438	340	99	23%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,032	681	351	34%
Gas Purchase Program	77	40	37	48%
Market Purchase Project	112	58	54	48%
	12,208	8,498	3,710	30%
<b>Energy Risk Management</b>	150	146	3	2%
<b>Settlements</b>	1,012	475	537	53%
<b>Integrated System Support</b>	405	237	168	41%
<b>Participant Pass Through Costs</b>	1,666	1,119	547	33%
<b>Support Services</b>	-	1,225	(1,225)	
	20,184	14,669	5,515	27%
<b>TOTAL ANNUAL BUDGET COST</b>	1,035,334	1,410,047	(374,713)	-36%
<b>LESS: THIRD PARTY REVENUE</b>				
<b>Plant ISO Energy Sales</b>	193,457	293,646	(100,189)	-52%
<b>Member Resource ISO Energy Sales</b>	49,954	102,041	(52,087)	-104%
<b>Member Owned Generation ISO Energy Sales</b>	118,709	190,425	(71,716)	-60%
<b>Revenue from Customers</b>	-	80,589	(80,589)	
<b>Customer Owned Generation ISO Energy Sales</b>	-	1,559	(1,559)	
<b>NCPA Contracts ISO Energy Sales</b>	34,944	53,573	(18,629)	-53%
<b>Western Resource ISO Energy Sales</b>	26,527	11,166	15,361	58%
<b>Load Aggregation Energy Sales</b>	-	154,257	(154,257)	
<b>Ancillary Services Sales</b>	5,514	3,693	1,821	33%
<b>Transmission Sales</b>	110	74	37	33%
<b>Western Credits, Interest &amp; Other Income</b>	43,537	130,927	(87,390)	-201%
	472,753	1,021,950	(549,197)	-116%
<b>NET ANNUAL BUDGET COST TO PARTICIPANTS</b>	562,582	388,097	\$ 174,484	31%

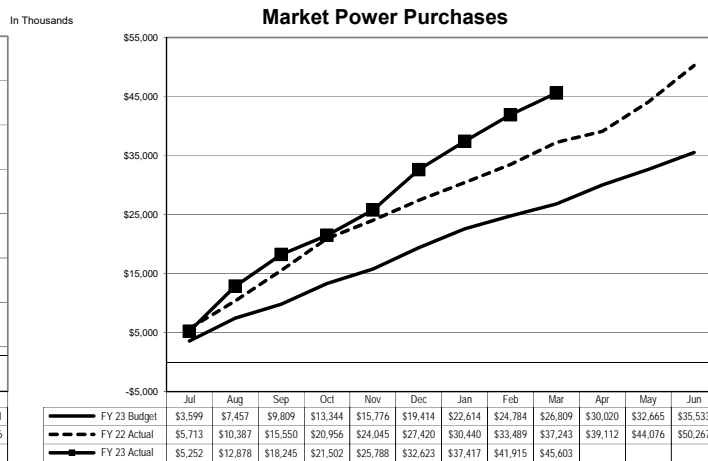
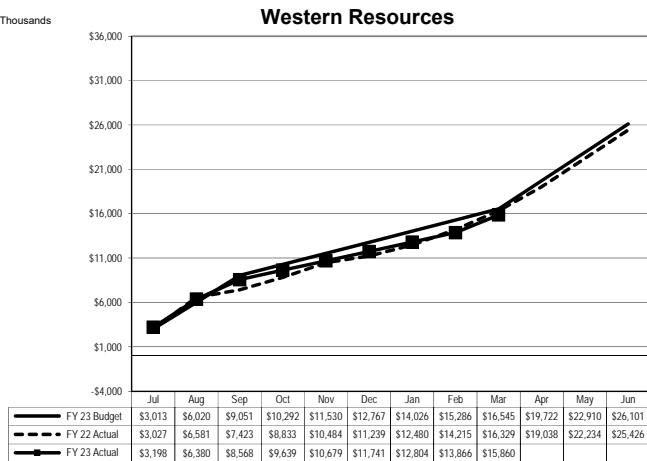
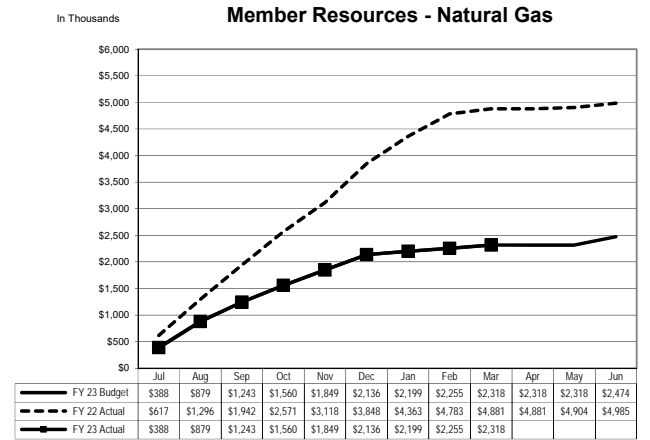
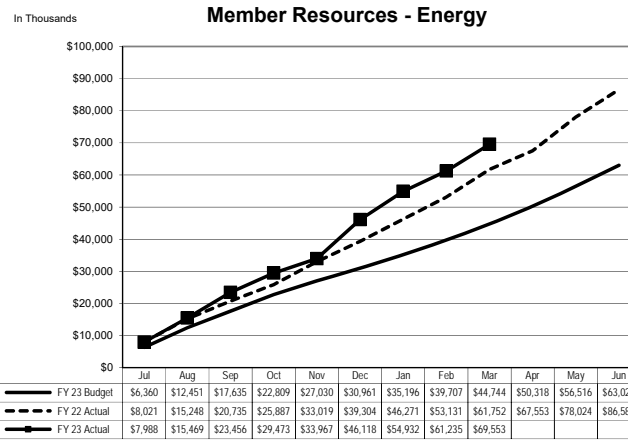
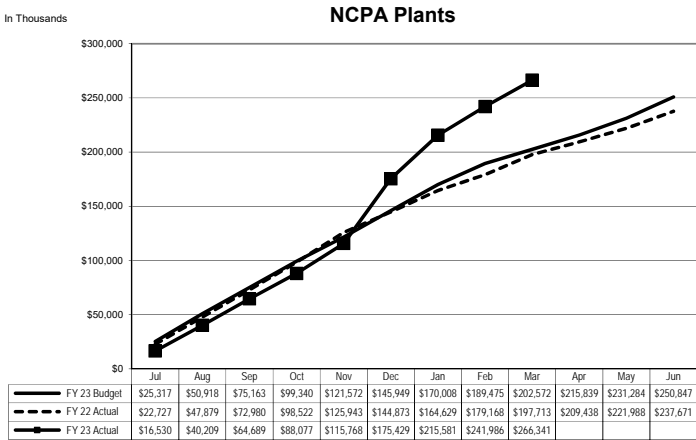


## Annual Budget Budget vs. Actual By Major Area As of March 31, 2023



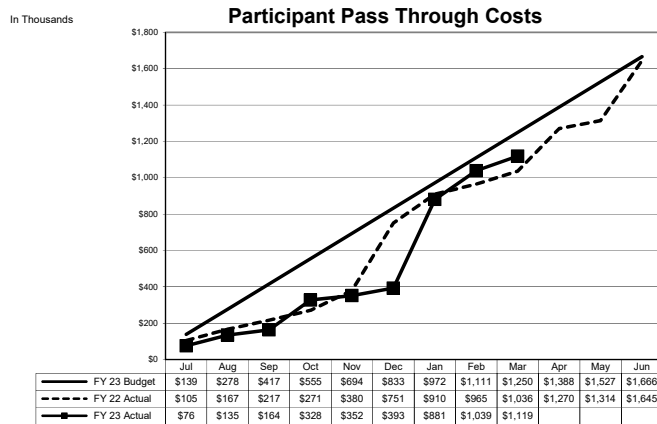
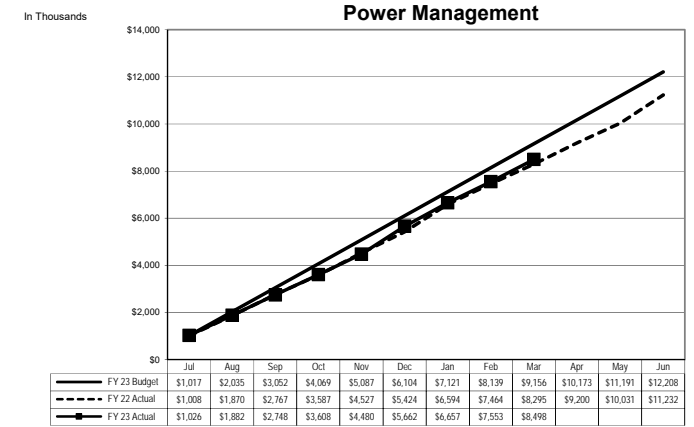
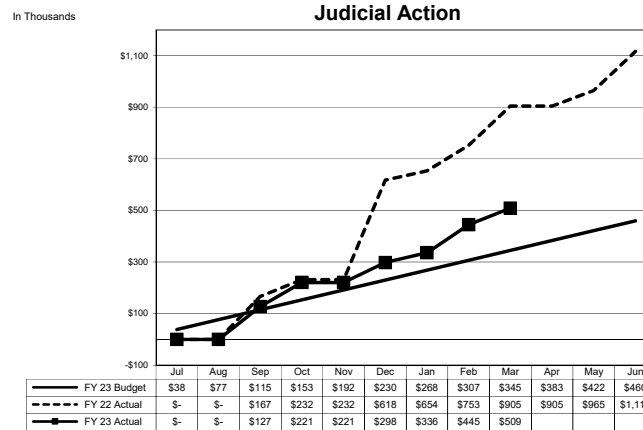
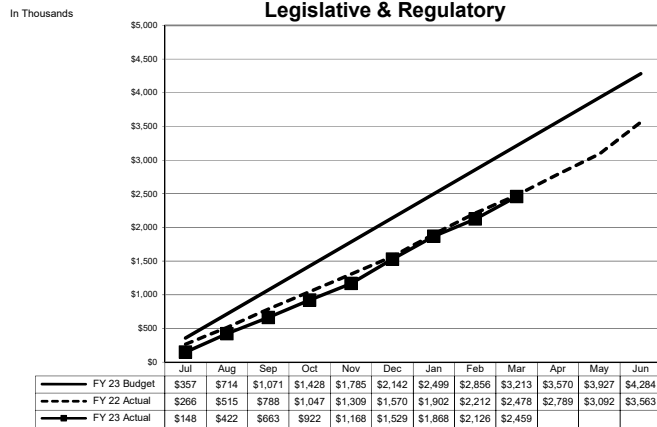
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

## Annual Budget Cost Generation Resources Analysis By Source As of March 31, 2023



Footnote: Other Resources (Graeagle, BART PV, Gridley PV) are included in Market Power Purchases

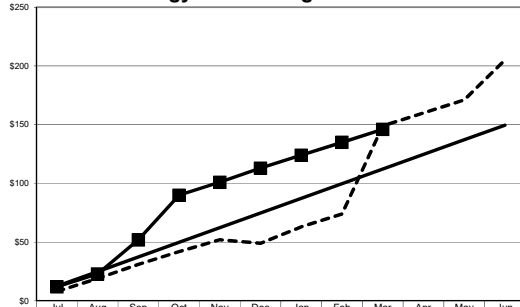
## Annual Budget Cost Management Services Analysis By Source As of March 31, 2023



**Annual Budget Cost  
Management Services Analysis By Source  
As of March 31, 2023**

In Thousands

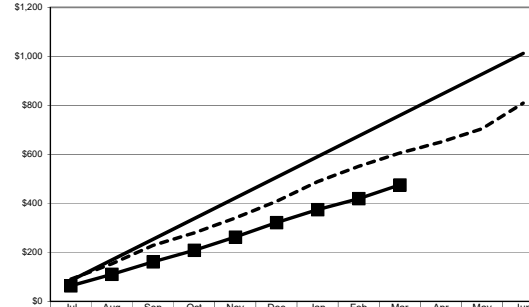
**Energy Risk Management**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	\$12	\$25	\$37	\$50	\$62	\$75	\$87	\$100	\$112	\$125	\$137	\$150
FY 22 Actual	\$8	\$19	\$31	\$42	\$52	\$49	\$63	\$74	\$149	\$160	\$171	\$205
FY 23 Actual	\$12	\$23	\$52	\$90	\$101	\$113	\$124	\$135	\$146			

In Thousands

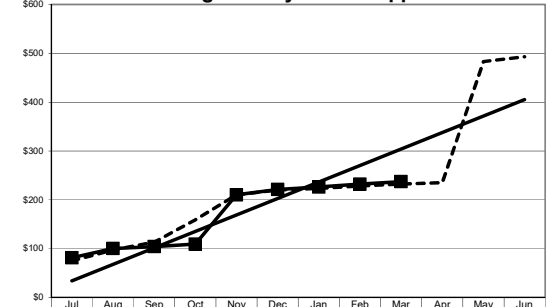
**Settlements**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	\$84	\$169	\$253	\$337	\$422	\$506	\$590	\$675	\$759	\$843	\$928	\$1,012
FY 22 Actual	\$90	\$153	\$228	\$279	\$340	\$408	\$488	\$551	\$605	\$650	\$704	\$809
FY 23 Actual	\$63	\$110	\$161	\$208	\$262	\$321	\$374	\$419	\$475			

In Thousands

**Integrated Systems Support**

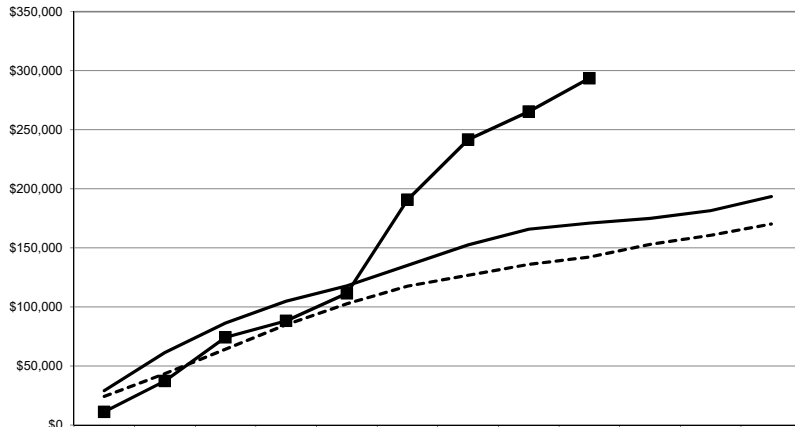


	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	\$34	\$68	\$101	\$135	\$169	\$203	\$236	\$270	\$304	\$338	\$371	\$405
FY 22 Actual	\$75	\$97	\$113	\$159	\$210	\$220	\$223	\$228	\$232	\$235	\$483	\$493
FY 23 Actual	\$81	\$100	\$104	\$109	\$210	\$221	\$226	\$232	\$237			

**Annual Budget Cost  
Third Party Revenue Analysis By Source  
As of March 31, 2023**

In Thousands

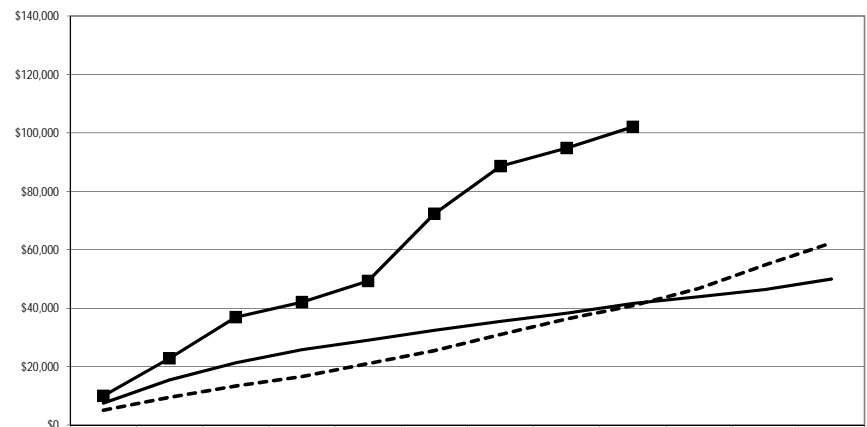
**Plant ISO Energy Sales**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	29,114	61,426	86,347	104,866	117,849	135,274	152,602	165,892	170,954	174,993	181,508	193,457
FY 22 Actual	\$24,279	\$43,507	\$64,273	\$85,028	\$102,756	\$117,565	\$126,765	\$136,004	\$142,216	\$153,015	\$160,724	\$170,257
FY 23 Actual	\$11,193	\$37,232	\$74,267	\$88,244	\$111,556	\$190,712	\$241,677	\$265,470	\$293,646			

In Thousands

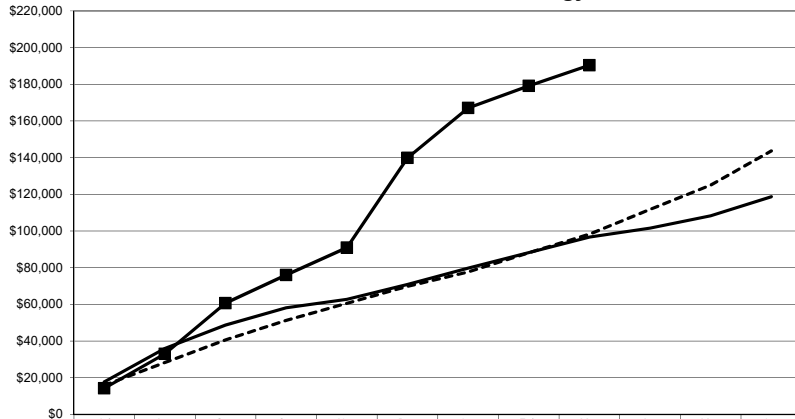
**Member Resource ISO Energy Sales**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	7,486	15,415	21,311	25,765	29,000	32,434	35,481	38,283	41,635	43,904	46,407	49,954
FY 22 Actual	\$5,075	\$9,482	\$13,381	\$16,569	\$21,029	\$25,489	\$31,009	\$36,321	\$40,825	\$46,768	\$54,792	\$62,307
FY 23 Actual	\$9,959	\$22,848	\$36,898	\$42,054	\$49,294	\$72,296	\$88,592	\$94,791	\$102,041			

In Thousands

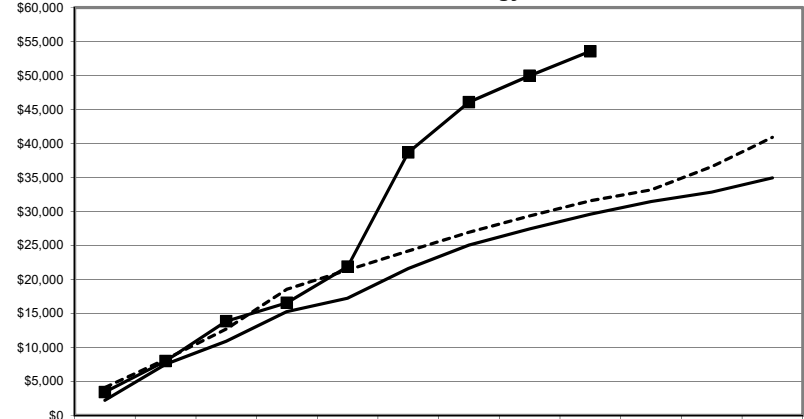
**Member Owned Generation ISO Energy Sales**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	17,724	35,953	48,701	58,108	62,709	70,827	79,792	88,194	96,702	101,593	108,295	118,709
FY 22 Actual	\$15,831	\$28,243	\$40,567	\$51,237	\$60,522	\$69,837	\$77,659	\$88,096	\$98,253	\$111,789	\$125,023	\$143,669
FY 23 Actual	\$14,212	\$33,017	\$60,686	\$76,006	\$90,898	\$139,840	\$167,094	\$179,158	\$190,425			

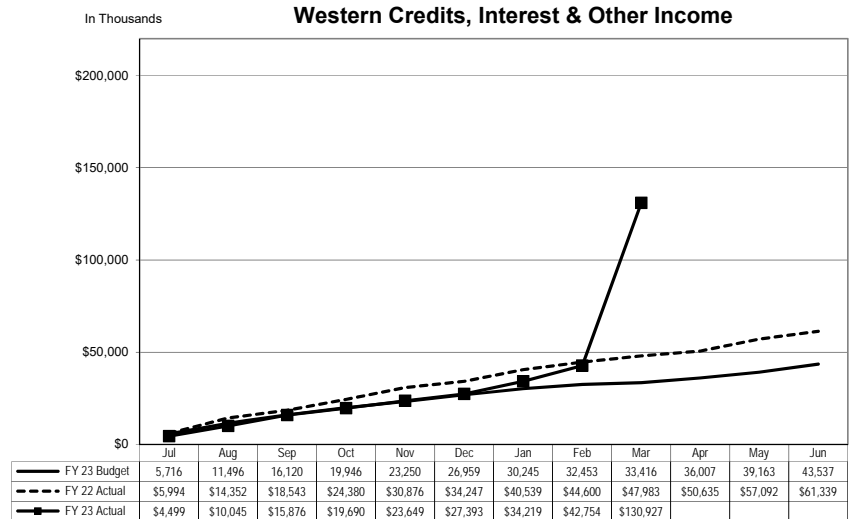
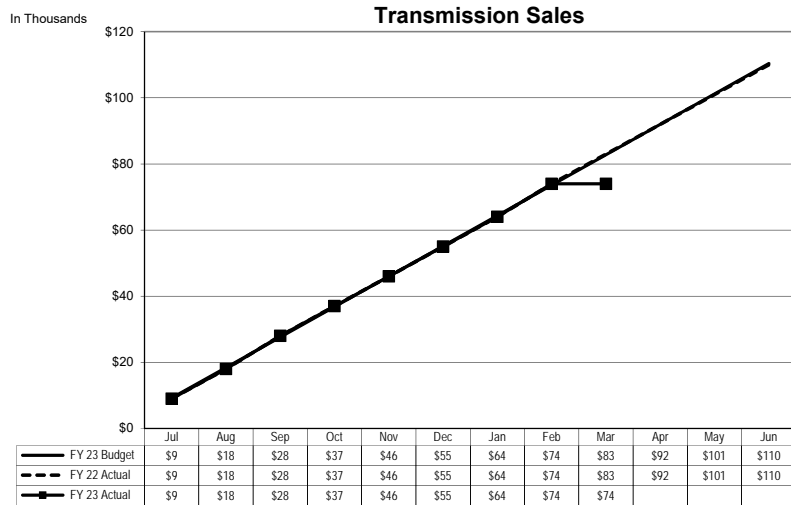
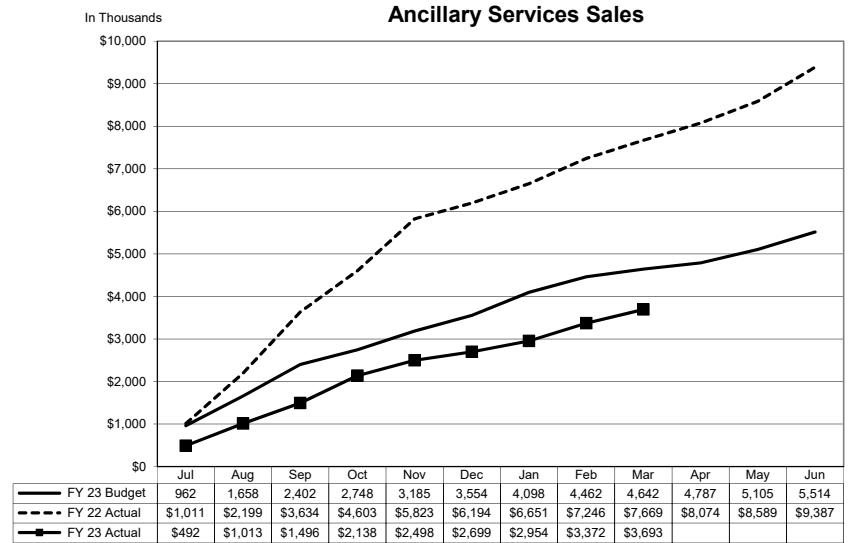
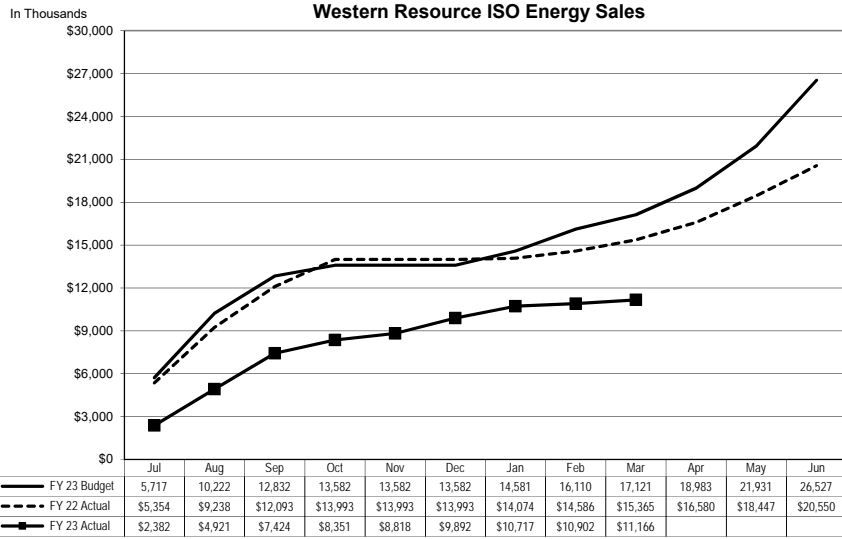
In Thousands

**NCPA Contracts ISO Energy Sales**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	2,222	7,517	10,911	15,267	17,240	21,588	25,053	27,443	29,593	31,468	32,851	34,944
FY 22 Actual	\$4,096	\$8,246	\$12,704	\$18,566	\$21,382	\$24,198	\$26,954	\$29,351	\$31,580	\$33,172	\$36,590	\$40,907
FY 23 Actual	\$3,439	\$8,003	\$13,845	\$16,565	\$21,872	\$38,699	\$46,089	\$49,968	\$53,573			

**Annual Budget Cost  
Third Party Revenue Analysis By Source  
As of March 31, 2023**





**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of March 31, 2023**

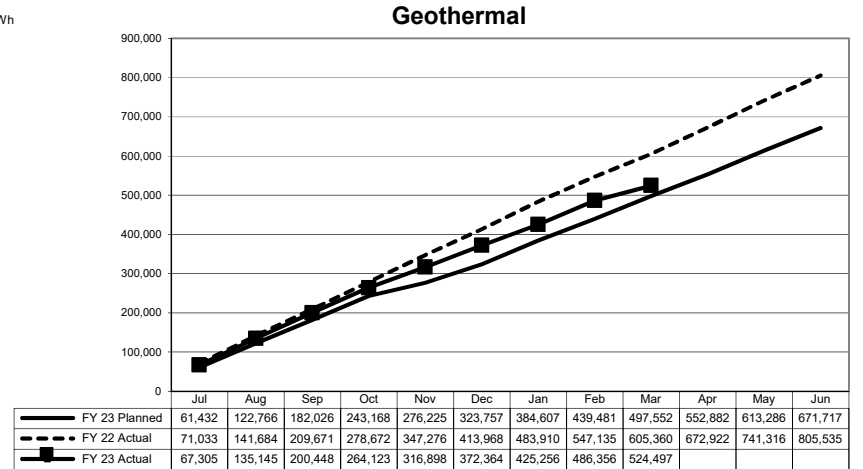
**Generation Cost Analysis**

\$ in thousands

	Geothermal				
	Budget	Actual	\$/MWh	Under(Over)	YTD %
			Actual	Budget	Remaining
Routine O & M	\$ 17,798	\$ 14,721	\$ 28.07	\$ 3,077	17%
Capital Assets/Spare Parts Inventories	7,401	3,131	5.97	4,269	58%
Other Costs	12,357	9,812	18.71	2,545	21%
CA ISO Charges	604	1,034	1.97	(430)	-71%
Debt Service	3,473	2,605	4.97	868	25%
Annual Budget	41,633	31,303	59.68	10,330	25%
Less: Third Party Revenue					
Interest Income	150	214	0.41	(64)	-43%
ISO Energy Sales	42,271	59,663	113.75	(17,392)	-41%
Ancillary Services Sales	-	-	-	-	0%
Effluent Revenues	750	466	0.89	284	38%
Misc	113	76	0.15	36	32%
	43,284	60,420	115.20	(17,136)	-40%
Net Annual Budget Cost to Participants	\$ (1,651)	\$ (29,117)	\$ (55.51)	\$ 27,466	-1664%
Net Generation--MWh @ Meter	671,717	524,497			
\$/MWh (A)	\$ (7.63)	\$ (60.48)			

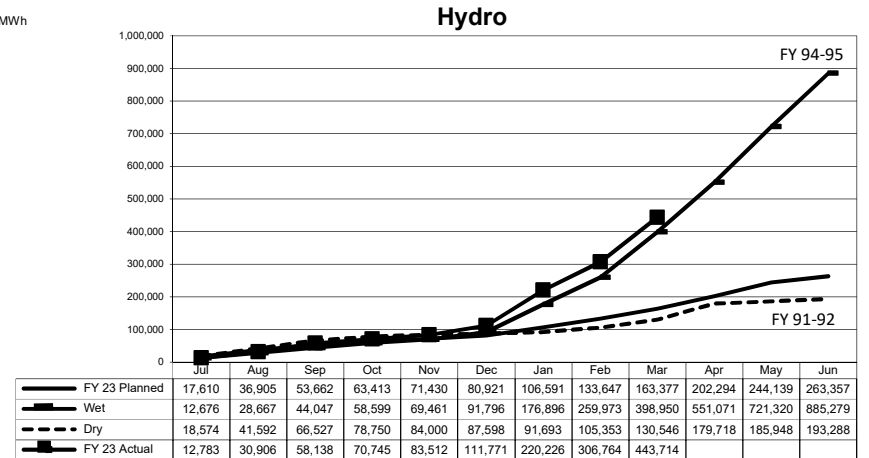
**MWhs Generated**

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh	Under(Over)	YTD %
			Actual	Budget	Remaining
Routine O & M	\$ 10,203	\$ 6,590	\$ 14.85	\$ 3,613	35%
Capital Assets/Spare Parts Inventories	4,270	3,359	7.57	911	21%
Other Costs	3,993	3,632	8.19	361	9%
CA ISO Charges	1,237	6,926	15.61	(5,689)	-460%
Debt Service	35,811	26,858	60.53	8,953	25%
Annual Budget	55,514	47,366	106.75	8,149	15%
Less: Third Party Revenue					
Interest Income	150	150	0.34	0	0%
ISO Energy Sales	22,182	62,569	141.01	(40,386)	-182%
Ancillary Services Sales	1,224	2,922	6.58	(1,698)	-139%
Misc	-	3	0.01	(3)	0%
	23,556	65,643	147.94	(42,087)	-179%
Net Annual Budget Cost to Participants	\$ 31,958	\$ (18,277)	\$ (41.19)	\$ 50,236	
Net Generation--MWh @ Meter	263,357	443,714			
\$/MWh (A)	\$ (14.63)	\$ (101.72)			

In MWh



Footnotes:

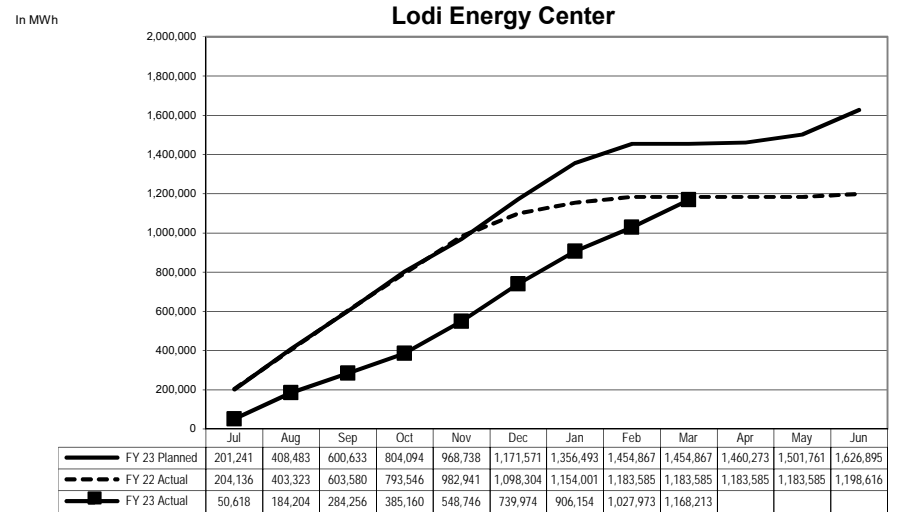
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of March 31, 2023**

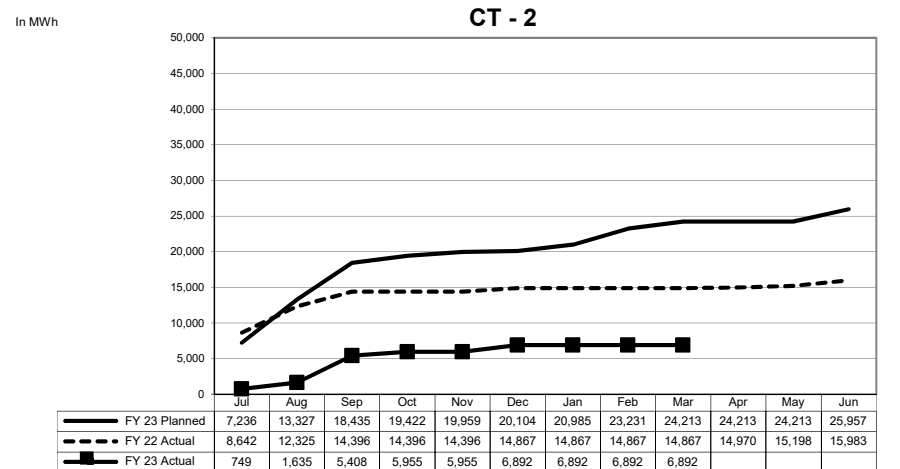
**Generation Cost Analysis**

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 9,826	\$ 7,644	\$ 6.54	\$ 2,182	22%
Fuel	64,819	120,180	102.87	(55,360)	-85%
GHG Allowance Costs	20,250	10,805	9.25	9,445	47%
CA ISO Charges and Energy Purchases	2,970	8,724	7.47	(5,754)	-194%
Capital Assets/Spare Parts Inventories	3,631	2,205	1.89	1,427	39%
Other Costs	10,244	6,954	5.95	3,290	32%
Debt Service	25,996	19,497	16.69	6,499	25%
Annual Budget	137,737	176,008	150.66	(38,271)	-28%
Less: Third Party Revenue					
Interest Income	250	899	0.77	(649)	-260%
ISO Energy Sales	121,620	165,417	141.60	(43,797)	-36%
Ancillary Services Sales	2,318	523	0.45	1,794	77%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	19,710	10,805	9.25	8,905	45%
Misc	-	10	0.01	(10)	0%
	143,897	177,653	152.07	(33,756)	-23%
Net Annual Budget Cost to Participants	\$ (6,160)	\$ (1,645)	\$ (1.41)	\$ (4,515)	73%
Net Generation--MWh @ Meter	1,626,895	1,168,213			
\$/MWh (A)	\$ (19.77)	\$ (18.10)			

**MWhs Generated**



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,616	\$ 967	\$ 140.33	\$ 649	40%
Fuel and Pipeline Transport Charges	2,227	1,539	223.35	687	31%
GHG Allowance Costs	424	-	-	424	100%
Capital Assets/Spare Parts Inventories	220	9	1.31	211	96%
Other Costs	643	916	132.85	(273)	-42%
CA ISO Charges	148	-	-	148	100%
Debt Service	5,084	3,813	553.26	1,271	25%
Annual Budget	10,361	7,244	1,051.10	3,117	30%
Less: Third Party Revenue					
Interest Income	42	88	12.84	(46)	-111%
ISO Energy Sales	4,331	2,540	368.55	1,791	41%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,775	7,219	1,047.45	(5,444)	-307%
GHG Allowance Credits	424	-	-	424	100%
Misc	-	3	0.37	(3)	0%
	6,572	9,850	1,429.20	(3,278)	-50%
Net Annual Budget Cost to Participants	\$ 3,789	\$ (2,606)	\$ (378.10)	\$ 6,395	169%
Net Generation--MWh @ Meter	25,957	6,892			
\$/MWh (A)	\$ (49.88)	\$ (931.36)			



Footnotes:

(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of March 31, 2023**

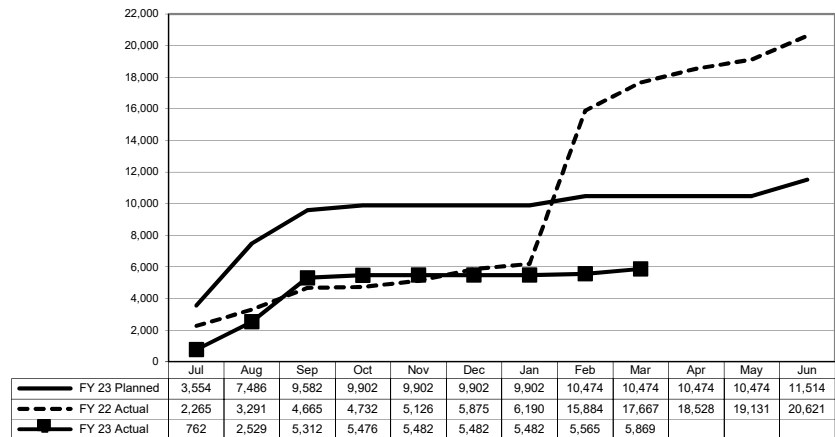
**Generation Cost Analysis**

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,530	\$ 1,791	\$ 305.17	\$ 739	29%
Fuel and Pipeline Transport Charges	1,214	1,055	179.69	159	13%
Capital Assets/Spare Parts Inventories	800	479	81.59	321	40%
Other Costs	882	694	118.21	188	21%
CA ISO Charges	176	403	68.62	(227)	-129%
Debt Service	-	-	-	-	-
Annual Budget	5,602	4,421	753.28	1,181	21%
Less: Third Party Revenue					
Interest Income	55	56		(1)	-2%
ISO Energy Sales	3,053	3,458	589.24	(405)	-13%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	-	-	-	0%
	3,108	3,514	589.24	(406)	-13%
Net Annual Budget Cost to Participants	\$ 2,493	\$ 907	\$ 154.50	\$ 1,586	64%
Net Generation--MWh @ Meter	11,514	5,869			
\$/MWh (A)	\$ 216.54	\$ 154.50			

**MWhs Generated**

In MWh

**CT - 1**



Footnotes:

(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)