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# BUSINESS PROGRESS REPORT

July 2023

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# Generation Costs & Reliability

## Combustion Turbine Project

### Unit Operation for June 2023

Unit	Availability		Production		Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	0.0 MWh	No Run / No Run
	92.5%	92.5%	Unit 2	0.0 MWh	
Curtailments, Outages, and Comments:					
Unit 1:	6/05 @ 07:00 - 6/07 12:43; 115kV Switchyard Relay Testing, OMS 13650062				
Unit 2:	6/05 @ 07:00 - 6/07 12:43; 115kV Switchyard Relay Testing, OMS 13650068				
Unit	Availability		Production		Reason for Run
CT1 Lodi	99.79%		0.0 MWh		No Run
Curtailments, Outages, and Comments:					
6/01 @ 08:00 - 09:30; Oil Leak Repair.					
Unit	Availability		Production		Reason for Run
CT2 STIG	100.0%		0.0 MWh		No Run
Curtailments, Outages, and Comments:					
Normal operation.					
Unit	Availability		Production		Reason for Run
LEC	100.0%		9,804 MWh		CAISO & TESTING
Curtailments, Outages, and Comments:					
Normal Operation.					

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

## Geothermal Facilities

### Availability/Production for June 2023

Unit	Availability		Net Electricity Generated/Water Delivered		Out-of-Service/Descriptors
Unit 1	0	%	0	MWh	U1 down for outage
Unit 2	100	%	26,586	MWh	U2 in service
Unit 3	N/A	%	N/A	-	Unit 3 remains out of service.
Unit 4	0	%	0	MWh	U 4 down for maint. outage
Southeast Geysers Effluent Pipeline	96	%	194.7	mgallons	Average flow rate: 4,441 gpm
Southeast Solar Plant	N/A		114,040	KWh	Year-to-date KWh: 1,289,938
Bear Canyon Pump Station Zero Solar	N/A		133,368	KWh	Year-to-date KWh: 966,320

\* Accounts for an additional 884 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

## Hydroelectric Project

### Availability/Production for June 2023

Units	Availability	Net Electricity Generated	Out-of-Service
<b>Collierville Unit 1</b>	100%	77160 MWh	CV Unit 1 – No Outages
<b>Collierville Unit 2</b>	98.75%	75780 MWh	CV Unit 2 – Out of Service on 6/12/23 from 1352 to 2019 for Unit 2 Trip Offline and on 6/23/23 from 1104 to 1332 for Egen Breaker trouble on 480 volt bus
<b>Spicer Unit 1</b>	99.69%	1522 MWh	NSM1- Out of Service on 6/6/23 from 1345 to 1536 for 21kV Line Trouble and on 6/12/23 from 1218 to 1233 for Comm Circuit Trouble
<b>Spicer Unit 2</b>	99.64%	1498 MWh	NSM2- Out of Service on 6/6/23 from 1345 to 1536 for 21kV Line Trouble and on 6/12/23 from 1218 to 1258 for Comm Circuit Trouble
<b>Spicer Unit 3</b>	96.83%	287 MWh	NSM3- Out of Service on 6/6/23 to 6/7/23 from 1345 to 1234 for 21kV line trouble

#### Operations & Maintenance Activities:

- CMMS work orders
- NSM Recreation Facilities opening
- 230kV line vegetation management

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

- There were no Cal OSHA Recordable or vehicle accidents in the month of June. There was one Lost Time Accident. On June 8, an employee at the Geothermal plant suffered a stroke. The employee is currently seeing a specialist.
- 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 June 17, 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.

### June 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	949	138	2,994	3,978
Work Hours Since Last Recordable	83,640	29,650	454,246	2,961,694
LTA's (this month)	0	1	0	0
LTA's (calendar year)	0	1	0	0
Days without LTA	5,728	10	10,898	6,991
Work Hours without LTA	516,209	2,190	865,790	2,583,712
Vehicle Incident (month)	0	1	0	0
Vehicle Incident (calendar year)	0	2	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 June 17, 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>June 2023</b>		<b>Calendar Year 2023</b>	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	381.08 6/30 @ 1800	178,877	381.08 6/30 @ 1800	1,094,132
SVP	612.72 6/30 @ 1600	374,199	612.72 6/30 @ 1600	2,243,954
MSSA	988.2 6/30 @ 1700	553,076	988.2 6/30 @ 1700	3,338,086

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

	<b>June 2022</b>		<b>Calendar Year 2022</b>	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	440.09 6/21 @ 1800	197,046	511.56 9/6 @ 1600	1,092,764
SVP	647.57 6/21 @ 1700	381,519	687.74 9/6 @ 1300	2,188,502
MSSA	1086.35 6/21 @ 1800	578,565	1176.2 9/6 @ 1400	3,281,266

\*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	381.08 6/30 @ 1800
SVP	687.74 MW on 9/6/22 @ 1300	612.72 6/30 @ 1600
MSSA	1176.20 MW on 9/6/22 @ 1400	988.2 6/30 @ 1700

- 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>June 2023</b>	<b>Calendar Year 2023</b>
MSSA % Within the Band	97.86%	97.04%

## **CAISO Real-time Contingency Dispatches (RTCD):**

- June 19, 2023, 2246 hours
- June 21, 2023, 0143 hours
- June 26, 2023, 1521 hours

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

- NCPA Pool loads during June 2023 were 178,878 MWh versus the budget forecast of 197,383 MWh, resulting in a forecast error of 10.4% mainly due to unusually cool weather during the month. The current weather outlook for July 2023 is for above normal temperatures. The Pool's July load forecast is 211,420 MWh compared with extrapolated actuals of 214,660 MWh as of July 18, 2023.
- Lodi Energy Center (LEC) ran 45 hours and produced 9,803 MWh. Due to the current hot LEC is expected to run extensively over the last two weeks of July. Even with the abundance of hydro generation
- During June 2023, 0.35" of rain was recorded at the Big Trees gauge. June average rainfall at Big Trees is 0.45". New Spicer Meadows storage filled to maximum capacity of 189,000 acre feet and began to spill on June 19th. All of the spilled water at Spicer has been utilized for generation at Collierville via McKays reservoir.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been maintained at \$90/MWh. Releases from NSMR have been held near 350cfs during the majority of June.
- New Spicer Meadows storage as of June 30, 2023 was 189,000 acre feet. The historical average storage at the end of June is 145,748 acre feet. As of July 18<sup>th</sup>, storage was 186,312 acre feet.
- Combined Calaveras Project generation for the Pool in June 2023 totaled 79,303MWh, up from 63,321MWh in May 2023.
- Western Base Resource (BR) deliveries for the Pool during June 2023 were 57,603 MWh. Displacement program energy totaled 4,579 MWh. The Pool's share of expected total delivery from the Western Base Resource for July 2023 is 63,175 MWh, with 36,705 MWh having been delivered through July 18, 2023.
- The PG&E Citygate gas index averaged \$3.10 / MMBtu during the month of June as compared to an average of \$3.84 for May. July's 2023 average City Gate gas price is \$4.01 through the 18<sup>th</sup>. The August 2023 PG&E Citygate forward price is \$4.61 / MMBtu.
- Day-Ahead PG&E DLAP electricity prices for June averaged \$29.45 / MWh On-Peak and \$30.27 Off-Peak, with a high of \$100.99 and a low of -\$7.57. DLAP prices have averaged \$51.65 On-Peak and \$46.54 Off-Peak for the period July 1<sup>st</sup> through the 18<sup>th</sup>, with a low price of \$1.88. The forward power prices for August are \$95.32 On-Peak and \$65.14 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 September 2023:
  - Monthly System Resource Adequacy Demonstration (filed July 18, 2023)
  - Monthly Supply Plan (filed July 18, 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:

#### **Subscriber Participating Transmission Owner model**

- The ISO is developing an opportunity for developers to deliver generation to California without increasing the Transmission Access Charge (TAC) and without picking the winner by selecting a project in the Transmission Planning Process (TPP). The ISO intends to implement the Subscriber Participating Transmission Owner model as a win-win arrangement versus trying to extract value from those paying for the line for the benefit of the ISO's existing ratepayers. This model allows the potential off takers/California load serving entities to make their own economic decisions with respect to which out-of-state generation projects to contract with, while the ISO would continue to exercise its existing tariff authority and utilize its supporting software systems to implement a new protocol.
- NCPA submitted draft tariff redlines acknowledging non-CPUC jurisdictional Local Regulatory Authorities' (LRAs) within the CAISO Balancing Authority Area as potential project subscribers and for the process to take into account such entities' resource portfolio deliverability requirements.

## 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	40,439	(841)	\$1,349,908	\$ 33.38	\$ 1.05	\$ 84.31
May-23	74,195	82,386	8,191	\$1,349,908	\$ 16.39	\$ (0.02)	\$ 59.37
Jun-23	78,807	62,182	(16,625)	\$1,349,908	\$ 21.71	\$ (0.10)	\$ 48.41
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 61,182 MWh of Base Resource (BR) energy in June 2023. This includes displaced energy of 4,579 MWh. The cumulative MEEA savings is about \$73,800 and displacement savings is approximately \$142,600.
  - July 2023 WAPA Twelve-Month Rolling Forecast of CVP Generation and Base Resource.
    - FY 2023 BR Generations (actuals October 2022 through June 2023; projection July 2023 through September 2023)
      - Projected FY23 BR Generation using 90% forecast is about 20% below the historical average.
      - Projected FY23 BR Generation using 50% forecast is about 16% below the historical average.
    - Staff presented comparison of the June Twelve-Month rolling forecast with Water Year (WY) 2017 and 2019 actuals. The 50% exceedance BR forecasts for July through December 2023 is about 30% than the BR received during WY2017.
  - 2023 Integrated Resource Plan
    - The 5-Year Plan for 2024 – 2028 and Annual Update for 2022 reports were submitted to WAPA on June 28<sup>th</sup> for the July 1<sup>st</sup> deadline. WAPA accepted the reports on July 3<sup>rd</sup>.
  - Re-initiation of Consultation of the Long-Term Operations (ROC on LTO) – Trinity Component

- In September 2021, Reclamation requested a new Endangered Species Act (ESA) consultation with National Marine Fisheries Service (NMFS) and US Fish & Wildlife (USFWS). NMFS studies how CVP operations affect ocean fish, and Fish and Wildlife studies river fish, and both publish biological options with reasonable and prudent alternatives that allow the CVP to operate and avoid harm or jeopardy to species. Reclamation also completes the National Environmental Policy Act (NEPA) requirements, which include three or four alternatives to compare against baseline operations and analyzes the effect in environmental impact statement for public comment. As a final step, Reclamation publishes a Record of Decision adopting its preferred operational alternative. On February 28, 2022, Reclamation published a Notice of Intent in the Federal Register, for the preparation of an Environmental Impact Statement (EIS). Reclamation is targeting to complete the Record of Decision (ROD) for the ROC on LTO by February 2024 by selecting from the proposed alternatives. The outcome of this may have significant impact to the power benefit of the CVP.
- Reclamation provided the draft alternatives for the Trinity Component of the ROC on LTO on June 5, 2023. The original comment period was June 23, 2023 but got extended to July 7, 2023. NCPA submitted comments to Reclamation on July 5<sup>th</sup>.
- Reclamation will start including WAPA as cooperating agency for Sacramento River component.
- Reclamation's process for developing alternatives: Scope meetings, identify purpose and need, look at screening criteria, determine whether it's economically feasible, then some analysis is done. However, the real analysis comes once alternatives are selected. Customers can still comment if they are unsatisfied with the analysis results.

## **Interconnection Affairs**

### **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 settled two of the three outstanding issues
- In May 2023, FERC ruled in customers' favor on the income tax accounting issue (the third outstanding issue), and ordered PG&E to make another compliance filing by June 20
- CAISO will issue refunds once FERC issues an order on the compliance filing

## CAISO Initiative – 2023 Interconnection Process Enhancements Track 2 – NCPA Comments Summary

- Noted if access to interconnection capability is to be determined or prioritized by existing capacity and capacity additions approved in the CAISO TPP, there must be a mechanism for non-jurisdictional LSEs to include their planned resources in the TPP planning process.
- Supported the concept of organizing intake to the Interconnection Queue by prioritizing projects identified in the resource portfolios of LSEs.
- Opposed the use of an auction mechanism to allocate access to grid interconnection. Stated as a load-serving entity that recognizes that load pays the vast majority of CAISO costs, NCPA is focused on reducing costs to its customers, the auction appears to create additional costs that will be passed onto load.

### **Debt and Financial Management**

- According to the latest consumer price index report, annual inflation in June grew at its slowest pace in more than two years. This is an encouraging sign that the Fed is on track to meet its benchmark target rate of 2%. The year-over-year inflation rate dropped from 4% in May to 3% in June, largely due to falling energy and transportation prices.
- To cool inflation, the Fed has raised the benchmark interest rate from near-zero in March 2022 to its current range of 5% to 5.25%. However, the inflationary pressures from a resilient economy and job market remain a concern for the Fed, with the inflation rate still above its target of 2%. For that reason, it's widely expected that the Fed will announce a 0.25 percentage point hike when the central bank meets in July coming off a rate pause from their June meeting.
- Earlier this month, we were notified that the California Municipal Treasurers Association (CMTA) Investment Policy Certification had been validated and granted to the Agency. The Agency received perfect scores from two reviewers and a score of 98 out of 100 from the third. They indicated this is one of the top policies they have reviewed. Congratulations to Sondra Ainsworth for preparing the policy and meeting the program requirements within the 18 different topics areas deemed to be best practices for investment policies.

### **Schedule Coordination Goals**

#### **Software Development**

- Applications and Enhancements
  - Various Settlements related enhancements including new processing timelines for billing periods
  - Project kick-off for the new NCPA Logger app replacement of the legacy system. More details to come as the team estimates a 6-12-month development timeline split into multiple phases

- Integrations
  - On-going various new resource integrations for Q3 COD
- 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 2024.
- IS continues the work toward preparing the HQ and DRC Control Centers to be compliant with the NERC CIP Medium standards as we continue to work with AESI to review draft CIP-007, CIP-009 and CIP-010 procedures. Several new draft recovery procedures for a variety of cyber assets have been developed and will continue to be refined.
- IS has hired Arik Cheng to backfill the vacant SCADA Analyst IV position to provide additional assistance to support the SCADA Operations and real-time applications.
- Operations and Support Oracle DBA team is currently auditing, cleaning and improving a variety of tables and views related to meter data. This has been a long process to archive old information, streamline bid-to-bill processing which will enhance performance
- IS has refreshed a number of workstations and laptops at the Geothermal facility as equipment has reached end of life.

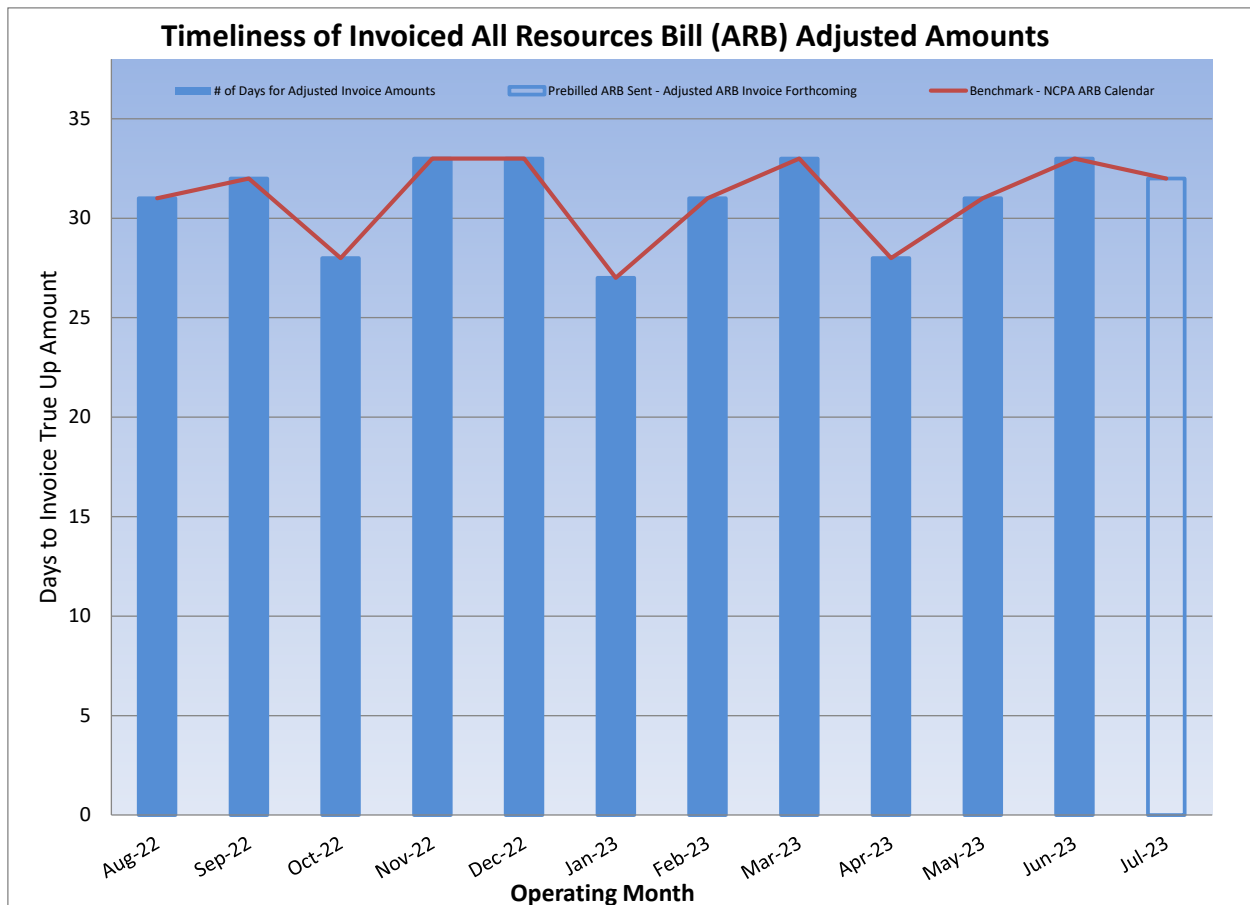
## **NCPA Bills & Settlements**

### **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 July 2023 NCPA All Resources Bill (ARB) monthly invoice sent to members on June 25, 2023 contains:

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



## **Legislative & Regulatory**

### **Legislative Update:**

- Following the advocacy of the Electricity Subsector Coordinating Council (ESCC) Wildfire Working Group, co-chaired by General Manager Randy Howard, NCPA has sought to introduce congressional legislation to remove the U.S. Forest Service requirement to sell wood waste downed near power lines as timber. Last week, Senators Feinstein and Padilla introduced the “Fire Safe Electrical Corridors Act” that allows wood waste near federal Rights of Way and power lines to be cleared without a mandatory timber sale. This is a result of the collaboration of ESCC members and lobbying of NCPA members on the Hill during the Federal Policy Conference, where this wood waste issue was discussed at length during congressional meetings. NCPA will continue to work the California delegation in the House on integrating this stand-alone bill into this year’s Farm Bill.
- Although the State Legislature is in Summer Recess until August 12, NCPA continues to actively advocate on AB 1594 (Garcia), which removes restrictions within the Advanced Clean Fleets (ACF) regulation that could restrict public utilities’ purchase of necessary vehicles. AB 1594 recently passed through the Senate Committee on Transportation and Senate Committee on Environmental Quality unanimously and on consent. NCPA is working jointly with CMUA and SCPA on outreach to the Senate Appropriations committee and the Governor’s office to ensure that the bill will continue to work through the legislative process, preferably on consent. Upon return from Recess, legislators will have one final month of the session before they adjourn for the year.

- NCPA is in the process of planning its annual State Legislative Staff Tour, which is scheduled for August 1-3. The tour will feature stops at the Geysers, Healdsburg, Alameda, Port of Oakland, and BART. The Tour will bring together a group of roughly 30 legislative staffers (mostly from NCPA's member delegation and energy-related committees) to tour NCPA's Geothermal plant, members' communities, and local projects. We will be hosting a policy forum with participation from several NCPA member utilities and are looking forward to productive discussions with legislative staff on policy issues such as regionalization, resource adequacy, the future of hydrogen, Advanced Clean Fleets, electrification, and adapting to a changing utility industry.

## **Human Resources**

### **Hires:**

None.

### **Intern Hires:**

The Agency welcomed back Manuel Romero, Student Assistant IV, on June 26, 2023. Manuel will spend the summer interning with the City of Lodi.

The Agency welcomed Andersson Flores, Student Assistant III, on June 20, 2023. Andersson will spend the summer interning with the City of Palo Alto.

Anna Sarkisyan joined NCPA Headquarters on June 26, 2023, as a Student Assistant III (Software Development).

Tyler Cooc joined NCPA Headquarters on June 26, 2023, as a Student Assistant III (Software Development).

### **Promotions:**

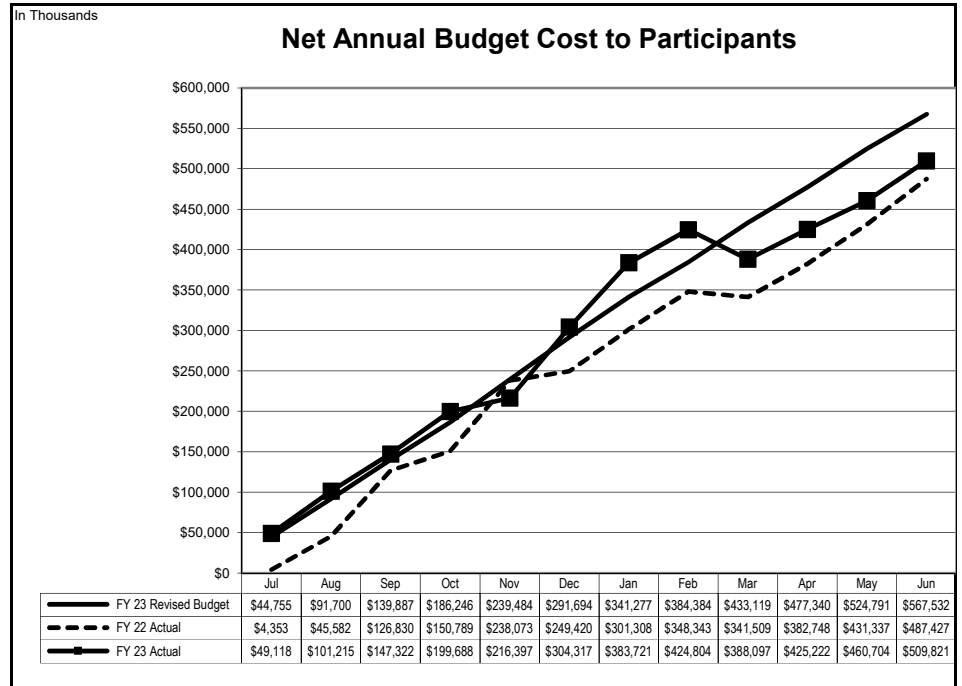
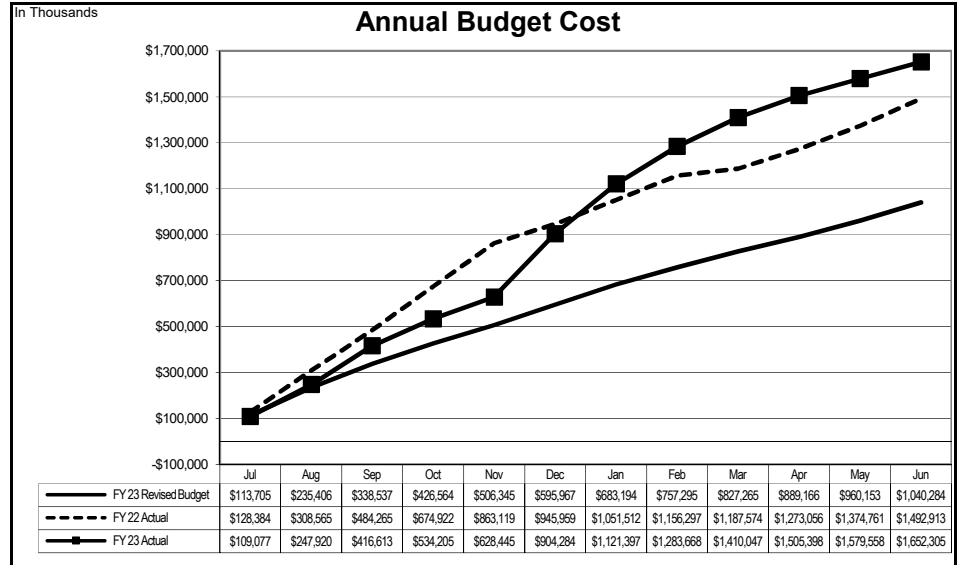
None.

### **Separations:**

None.

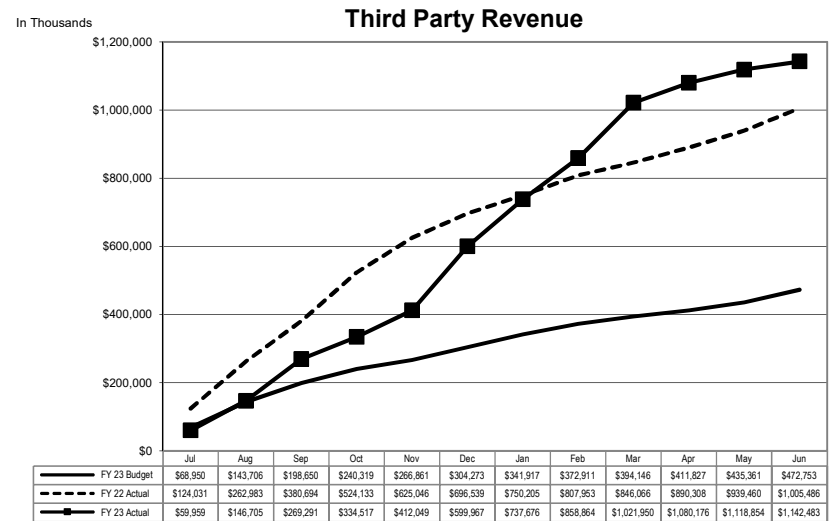
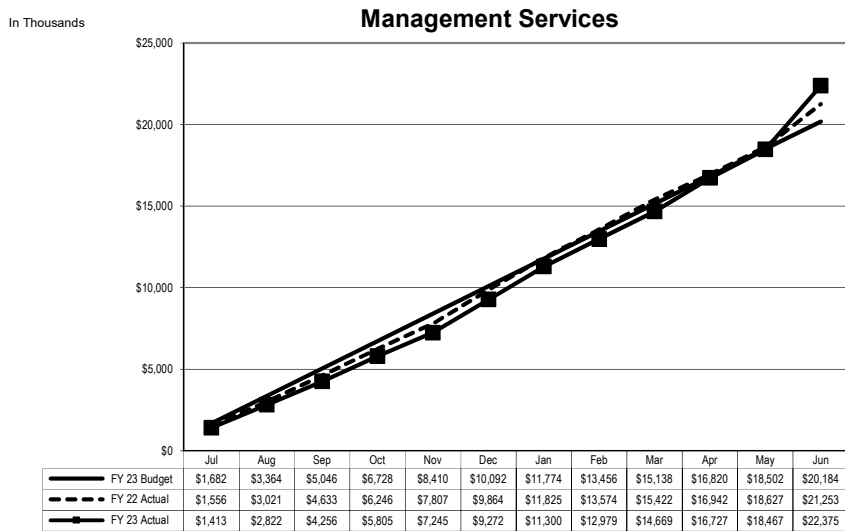
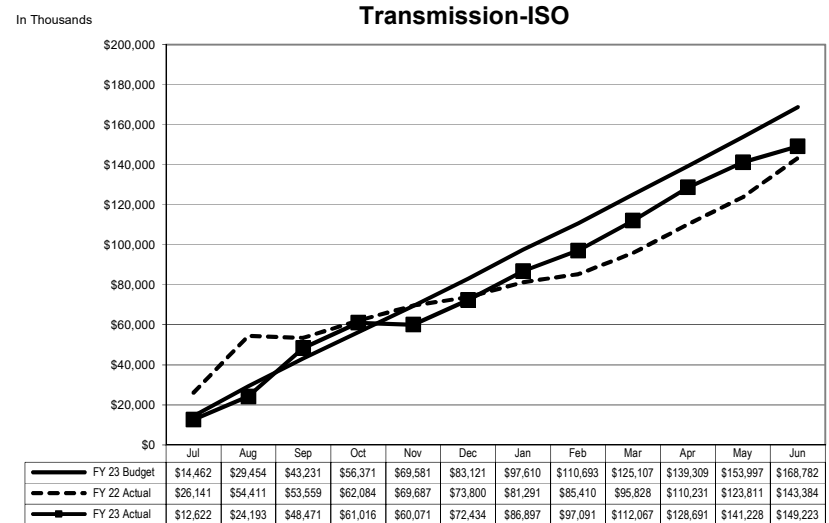
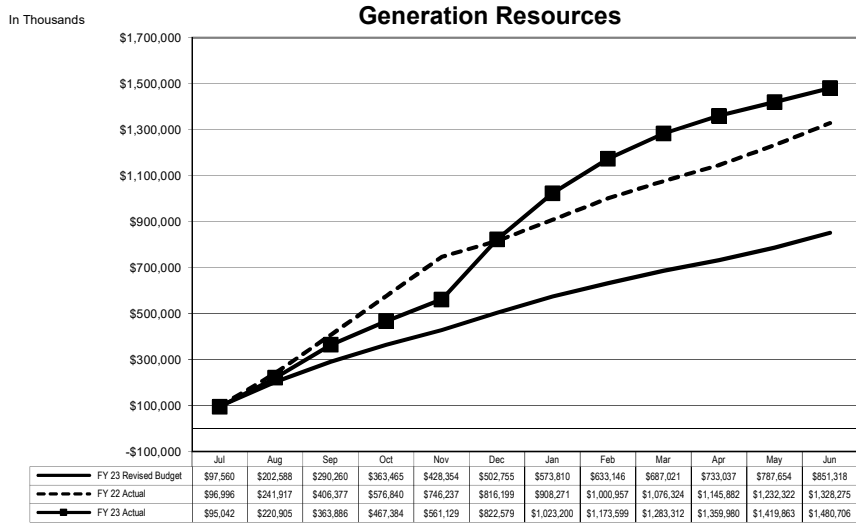
**Annual Budget  
2022-2023 Fiscal Year To Date  
As of June 30, 2023**

In Thousands	Program			
	Revised Budget	Actual	Under(Ovr) Budget	YTD % Remaining
<b>GENERATION RESOURCES</b>				
<b>NCPA Plants</b>				
Hydroelectric	55,514	61,658	\$ (6,144)	-11%
Geothermal Plant	46,583	44,825	1,758	4%
Combustion Turbine No. 1	5,602	6,340	(738)	-13%
Combustion Turbine No. 2 (STIG)	10,361	9,392	970	9%
Lodi Energy Center	137,737	195,168	(57,432)	-42%
	255,797	317,383	(61,586)	-24%
<b>Member Resources - Energy</b>	63,024	95,613	(32,590)	-52%
<b>Member Resources - Natural Gas</b>	2,474	2,599	(125)	-5%
<b>Western Resource</b>	26,100	20,002	6,098	23%
<b>Market Power Purchases</b>	35,533	55,193	(19,659)	-55%
<b>Load Aggregation Costs - ISO</b>	467,469	986,411	(518,942)	-111%
<b>Net GHG Obligations</b>	921	3,505	(2,584)	-281%
	851,318	1,480,706	(629,388)	-74%
<b>TRANSMISSION</b>				
<b>Independent System Operator</b>	168,782	149,223	19,559	12%
<b>MANAGEMENT SERVICES</b>				
<b>Legislative &amp; Regulatory</b>				
Legislative Representation	2,231	2,071	160	7%
Regulatory Representation	715	783	(68)	-9%
Western Representation	723	368	355	49%
Customer Programs	615	490	125	20%
	4,284	3,712	572	13%
<b>Judicial Action</b>	460	1,338	(878)	-191%
<b>Power Management</b>				
System Control & Load Dispatch	7,504	7,224	280	4%
Forecasting & Prescheduling	3,044	2,765	279	9%
Industry Restructuring	438	455	(16)	-4%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,032	981	51	5%
Gas Purchase Program	77	59	18	23%
Market Purchase Project	112	85	28	25%
	12,208	11,568	639	5%
<b>Energy Risk Management</b>	150	191	(42)	-28%
<b>Settlements</b>	1,012	706	306	30%
<b>Integrated System Support</b>	405	538	(133)	-33%
<b>Participant Pass Through Costs</b>	1,666	1,437	229	14%
<b>Support Services</b>	-	2,883	(2,883)	-
	20,184	22,375	(2,191)	-11%
<b>TOTAL ANNUAL BUDGET COST</b>	1,040,284	1,652,305	(612,020)	-59%
<b>LESS: THIRD PARTY REVENUE</b>				
<b>Plant ISO Energy Sales</b>	193,457	317,660	(124,202)	-64%
<b>Member Resource ISO Energy Sales</b>	49,954	114,062	(64,107)	-128%
<b>Member Owned Generation ISO Energy Sales</b>	118,709	212,044	(93,336)	-79%
<b>Revenue from Customers</b>	-	81,385	(81,385)	-
<b>Customer Owned Generation ISO Energy Sales</b>	-	2,554	(2,554)	-
<b>NCPA Contracts ISO Energy Sales</b>	34,944	57,130	(22,187)	-63%
<b>Western Resource ISO Energy Sales</b>	26,527	15,565	10,961	41%
<b>Load Aggregation Energy Sales</b>	-	185,052	(185,052)	-
<b>Ancillary Services Sales</b>	5,514	4,162	1,352	25%
<b>Transmission Sales</b>	110	110	-	0%
<b>Western Credits, Interest &amp; Other Income</b>	43,537	152,758	(109,221)	-251%
	472,753	1,142,483	(669,731)	-142%
<b>NET ANNUAL BUDGET COST TO PARTICIPANTS</b>	567,532	509,821	\$ 57,710	10%



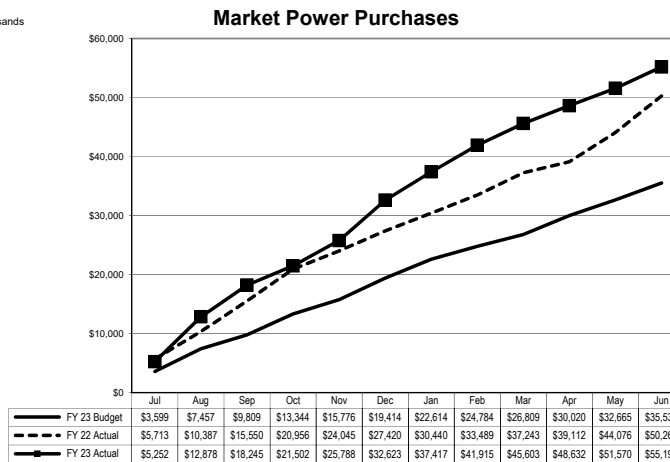
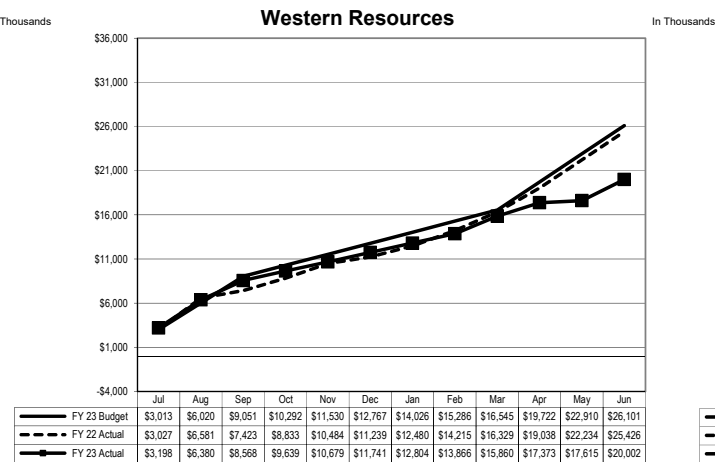
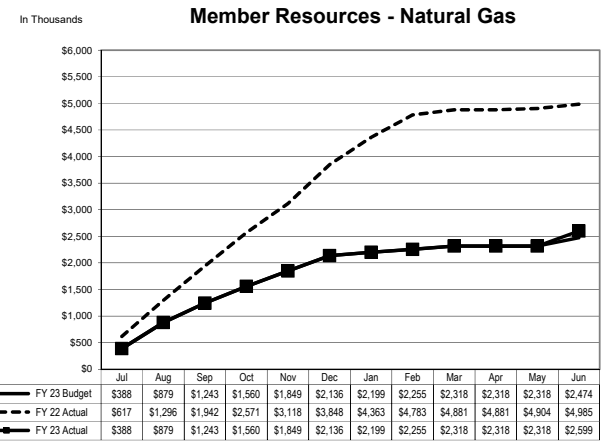
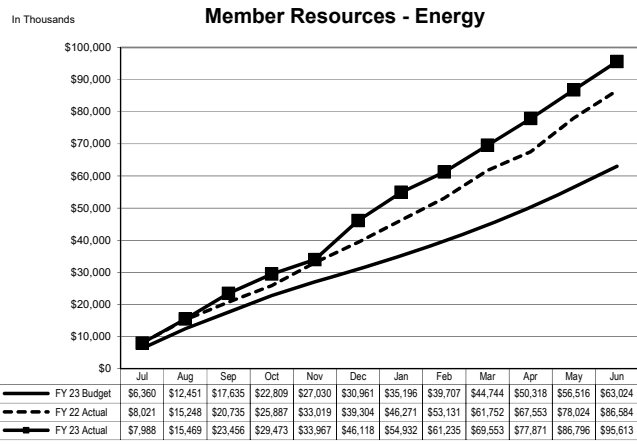
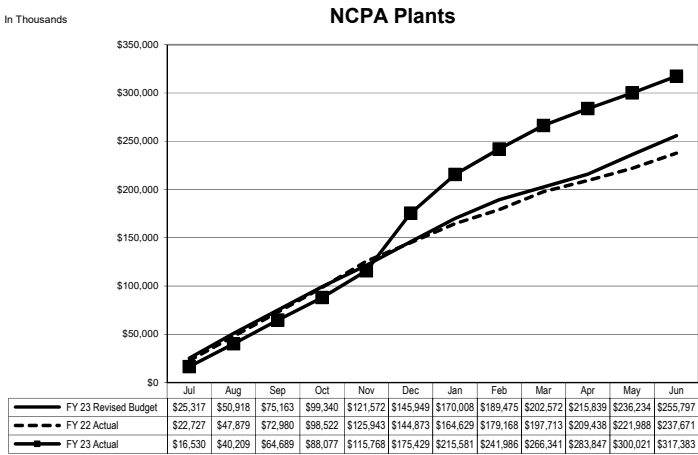


**Annual Budget  
Budget vs. Actual By Major Area  
As of June 30, 2023**



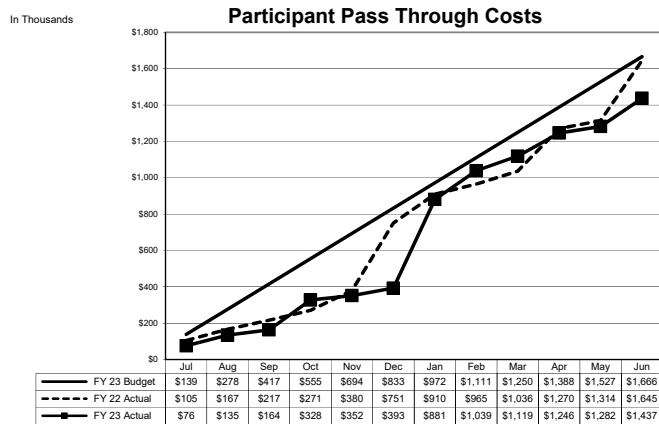
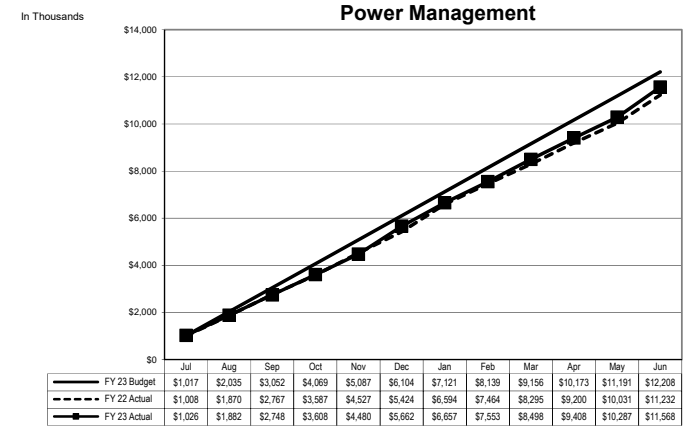
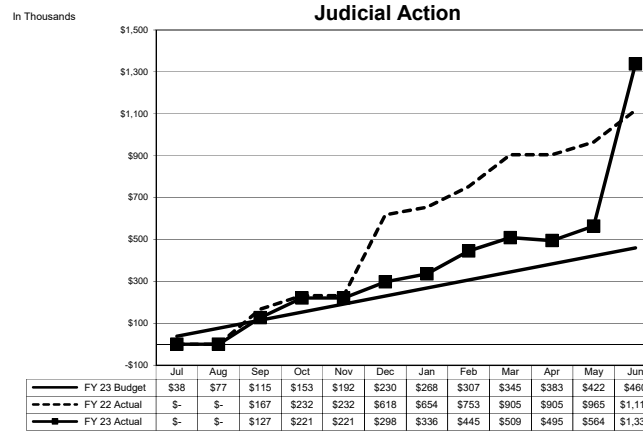
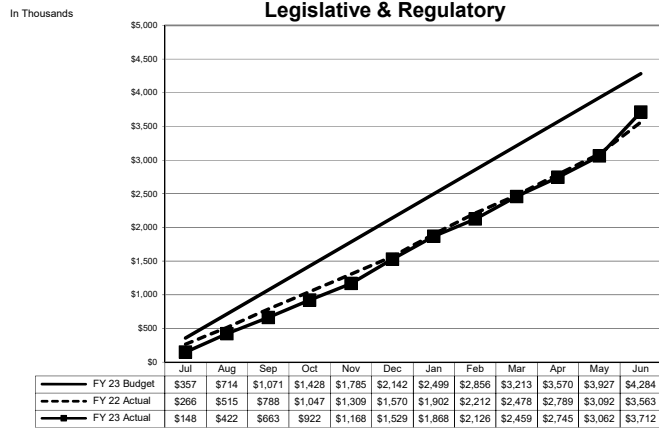
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

## Annual Budget Cost Generation Resources Analysis By Source As of June 30, 2023



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

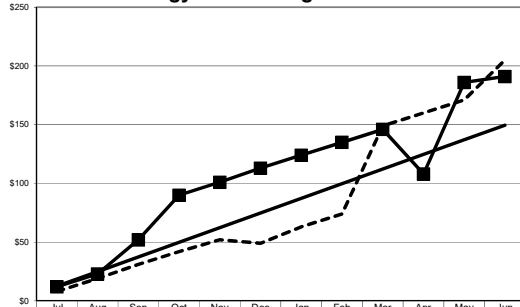
## Annual Budget Cost Management Services Analysis By Source As of June 30, 2023



**Annual Budget Cost  
Management Services Analysis By Source  
As of June 30, 2023**

In Thousands

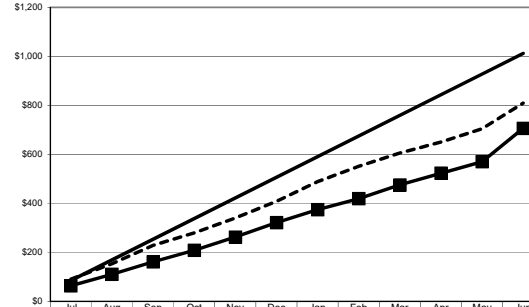
**Energy Risk Management**



	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	\$108	\$186	\$191

In Thousands

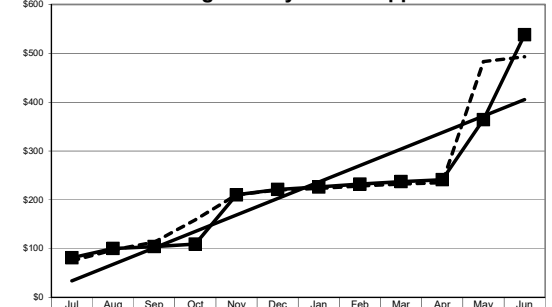
**Settlements**



	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	\$523	\$570	\$706

In Thousands

**Integrated Systems Support**

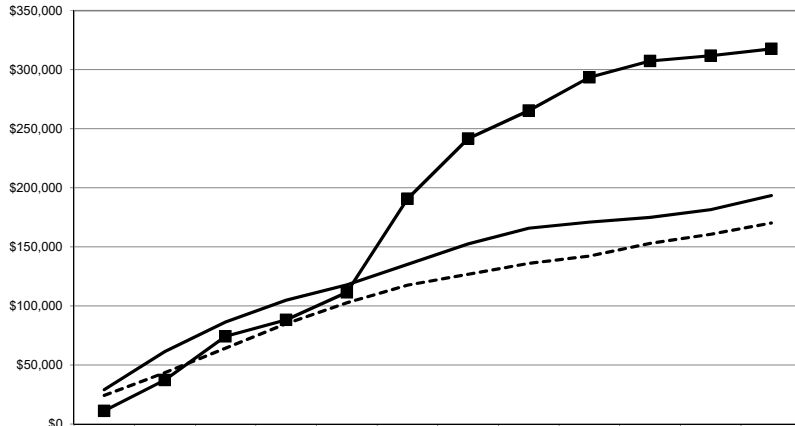


	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	\$34	\$68	\$101	\$135	\$169	\$203	\$236	\$270	\$304	\$338	\$371	\$405
FY 22 Actual	\$75	\$97	\$113	\$159	\$210	\$220	\$223	\$228	\$232	\$235	\$483	\$493
FY 23 Actual	\$81	\$100	\$104	\$109	\$210	\$221	\$226	\$232	\$237	\$241	\$364	\$538

**Annual Budget Cost  
Third Party Revenue Analysis By Source  
As of June 30, 2023**

In Thousands

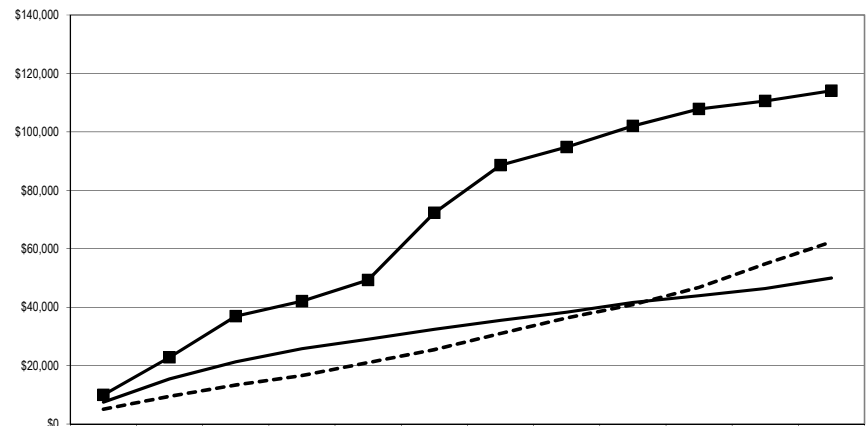
**Plant ISO Energy Sales**



	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	\$307,459	\$311,908	\$317,660

In Thousands

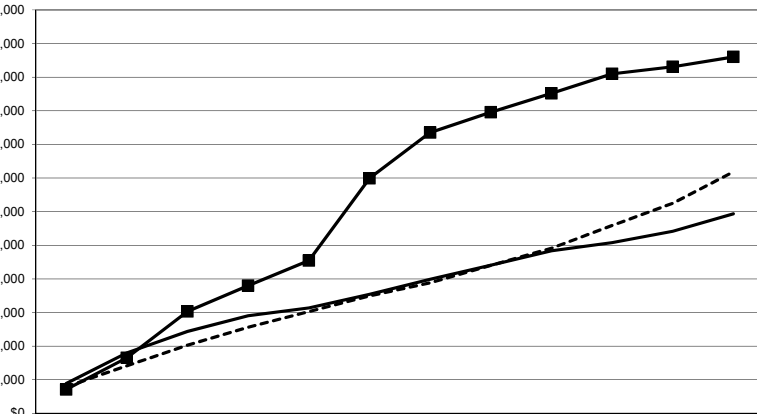
**Member Resource ISO Energy Sales**



	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	\$107,842	\$110,573	\$114,062

In Thousands

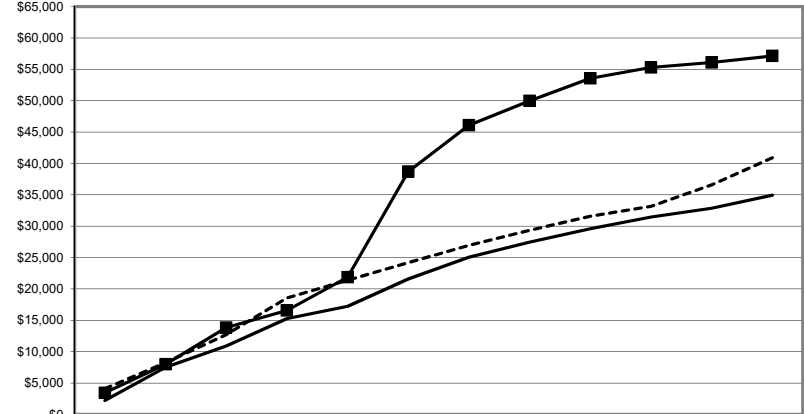
**Member Owned Generation ISO Energy Sales**



	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	\$202,003	\$206,169	\$212,044

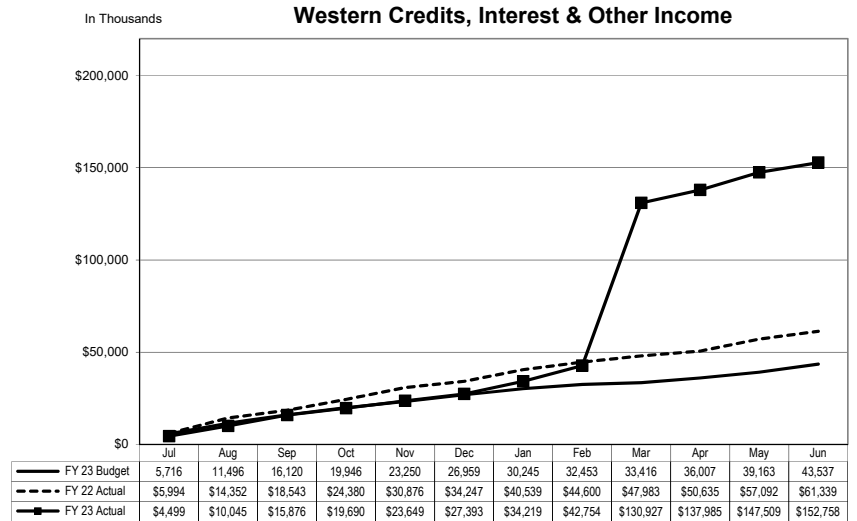
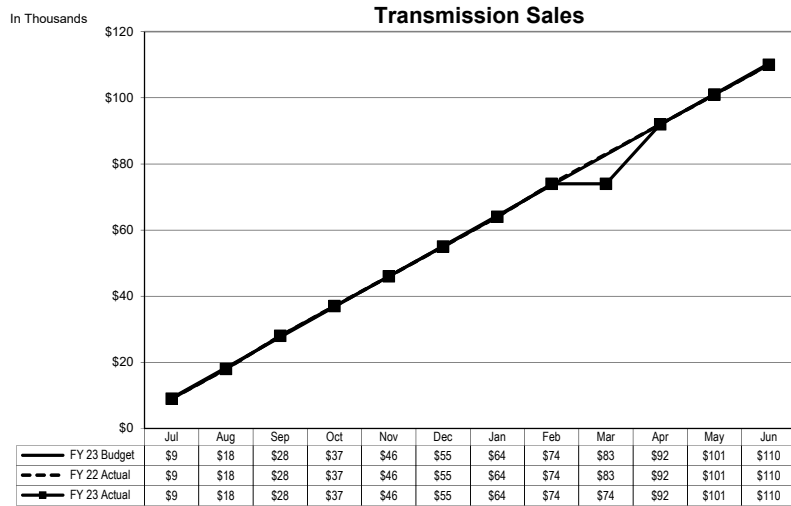
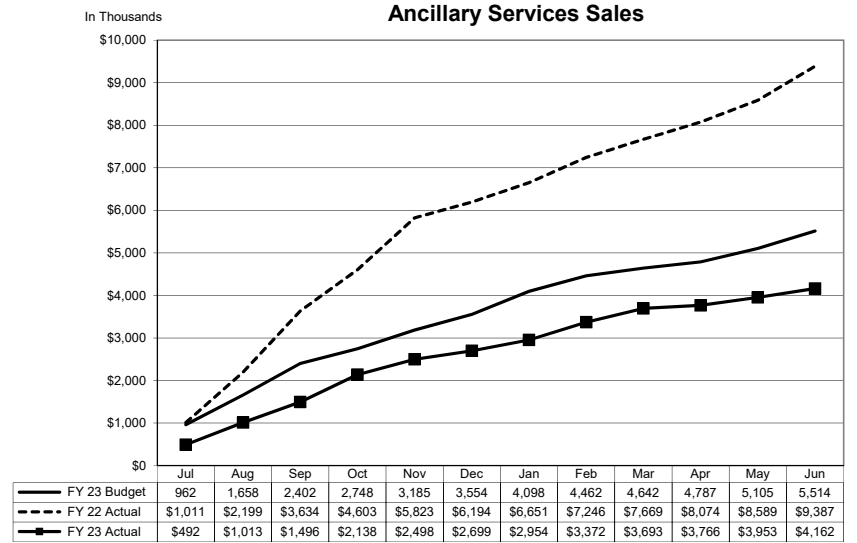
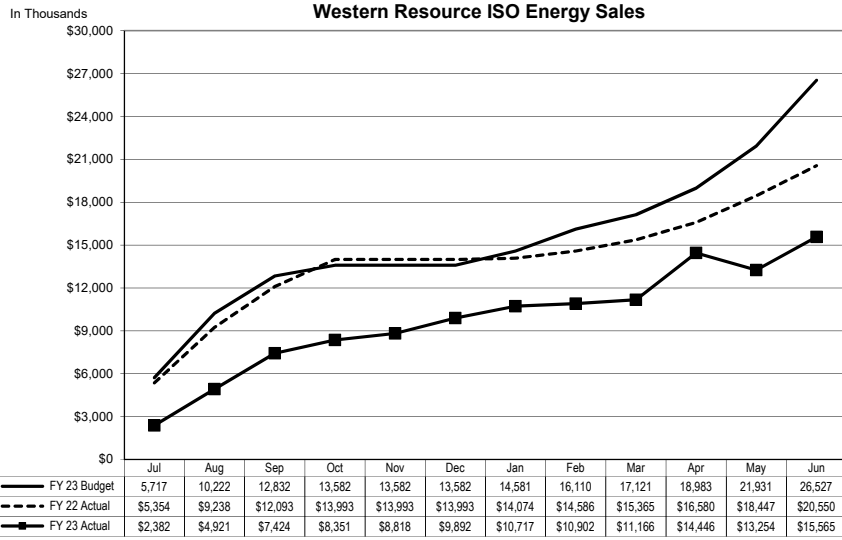
In Thousands

**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	\$55,306	\$56,083	\$57,130

**Annual Budget Cost  
Third Party Revenue Analysis By Source  
As of June 30, 2023**



**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of June 30, 2023**

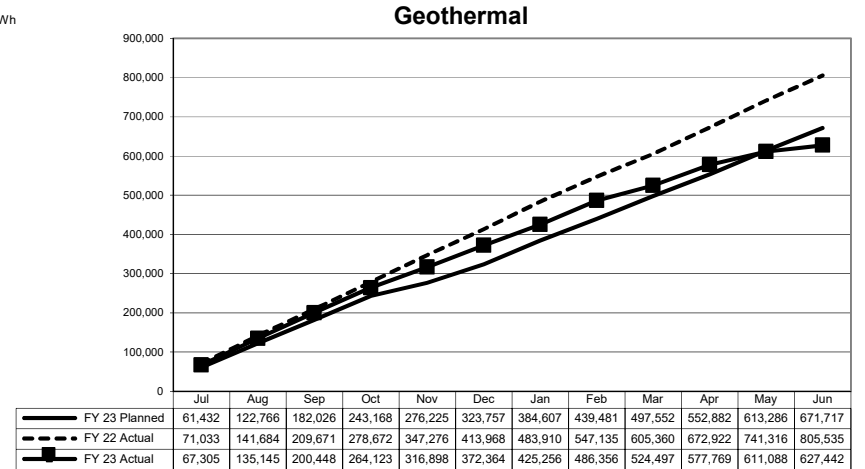
**Generation Cost Analysis**

\$ in thousands

	Geothermal				
	Revised		\$/MWh	Under(Over)	YTD %
	Budget	Actual	Actual	Budget	Remaining
Routine O & M	\$ 19,698	\$ 22,170	\$ 35.33	\$ (2,473)	-13%
Capital Assets/Spare Parts Inventories	10,151	5,277	8.41	4,873	48%
Other Costs	12,657	12,594	20.07	63	1%
CA ISO Charges	604	1,310	2.09	(706)	-117%
Debt Service	3,473	3,473	5.54	-	0%
Annual Budget	46,583	44,825	71.44	1,758	4%
Less: Third Party Revenue					
Interest Income	150	291	0.46	(141)	-94%
ISO Energy Sales	42,271	64,662	103.06	(22,391)	-53%
Ancillary Services Sales	-	-	-	-	0%
Effluent Revenues	750	1,244	1.98	(494)	-66%
Misc	113	114	0.18	(1)	-1%
	43,284	66,311	105.69	(23,027)	-53%
Net Annual Budget Cost to Participants	\$ 3,299	\$ (21,486)	\$ (34.24)	\$ 24,785	751%
Net Generation--MWh @ Meter	671,717	627,442			
\$/MWh (A)	\$ (0.26)	\$ (39.78)			

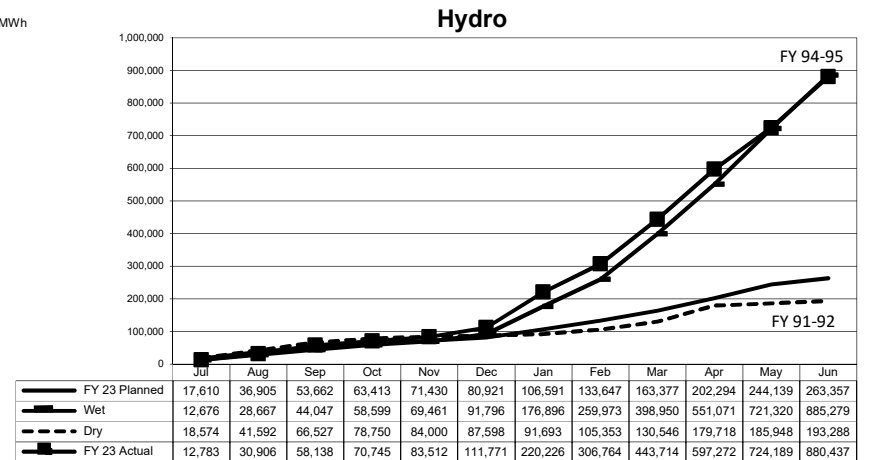
**MWhs Generated**

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh	Under(Over)	YTD %
	Budget	Actual	Actual	Budget	Remaining
Routine O & M	\$ 10,203	\$ 9,136	\$ 10.38	\$ 1,067	10%
Capital Assets/Spare Parts Inventories	4,270	4,279	4.86	(9)	0%
Other Costs	3,993	4,586	5.21	(593)	-15%
CA ISO Charges	1,237	7,845	8.91	(6,608)	-534%
Debt Service	35,811	35,811	40.67	-	0%
Annual Budget	55,514	61,658	70.03	(6,144)	-11%
Less: Third Party Revenue					
Interest Income	150	235	0.27	(85)	-56%
ISO Energy Sales	22,182	79,854	90.70	(57,672)	-260%
Ancillary Services Sales	1,224	3,362	3.82	(2,139)	-175%
Misc	-	6	0.01	(6)	0%
	23,556	83,457	94.79	(59,902)	-254%
Net Annual Budget Cost to Participants	\$ 31,958	\$ (21,799)	\$ (24.76)	\$ 53,758	
Net Generation--MWh @ Meter	263,357	880,437			
\$/MWh (A)	\$ (14.63)	\$ (85.43)			

In MWh



Footnotes:

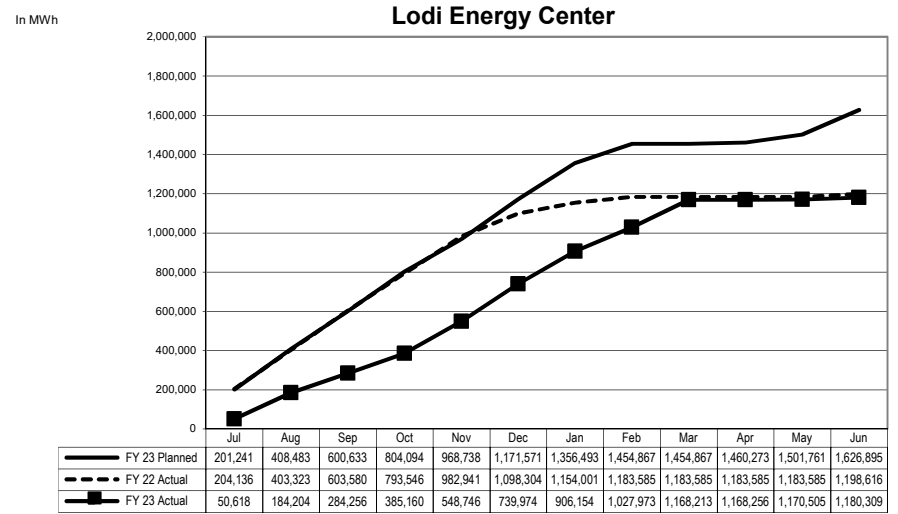
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of June 30, 2023**

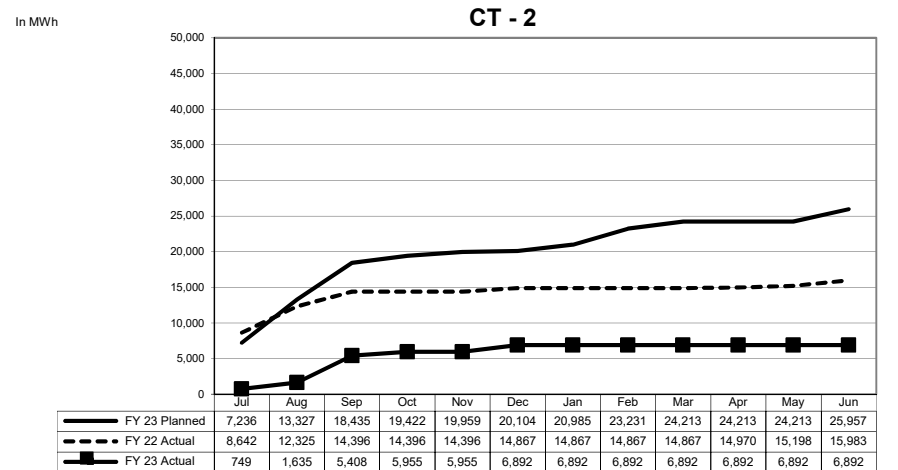
**Generation Cost Analysis**

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 9,826	\$ 10,899	\$ 9.23	\$ (1,073)	-11%
Fuel	64,819	121,768	103.17	(56,949)	-88%
GHG Allowance Costs	20,250	14,174	12.01	6,076	30%
CA ISO Charges and Energy Purchases	2,970	8,956	7.59	(5,986)	-202%
Capital Assets/Spare Parts Inventories	3,631	4,241	3.59	(610)	-17%
Other Costs	10,244	9,134	7.74	1,110	11%
Debt Service	25,996	25,996	22.02	(0)	0%
Annual Budget	137,737	195,168	165.35	(57,432)	-42%
Less: Third Party Revenue					
Interest Income	250	1,188	1.01	(938)	-375%
ISO Energy Sales	121,620	166,710	141.24	(45,091)	-37%
Ancillary Services Sales	2,318	524	0.44	1,794	77%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	19,710	14,174	12.01	5,536	28%
Misc	-	110	0.09	(110)	0%
	143,897	182,705	154.79	(38,808)	-27%
Net Annual Budget Cost to Participants	\$ (6,160)	\$ 12,463	\$ 10.56	\$ (18,623)	302%
Net Generation--MWh @ Meter	1,626,895	1,180,309			
\$/MWh (A)	\$ (19.77)	\$ (11.47)			

**MWhs Generated**



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,616	\$ 1,508	\$ 218.81	\$ 108	7%
Fuel and Pipeline Transport Charges	2,227	1,736	251.86	491	22%
GHG Allowance Costs	424	-	-	424	100%
Capital Assets/Spare Parts Inventories	220	3	0.45	217	99%
Other Costs	643	632	91.65	11	2%
CA ISO Charges	148	429	62.29	(281)	-190%
Debt Service	5,084	5,084	737.68	-	0%
Annual Budget	10,361	9,392	1,362.74	970	9%
Less: Third Party Revenue					
Interest Income	42	157	22.71	(115)	-273%
ISO Energy Sales	4,331	2,540	368.54	1,791	41%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,775	8,342	1,210.48	(6,567)	-370%
GHG Allowance Credits	424	-	-	424	100%
Misc	-	3	0.37	(3)	0%
	6,572	11,041	1,602.10	(4,469)	-68%
Net Annual Budget Cost to Participants	\$ 3,789	\$ (1,650)	\$ (239.36)	\$ 5,439	144%
Net Generation--MWh @ Meter	25,957	6,892			
\$/MWh (A)	\$ (49.88)	\$ (977.04)			



Footnotes:

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



**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of June 30, 2023**

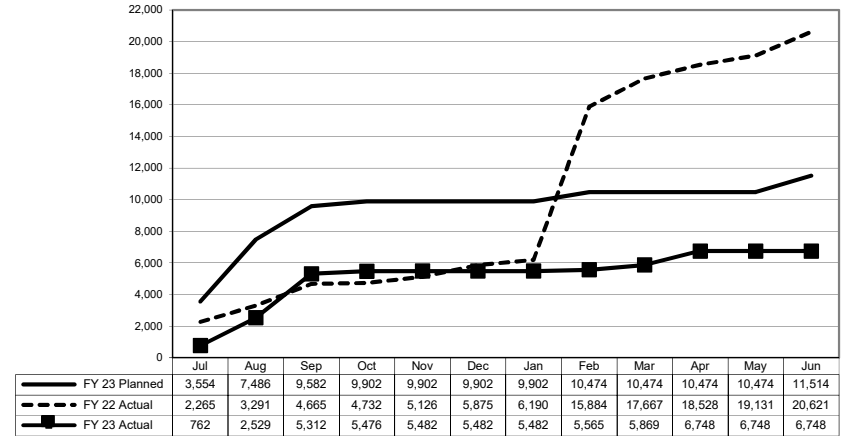
**Generation Cost Analysis**

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,530	\$ 2,273	\$ 336.79	\$ 257	10%
Fuel and Pipeline Transport Charges	1,214	1,272	188.46	(58)	-5%
Capital Assets/Spare Parts Inventories	800	1,245	184.44	(445)	-56%
Other Costs	882	904	133.92	(22)	-2%
CA ISO Charges	176	647	95.82	(471)	-268%
Debt Service	-	-	-	-	-
Annual Budget	5,602	6,340	939.43	(738)	-13%
Less: Third Party Revenue					
Interest Income	55	83	-	(28)	-52%
ISO Energy Sales	3,053	3,893	576.93	(840)	-28%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	-	-	-	0%
	3,108	3,977	576.93	(868)	-28%
Net Annual Budget Cost to Participants	\$ 2,493	\$ 2,363	\$ 350.15	\$ 130	5%
Net Generation--MWh @ Meter	11,514	6,748			
\$/MWh (A)	\$ 216.54	\$ 350.15			

**MWhs Generated**

In MWh

CT - 1



Footnotes:

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