



Northern California Power Agency
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BUSINESS PROGRESS REPORT

2023
August

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Generation Costs & Reliability

Combustion Turbine Project

Unit Operation for July 2023

Unit	Availability		Production			Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	84.0	MWh	CAISO / CAISO
	100.0%	97.8%	Unit 2	62.0	MWh	
Curtailments, Outages, and Comments:						
Unit 1:	6/28 @ 09:41 - 7/31 @ 23:59: AT&T comms service failure, requires 3 hour start time for local start. OMS 13812250 (ongoing).					
Unit 2:	6/28 @ 09:41 - 7/31 @ 23:59: AT&T comms service failure, requires 3 hour start time for local start. OMS 13812252 (ongoing). 7/16 @ 19:20 - 7/17 11:39; Gas compressor trouble, OMS 13919942					
Unit	Availability		Production			Reason for Run
CT1 Lodi	100.00%		22.7 MWh			CAISO
Curtailments, Outages, and Comments:						
Normal Operation.						
Unit	Availability		Production			Reason for Run
CT2 STIG	100.0%		1,811.6 MWh			CAISO
Curtailments, Outages, and Comments:						
Normal operation.						
Unit	Availability		Production			Reason for Run
LEC	77.4%		110,528 MWh			CAISO
Curtailments, Outages, and Comments:						
07/01 @ 00:00 - 07/07 @ 23:59; ST gearbox inspection & steam leak repair. OMS 13806956 07/14 @ 16:42 - 19:00; LEC limited to Pmin by stuck disk cavity bleed valve. OMS 1392509						

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for July 2023

Unit	Availability		Net Electricity Generated/Water Delivered		Out-of-Service/Descriptors
Unit 1	0	%	0	MWh	U1 down for outage
Unit 2	100	%	28,521	MWh	U2 in service
Unit 3	N/A	%	N/A	-	Unit 3 remains out of service.
Unit 4	100	%	33,557	MWh	U4 in service
Southeast Geysers Effluent Pipeline	100	%	190.9	mgallons	Average flow rate: 4,189 gpm
Southeast Solar Plant	N/A		136,816	KWh	Year-to-date KWh: 1,214,238
Bear Canyon Pump Station Zero Solar	N/A		135,946	KWh	Year-to-date KWh: 969,632

* Accounts for an additional 0 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for July 2023

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	100%	37596 MWh	CV Unit 1 – No Outages
Collierville Unit 2	100%	32236 MWh	CV Unit 2 – No Outages
Spicer Unit 1	98.95%	1855 MWh	NSM1- Out of Service on 7/29/23 from 0148 to 0933 for Transfer Trip Comm Trouble
Spicer Unit 2	98.95%	1860 MWh	NSM2- Out of Service on 7/29/23 from 0148 to 0941 for Transfer Trip Comm Trouble
Spicer Unit 3	100%	340 MWh	NSM3- No Outages

Operations & Maintenance Activities:

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

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

- There were no Lost Time or vehicle accidents in the month of July. There were two Cal OSHA Recordable accidents. On June 27, an employee at the Geothermal plant strained an abdominal muscle while using a large wrench to turn a circ water pump for alignment, and the employee was seen by a medical professional in Saint Helena. On July 7, an employee at the Combustion Turbine plant sustained a back injury, for which he received medical treatment and was placed on light duty.
- 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 July 29, 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.

July 2023 Generation Services Safety Report

	Hydro	GEO	CT Group *	NCPA HQ **
Cal OSHA Recordable (this month)	0	1	1	0
Cal OSHA Recordable (calendar year)	0	2	1	0
Days since Recordable	991	33	22	4,020
Work Hours Since Last Recordable	87,054	6,072	4,906	2,977,750
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	1	0	0
Days without LTA	5,770	52	10,940	7,033
Work Hours without LTA	519,623	9,927	875,151	2,599,768
Vehicle Incident (month)	0	0	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 July 29, 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

	July 2023		Calendar Year 2023	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	411.56 7/17 @ 1800	208,881	411.56 7/17 @ 1800	1,303,013
SVP	644.24 7/17 @ 1600	398,671	644.24 7/17 @ 1600	2,642,625
MSSA	1052.85 7/17 @ 1700	607,552	1052.85 7/17 @ 1700	3,945,638

Last Year 2022 Data*

	July 2022		Calendar Year 2022	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	412.02 7/11 @ 1800	206,308	511.56 9/6 @ 1600	1,299,071
SVP	623.99 7/18 @ 1500	393,294	687.74 9/6 @ 1300	2,581,782
MSSA	1021.19 7/11 @ 1700	599,602	1176.2 9/6 @ 1400	3,880,853

*Last year's data added for comparison purposes only

System Peak Data

	All Time Peak Demand	2023 Peak Demand
NCPA Pool	517.83 MW on 7/24/06 @ 1500	411.56 7/17 @ 1800
SVP	687.74 MW on 9/6/22 @ 1300	644.24 7/17 @ 1600
MSSA	1176.20 MW on 9/6/22 @ 1400	1052.85 7/17 @ 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.

NCPA Deviation Band Performance		
	July 2023	Calendar Year 2023
MSSA % Within the Band	97.94%	97.17%

CAISO Real-time Contingency Dispatches (RTCD):

1. July 25, 2023, 1653 hours

CAISO Energy Emergency Alerts (EEA):

1. EEA 1 NOTICE [202302770], 1930-2200, 7/20/23
2. EEA Watch NOTICE [202302772], 1926-2359, 7/25/23
3. EEA Watch NOTICE [202302774], 1800-2200, 7/26/23

PG&E Public Safety Power Shut-off (PSPS)

No PSPS alerts

Pooling, Portfolio Planning & Forecasting

- NCPA Pool loads during July 2023 were 208,881 MWh versus the budget forecast of 211,420 MWh, resulting in a forecast error of 1.22%. The current weather outlook for August 2023 is for slightly above normal temperatures. The Pool's August load forecast is 212,005 MWh compared with extrapolated actuals of 218,232 MWh as of July 14, 2023.
- Lodi Energy Center (LEC) ran 431 hours and produced 110,534 MWh. Due to the current hot weather LEC is expected to run extensively over the last two weeks of August.
- During July 2023, 0.00" of rain was recorded at the Big Trees gauge. July average rainfall at Big Trees is 0.18". New Spicer Meadows storage filled to maximum capacity of 189,000 acre feet and began to spill on June 19th. Spill ended on July 14th.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been increased to \$110/MWh. Releases from NSMR ranged from 350cfs to 550cfs during July.
- New Spicer Meadows storage as of July 31, 2023 was 176,582 acre feet. The historical average storage at the end of July is 135,600 acre feet. As of August 14th, storage was 169,752 acre feet.
- Combined Calaveras Project generation for the Pool in July 2023 totaled 37,704MWh, down from 79,303MWh in June 2023.
- Western Base Resource (BR) deliveries for the Pool during July 2023 were 61,343 MWh. Displacement program energy totaled 2,370 MWh. The Pool's share of expected total delivery from the Western Base Resource for August 2023 is 62,500 MWh, with 33,209 MWh having been delivered through August 18, 2023.
- The PG&E Citygate gas index averaged \$4.57 / MMBtu during the month of July as compared to an average of \$3.10 for June. August's 2023 average City Gate gas price is \$5.53 through the 14th. The September 2023 PG&E Citygate forward price is \$6.23 / MMBtu.
- Day-Ahead PG&E DLAP electricity prices for July averaged \$60.76 / MWh On-Peak and \$52.34 Off-Peak, with a high of \$202.36 and a low of \$21.26. DLAP prices have averaged \$80.79 On-Peak and \$60.99 Off-Peak for the period August 1st through the 14th, with a low price of \$34.45 and a high of 933.99. The forward power prices for September are \$92.97 On-Peak and \$68.27 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 October 2023:
 - Monthly System Resource Adequacy Demonstration (filed August 17, 2023)
 - Monthly Supply Plan (filed August 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:

CAISO VOM Review

Through this triennially recurring stakeholder process, the ISO will review the default variable operations and maintenance adders and, if necessary, update these default values.

SCs use VOM adders to reflect their cost of operations (e.g., consumables) and maintenance (e.g., wear-and-tear) in CAISO markets.

VOM adders are used in the calculation of default energy bids (MPM) and default commitment costs (cap min load and start-up costs). SCs can use default or negotiated adders.

CAISO proposes to adjust default VOM adders using an adjustment based on CPI from the US Bureau of Labor Statistics from 2019 to 2022 (16% increase).

Technology Type	Pre-Update Values			Post-Update Values		
	Default VOM-EN	Default VOM-ML	Default VOM-SU	Default VOM-EN	Default VOM-ML	Default VOM-SU
	(\$/MWh)	(\$/run-hour/MW)	(\$/start/MW)	(\$/MWh)	(\$/run-hour/MW)	(\$/start/MW)
Coal	2.69	-	-	3.12	-	-
Steam turbines	0.33	-	-	0.38	-	-
Natural gas-fired combined-cycle	0.59	1.74	-	0.68	2.02	-
Frame combustion turbines	0.97	-	52.13	1.12	-	60.46
Aeroderivative combustion turbines	2.15	4.38	-	2.49	5.08	-
Reciprocating internal combustion engines	1.10	-	-	1.28	-	-
Nuclear	1.08	-	-	1.25	-	-
Biomass	1.65	-	-	1.91	-	-
Geothermal	1.16	-	-	1.35	-	-
Landfill gas	1.21	-	-	1.40	-	-
Hydroelectric	-	0.65	-	-	0.75	-
Solar	-	-	-	-	-	-
Wind	0.28	-	-	0.32	-	-
Other (e.g., storage, non-generating resource)	-	-	-	-	-	-

Price Formation Enhancements

The ISO plans to consider the following topics in this initiative: (1) enhance real-time market scarcity pricing to better reflect tight supply conditions, (2) consider fast-start pricing, and (3) enhance how the real-time market uses advisory prices to dispatch resources.

CAISO addressed scarcity pricing concerns related to August 2020 events in 2021 Summer Readiness Initiative. Our understanding is they have been effective and no further enhancements are necessary.

CAISO already concluded that fast-start pricing would undermine its efforts to incentivize and compensate flexible resources in real time. Fast-start pricing may not dispatch units in a way that secures the ramp needed to meet the net load or the net load uncertainty in a future interval. As a result, the market would not price the opportunity cost of ramp. Fast start pricing is already addressed in BCR. NCPA does not see need to revisit.

New Resource Opportunities

Lodi STIG Conversion – LM5000 conversion to LM6000. Sierra Local Flex cat 1 RA. Hydrogen capable

Grace Solar – PCC1 located in Riverside County, CA. COD Dec. 2027

Wildcat Solar – PCC1 located in Imperial County, CA. COD Jun. 2026

Please contact mike.whitney@ncpa.com for more information.

Western

Western Base Resource Tracking - NCPA Pool							
	Actual			Costs & Rates			
	BR Forecast ¹ (MWh)	BR Delivered (MWh)	Difference (MWh)	Base Resource & Restoration Fund (\$)	Monthly Cost of BR ² (\$/MWh)	CAISO LMP Differential ³ (\$/MWh)	12-Mo Rolling Avg. Cost of BR ⁴ (\$/MWh)
Jul-23	35,526	63,713	28,187	\$1,276,102	\$ 20.03	\$ (2.07)	\$ 39.84
Aug-23	26,389	-		\$1,276,102	\$ 48.36	\$ -	\$ 37.29
Sep-23	12,488	-		\$1,275,846	\$ 102.17	\$ -	\$ 35.76
Oct-23	7,510	-		\$672,803	\$ 89.59	\$ -	\$ 36.32
Nov-23	12,128	-		\$672,803	\$ 55.48	\$ -	\$ 35.65
Dec-23	721	-		\$672,803	\$ 933.15	\$ -	\$ 36.17
Jan-24	11,160	-		\$672,803	\$ 60.29	\$ -	\$ 35.69
Feb-24	16,835	-		\$672,803	\$ 39.96	\$ -	\$ 34.31
Mar-24	11,662	-		\$672,803	\$ 57.69	\$ -	\$ 33.64
Apr-24	37,152	-		\$1,774,034	\$ 47.75	\$ -	\$ 35.40
May-24	66,765	-		\$1,774,034	\$ 26.57	\$ -	\$ 38.80
Jun-24	70,929	-		\$1,774,034	\$ 25.01	\$ -	\$ 39.50

1/ As forecasted in NCPA 23/24 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 63,713 MWh of Base Resource (BR) energy in July 2023. This includes displaced energy of 2,370 MWh. MEEA savings was negative at \$(127,100) and displacement savings was approximately \$8,480.
 - August 2023 WAPA Twelve-Month Rolling Forecast of CVP Generation and Base Resource.
 - FY 2023 BR Generations (actuals October 2022 through July 2023; projection August 2023 through September 2023)
 - FY23 Projected BR for NCPA Pool is 385,566 MWh.
 - Projected FY23 BR Generation using 90% forecast is about 20% below the historical average.
 - Projected FY23 BR Generation using 50% forecast is about 18% below the historical average.

- Re-initiation of Consultation of the Long-Term Operations (ROC on LTO) – Trinity Component
 - In September 2021, Bureau of Reclamation and California Department of Water Resources requested a new Endangered Species Act (ESA) with National Marine Fisheries Service (NMFS) and US Fish & Wildlife (USFWS). The ESA requires formal consultation of the CVP operation’s impact on the species. As part of the National Environmental Policy Act (NEPA) requirement, Reclamation is required to provide three or four alternatives to compare against baseline operations and analyze the effect in an 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 provided the preliminary four alternatives for the Trinity portion for the EIS early June and comment due dates were extended a couple times, the deadline ended up being July 21th. Reclamation received 57 public comments but did indicate they will not be providing written responses to these comments.
 - On July 25, 2023 Reclamation held a meeting for Trinity River Interested Party. The purposes of this meeting was to engage with interested parties and hear ideas and concerns. They also introduced the Tribal Co-Leads (Hoopa Valley tribe and Yurok Tribe).
 - In response to the comments Reclamation received for the preliminary draft alternatives, they added Alternative 5 and labeled that as Power focused and Alternative 6 labeled as Carryover Focused. Alternative 5 was created based on WAPA’s comments and Alternative 6 is based on comments from non-government entities and Trinity. Reclamation also went over how these two added alternatives fit in the Storage Management, Variable Instream Flows and Temperature management criteria. Reclamation seems to continue to lean towards alternative 2 and may incorporate certain components from Alternative 5 and 6.
 - Alternative 5 suggest vetting through modeling approaches. To pivot from Long Term average from the 50/50 split between Trinity Basin and Sacramento basin and shift some of ROD water out of releases to rebuild cold water storage. Also, minimal diversions in Sacramento River to promote project generation. WAPA has been suggesting Reclamation to produce exploratory models and it sounded like Reclamation will do that at some point.

- Alternative 6 mostly focused on higher minimum storage in Trinity Lake and carrying water volumes from one water year to the next and no summer flow reductions.
 - Pending decision on whether there will be a separate EIS for the Trinity portion.
 - Reclamation plans to have Monthly Interested Party Technical Meetings. The next meeting is scheduled on August 22, 2023 from 1pm-3pm.

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.

PG&E RY2024 Formula Rate Annual Update

- TO-20 was PG&E's first formula rate filing. After the formula is set/final, the revenue requirement is revised through an annual update. This process is FERC approved and allows for a pass through of changing costs without further approval. Amounts charged by PG&E are later trued-up to recorded cost.

Annual update schedule is as follows:

- July 1 – Utility posts proposed cost for the next calendar year
- July 1 – Oct 15 – Customers examine new costs and issue discovery
- August 15 – Sept 1 – Technical Conference
- November 1 – Last changes to Annual Update
- December 1 – Utility submits to FERC
- January 1 – New revenue requirement becomes effective

PG&E's Revenue Requirement for RY2024 (Jan 1 – Dec 31, 2024) is as follows:

PG&E Wholesale Rates	RY2023 (Current)	As Filed RY 2024	% Change
Revenue Requirement	\$2.7B	\$2.3B	-15%
HV TAC (\$/MWH)	\$9.50	\$7.68	-19%
LV TAC (\$/MWH)	\$20.40	\$17.87	-12%

Major Contributing Factors to the decrease are PG&E's:

- Prior Over Collections
- \$83M decrease to Administrative and General expenses
- \$6.8M decrease to Operations and Maintenance expenses
- ~\$285M decrease to the Accumulated Depreciation Reserve

Key Notes

- Numbers are subject to change especially since PG&E as not filed its 2024 Transmission Revenue Balancing Account Adjustment
- Indications of upward rate pressure in the future years, \$2B in forecasted capital additions next year
- In Oct, 2023 PG&E will files it's TO-21 formula for rates effective Jan 1, 2024

Next Steps

- TANC is now engaged in the 2024 TRR review process to negotiate with PG&E over amounts found to be excessive or unsupported

Debt and Financial Management

- At their July meeting, the Fed approved a much-anticipated interest rate hike that takes benchmark borrowing costs to their highest level in more than 22 years. In a move the financial markets had completely priced in, the Fed raised the overnight borrowing rate by a quarter percentage point to a target range of 5.25%-5.5%. While market analysts believe the Fed is done raising rates, Chairman Powell was quoted as saying "... it's certainly possible that we will raise funds again at the September meeting if the data warranted."
- In August, it was reported by the Bureau of Labor Statistics that the consumer price index rose 3.2% from a year ago in July. Although a slight increase from the previous month, it was less than what was expected (3.3%). While inflation is moving in the right direction, the still-elevated level suggests that the Fed is some distance from cutting rates. However, more economists are beginning to expect the U.S. can avoid a recession despite the aggressive rate hikes.
- At the August Finance Committee meeting, the Agency's financial advisor, PFM, provided a report on the current financial market conditions. One item of note shared by PFM is a typical 30-year AA-, California public power transactions are pricing at roughly a Total Interest Cost (TIC) of 4.00%-4.50%. While this is significantly higher than refunding experienced over the last several years, the rate is still trending below the historical average.

Schedule Coordination Goals

Software Development

- Applications and Enhancements
 - RPS app with WREGIS API integration development and testing on-going
 - Development of the NCPA Logger app replacement of the legacy system is on-going, estimated 6-12 month development timeline split into multiple phases.
- Integrations
 - EBCE's Daggett PV and BESS resources readiness for September 2023 COD
 - On-going various new resource integrations for Q3 COD
- IS to provide technical support for SJCE's Data Warehouse project utilizing the NCPA Data Portal API Service.

Network

- SCADA and Networking team is currently working with a number of stakeholders to bring online the Lodi Strategic Reserve project in the coming months. Meetings have been conducted and information has been shared in an effort to establish real-time telemetry to the project in the near future.
- 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.

- Operations and Support Oracle DBA team has rolled out phase 1 of the meter data cleanup which includes creating an archive location for out dated information. This is an effort to comply with retention policies and to improve query performance.
- Recently worked with the Hydro team to cutover to a new fiber circuit at Mt. Elizabeth, which will improve telemetry for communications to the Collierville project.
- IS has worked with SSWD and NID to cutover to a new Starlink communications network to improve the stability of the failing comms at Camp Far West. The cutover was successful and Dispatch has regained telemetry of the project.

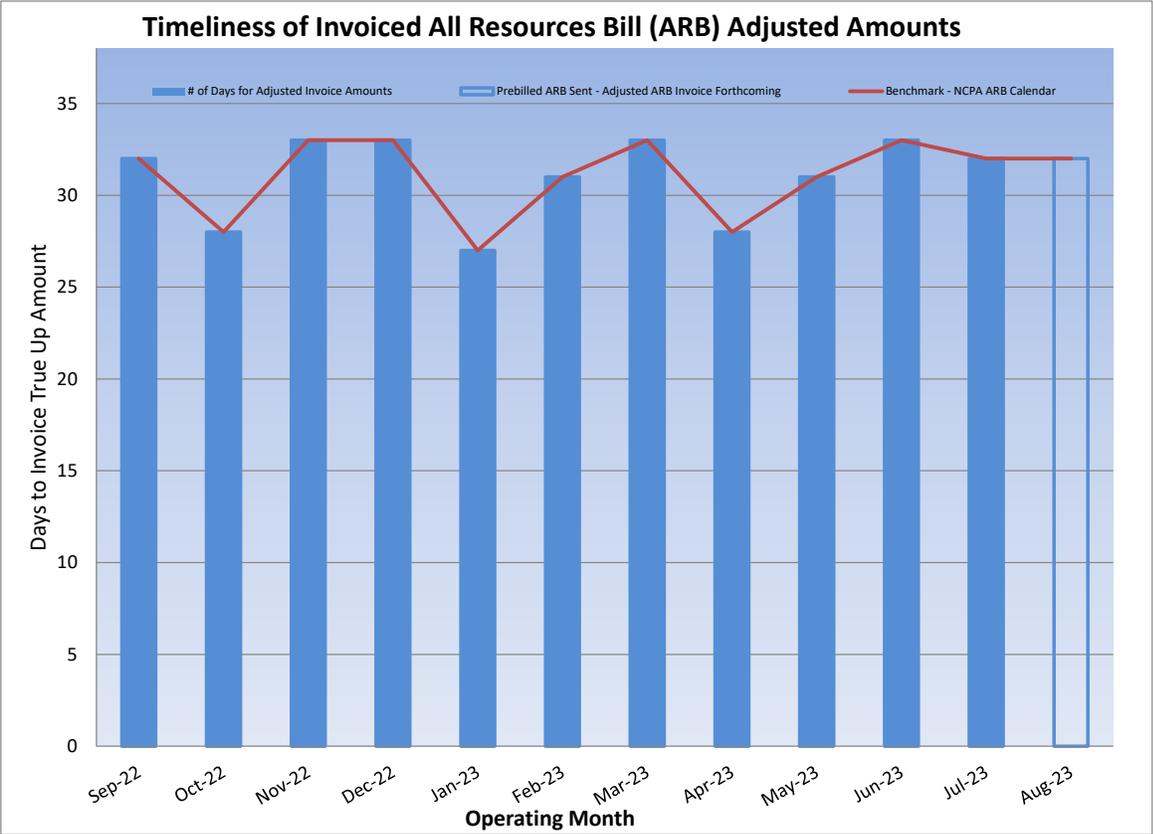
NCPA Bills & Settlements

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

- August 2023 monthly pre-billed budget/forecast amounts;
- June 2023 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- May 2023 (2nd Adjustment) NCPA Project settlement true-up and T+20 business day recalculated CAISO settlement true-up allocations;
- March 2023 (3rd Adjustment) T+70 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- July 2022 (4th Adjustment) T+11-month recalculated CAISO settlement true-up allocations;
- September 2021 (5th Adjustment) T+21-month recalculated CAISO settlement true-up;
- June 2021 (6th Adjustment) T+24-month recalculated CAISO settlement true-up;
- August 2020 (6th Adjustment) T+33-month recalculated CAISO settlement true-up;
- May 2020 (7th Adjustment) T+36-month CAISO settlement true-up;



Legislative & Regulatory

Legislative Update:

- NCPA hosted this year’s State Legislative Staff Tour during August 1-3, 2023. The tour is an annual event during which the NCPA Legislative and Regulatory Affairs team takes state legislative staff on an educational trip to NCPA member facilities and communities. This year, our three-day tour highlighted the diversity of NCPA’s member communities, with featured stops at the Geysers, Healdsburg, the Port of Oakland, and Alameda. During the tour, we featured a policy series with speakers from Truckee Donner PUD, Lodi, Go-Biz, and the San Francisco Bay Area Rapid Transit District. We are so grateful for the NCPA Commissioners, Utility Directors, and utility staff representatives who dedicated their time to make this year’s tour a success!

Human Resources

Hires:

Candace Seibel joined NCPA’s Lodi Energy Center as a CT Specialist II (Operator), effective July 24, 2023. Candace joins us from UC Davis Medical Center where she was a Cogen Plant Operator. In this role, she operated a 22MW cogeneration facility with a GE LM2500 combustion turbine, a Murray steam turbine, a heat recovery steam generator, and was responsible for plant start-up and shutdown. Candace previously worked for Blue Diamond Growers as a Boiler Operator/Waste Water Operator and brings over 7 years of experience.

Arik Cheng joined NCPA Headquarters as a Computer Technology Analyst IV (SCADA) effective July 18, 2023. Arik joins us from Tesco Controls, Inc., where he was an Automation Engineering Supervisor. In this role, he ensured the team succeeded in their programming production while maintaining acceptable levels of project standards, and he developed programs and associated Operator Interface Terminal (OIT) software used to control water and/or wastewater processes. Arik holds a Bachelor of Science in Electrical Engineering from California State University, Sacramento. Arik brings over 7 years of experience.

Intern Hires:

None.

Promotions:

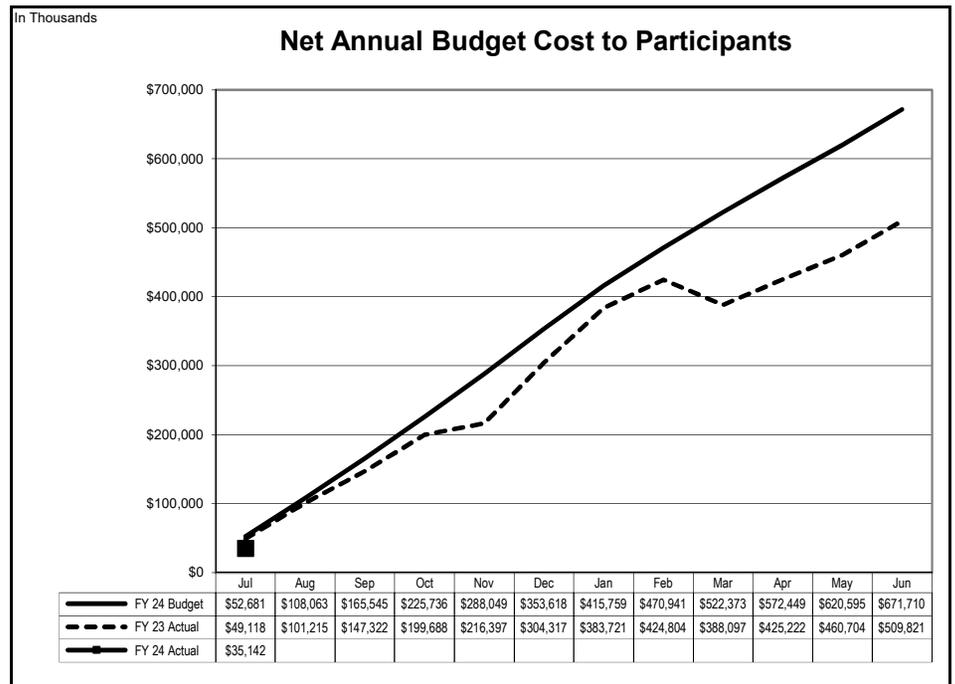
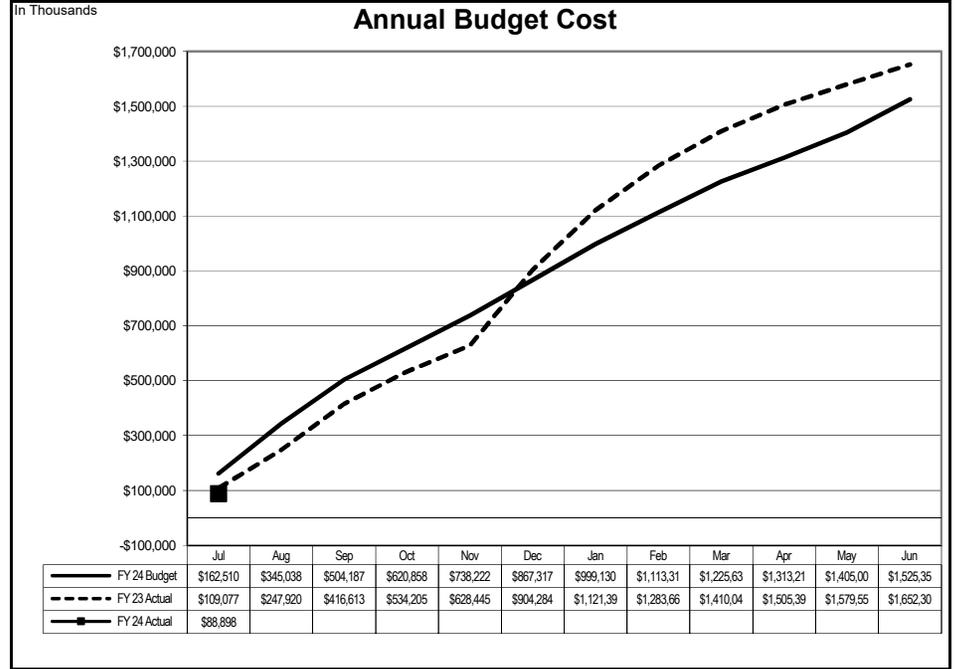
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Separations:

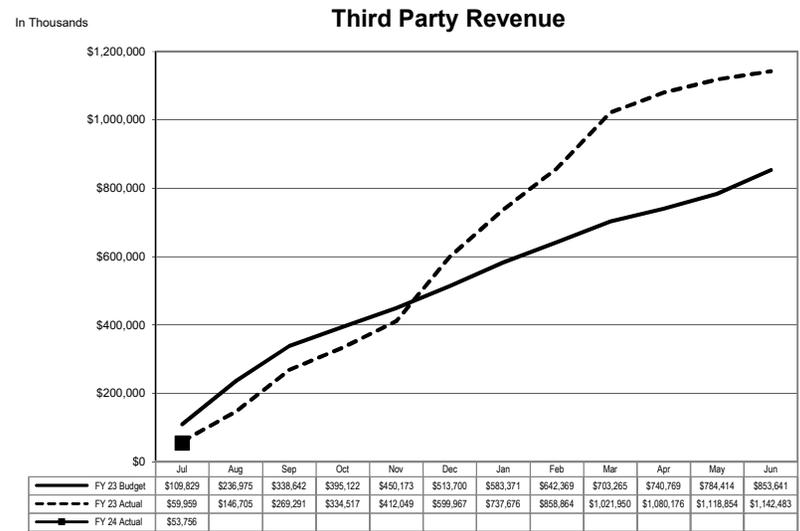
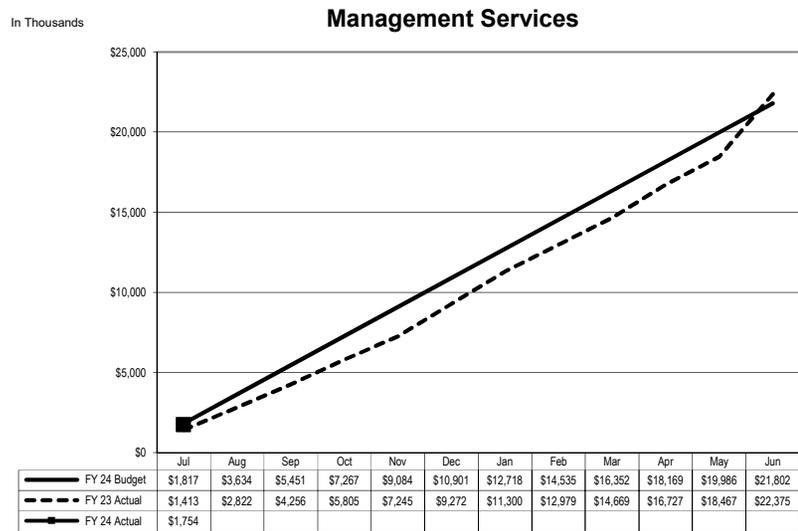
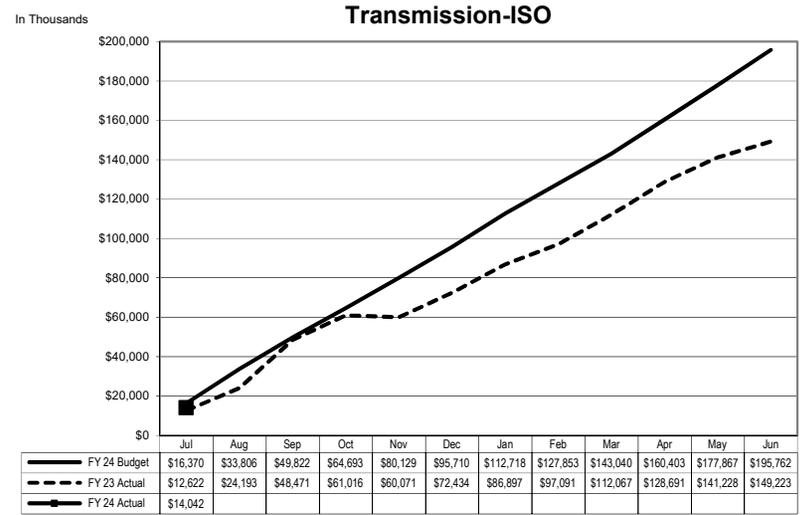
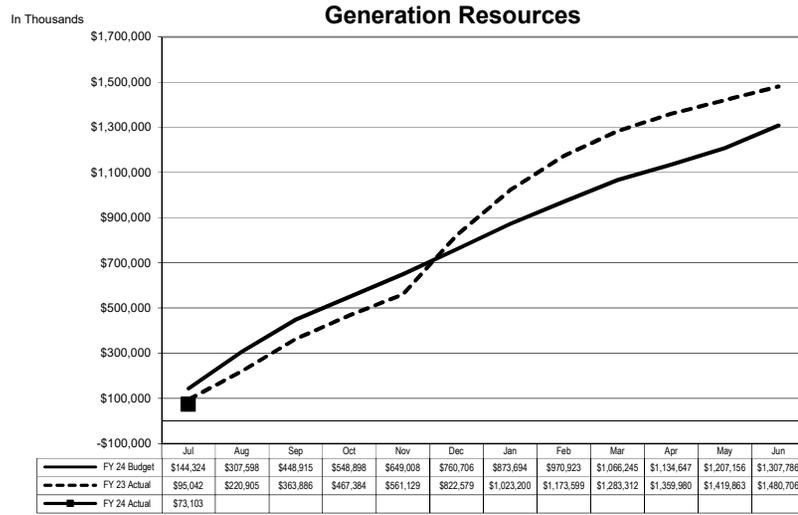
None.

**Annual Budget
2023-2024 Fiscal Year To Date
As of July 31, 2023**

In Thousands	Program			
	Budget	Actual	Under(Ovr) Budget	YTD % Remaining
GENERATION RESOURCES				
NCPA Plants				
Hydroelectric	57,650	4,832	\$ 52,818	92%
Geothermal Plant	47,009	3,148	43,861	93%
Combustion Turbine No. 1	6,932	419	6,513	94%
Combustion Turbine No. 2 (STIG)	9,217	675	8,542	93%
Lodi Energy Center	136,797	8,653	128,144	94%
	257,605	17,728	239,877	93%
Member Resources - Energy	70,125	6,548	63,577	91%
Member Resources - Energy (Customer)	359	7	352	98%
Member Resources - Natural Gas	2,510	390	2,120	84%
Western Resource	25,839	1,150	24,690	96%
Market Power Purchases	37,309	4,586	32,723	88%
Gross Load Costs	691,439	33,897	657,543	95%
Gross Load Costs (Customer)	220,937	8,798	212,139	96%
Net GHG Obligations	1,363	-	1,363	100%
Preliminary Surveys and Investigations	300	-	300	100%
	1,307,786	73,103	1,234,683	94%
TRANSMISSION				
Independent System Operator	195,762	12,800	182,962	93%
Independent System Operator - Customer	-	1,242	(1,242)	
	195,762	14,042	181,720	93%
MANAGEMENT SERVICES				
Legislative & Regulatory				
Legislative Representation	2,250	248	2,002	89%
Regulatory Representation	763	67	696	91%
Western Representation	768	15	753	98%
Customer Programs	649	44	605	93%
	4,429	374	4,056	92%
Judicial Action				
	1,064	-	1,064	100%
Power Management				
System Control & Load Dispatch	7,900	704	7,196	91%
Forecasting & Prescheduling	2,891	257	2,634	91%
Industry Restructuring	392	43	349	89%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,176	108	1,069	91%
Gas Purchase Program	79	6	73	93%
Market Purchase Project	113	8	105	93%
	12,552	1,126	11,426	91%
Energy Risk Management				
	144	12	132	91%
Settlements				
	1,076	48	1,028	96%
Integrated System Support				
	772	99	674	87%
Participant Pass Through Costs				
	1,765	67	1,698	96%
Support Services				
	-	28	(28)	
	21,802	1,754	20,049	92%
TOTAL ANNUAL BUDGET COST	1,525,350	88,898	1,436,452	94%
LESS: THIRD PARTY REVENUE				
Plant ISO Energy Sales	244,824	16,818	228,006	93%
Member Resource ISO Energy Sales	74,477	6,996	67,481	91%
Member Owned Generation ISO Energy Sales	179,429	13,963	165,466	92%
Revenue from Customers	70,212	1,717	68,495	98%
Customer Owned Generation ISO Energy Sales	154,466	37	154,429	100%
NCPA Contracts ISO Energy Sales	45,275	2,329	42,946	95%
Western Resource ISO Energy Sales	31,463	4,508	26,955	86%
Load Aggregation Energy Sales	-	2,699	(2,699)	
Ancillary Services Sales	9,295	45	9,250	100%
Transmission Sales	110	9	101	92%
Western Credits, Interest & Other Income	44,090	4,635	39,455	89%
	853,641	53,756	799,885	94%
NET ANNUAL BUDGET COST TO PARTICIPANTS	671,709	35,142	\$ 636,567	95%

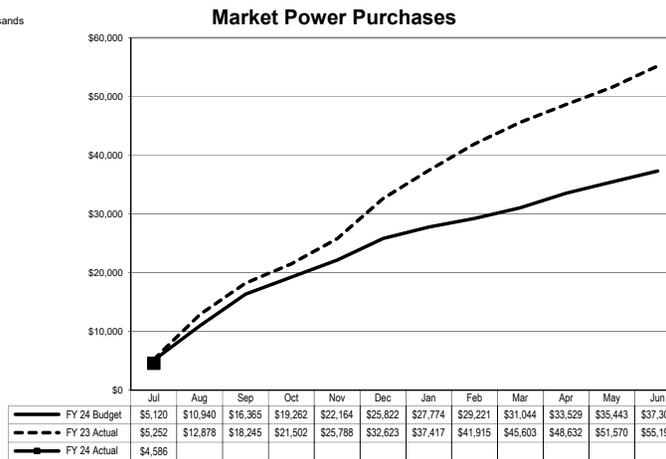
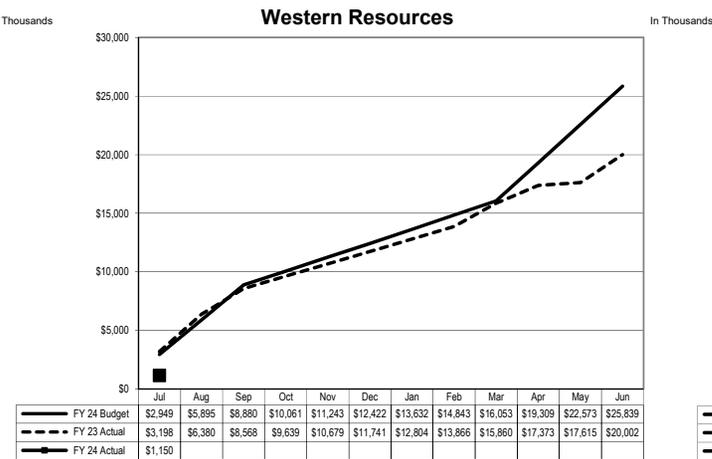
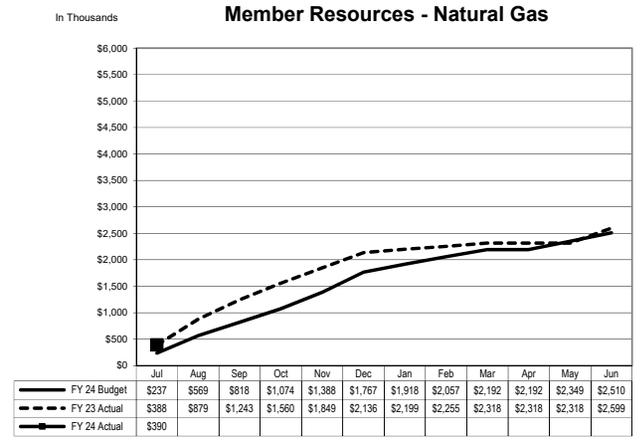
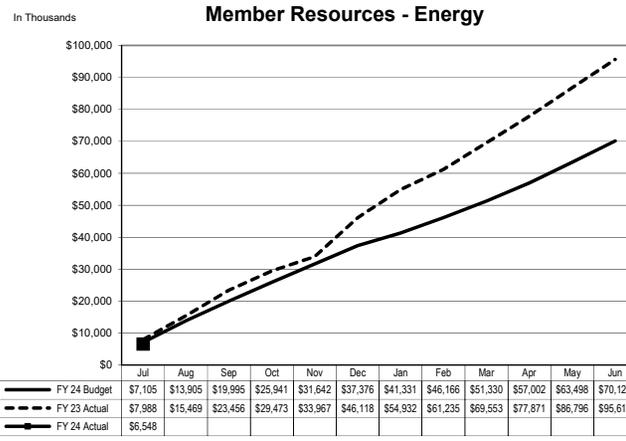
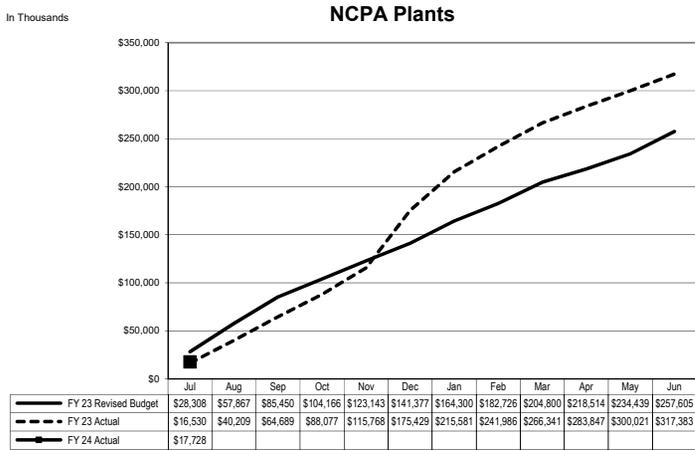


Annual Budget Budget vs. Actual By Major Area As of July 31, 2023

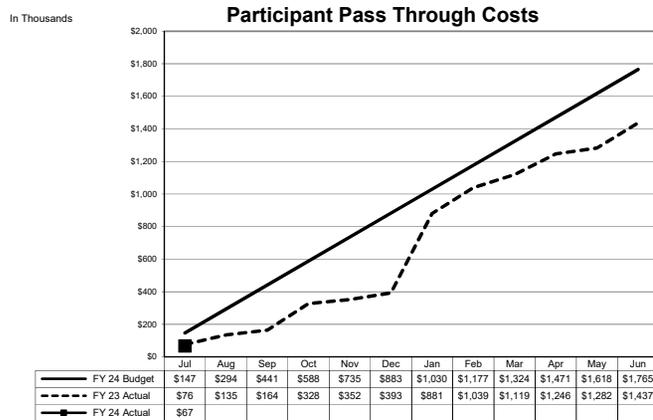
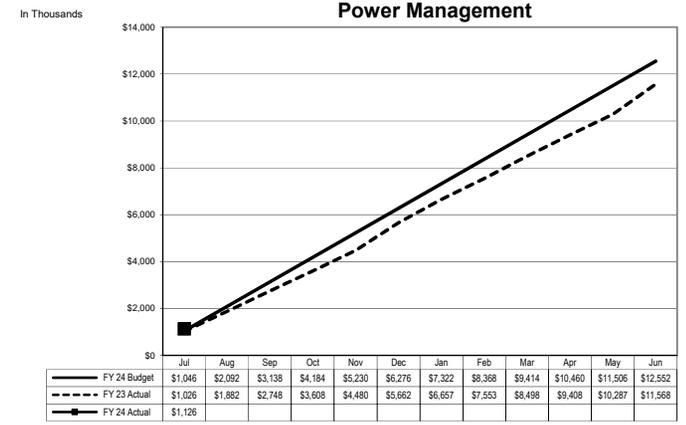
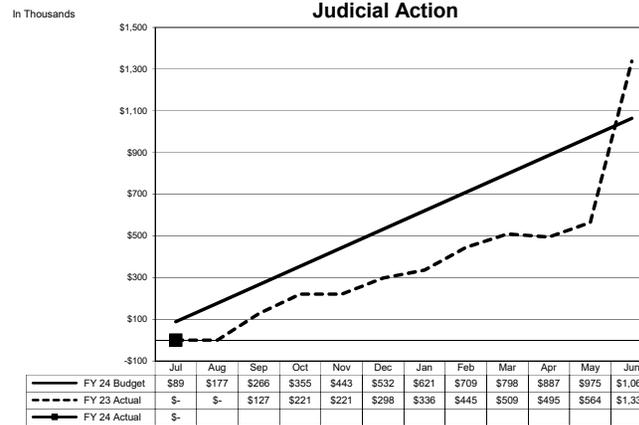
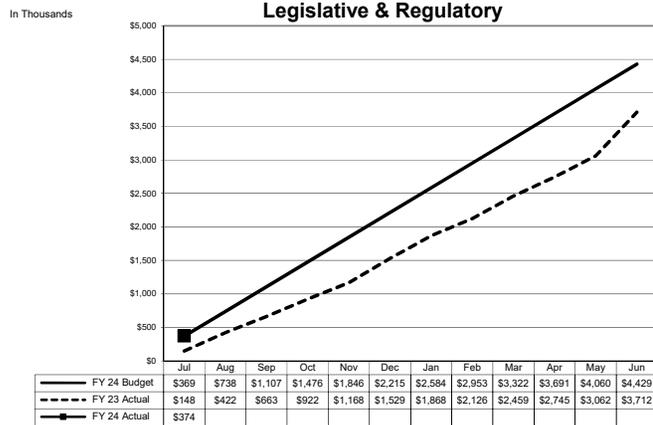


Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

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



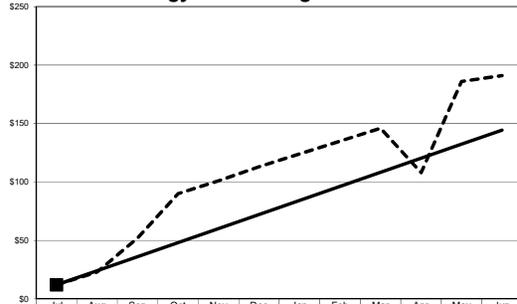
**Annual Budget Cost
Management Services Analysis By Source
As of July 31, 2023**



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

In Thousands

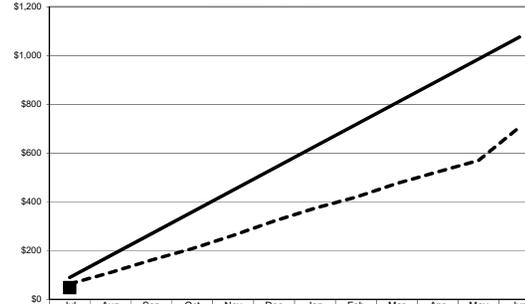
Energy Risk Management



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 24 Budget	\$12	\$24	\$36	\$48	\$60	\$72	\$84	\$96	\$108	\$120	\$132	\$144
FY 23 Actual	\$12	\$23	\$52	\$90	\$101	\$113	\$124	\$135	\$146	\$108	\$186	\$191
FY 24 Actual	\$12											

In Thousands

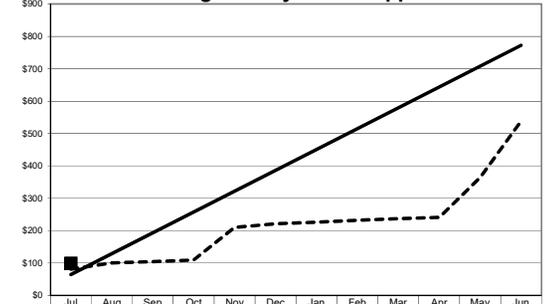
Settlements



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 24 Budget	\$90	\$179	\$269	\$359	\$448	\$538	\$627	\$717	\$807	\$896	\$986	\$1,076
FY 23 Actual	\$63	\$110	\$161	\$208	\$262	\$321	\$374	\$419	\$475	\$523	\$570	\$706
FY 24 Actual	\$48											

In Thousands

Integrated Systems Support

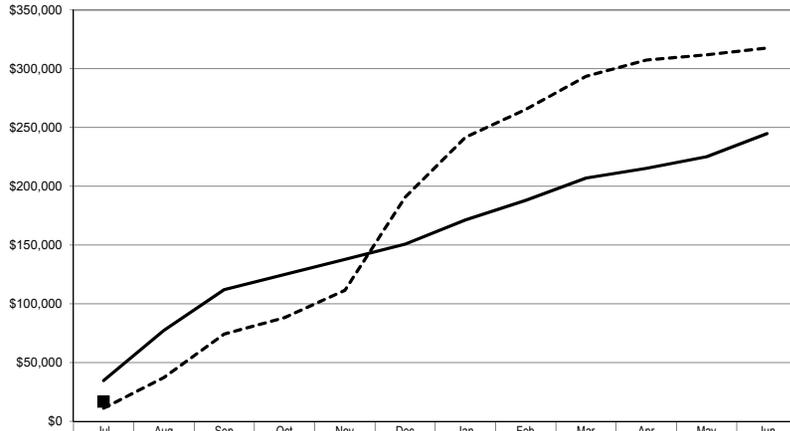


	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 24 Budget	\$64	\$129	\$193	\$257	\$322	\$386	\$451	\$515	\$579	\$644	\$708	\$772
FY 23 Actual	\$81	\$100	\$104	\$109	\$210	\$221	\$226	\$232	\$237	\$241	\$364	\$538
FY 24 Actual	\$99											

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

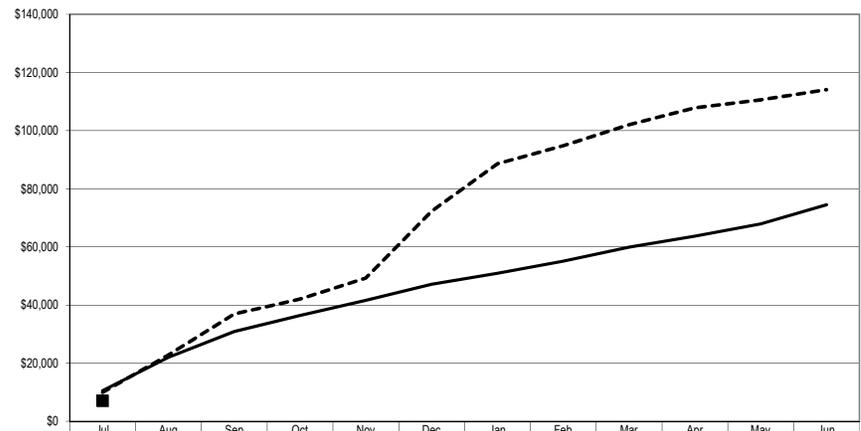
In Thousands

Plant ISO Energy Sales



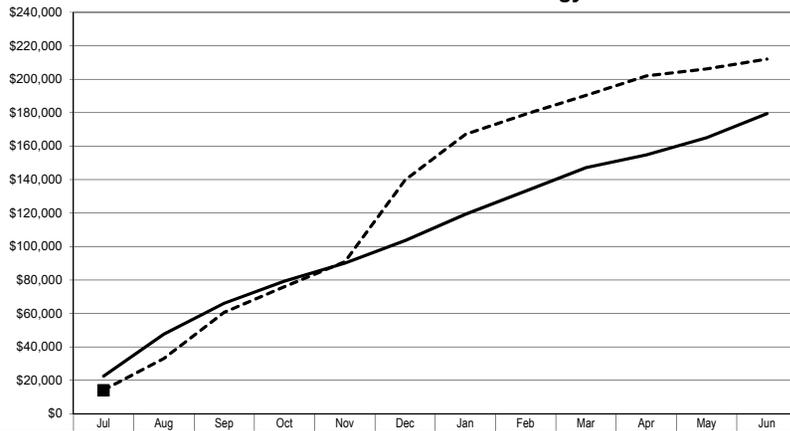
In Thousands

Member Resource ISO Energy Sales



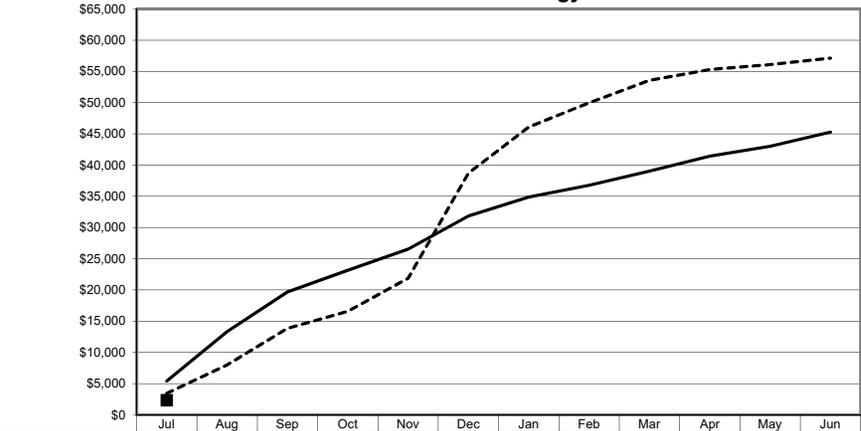
In Thousands

Member Owned Generation ISO Energy Sales

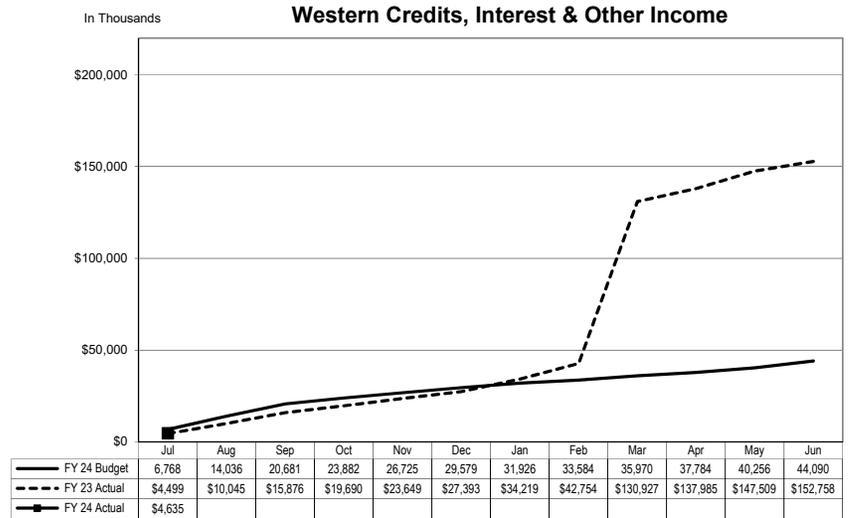
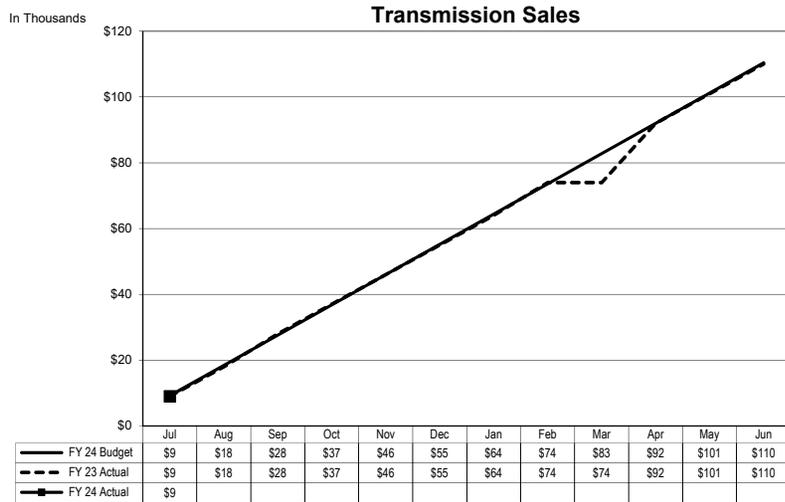
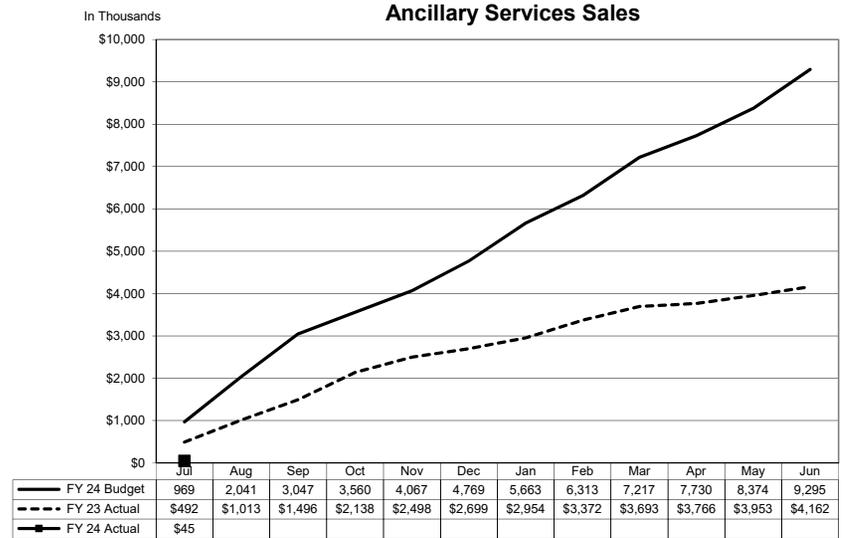
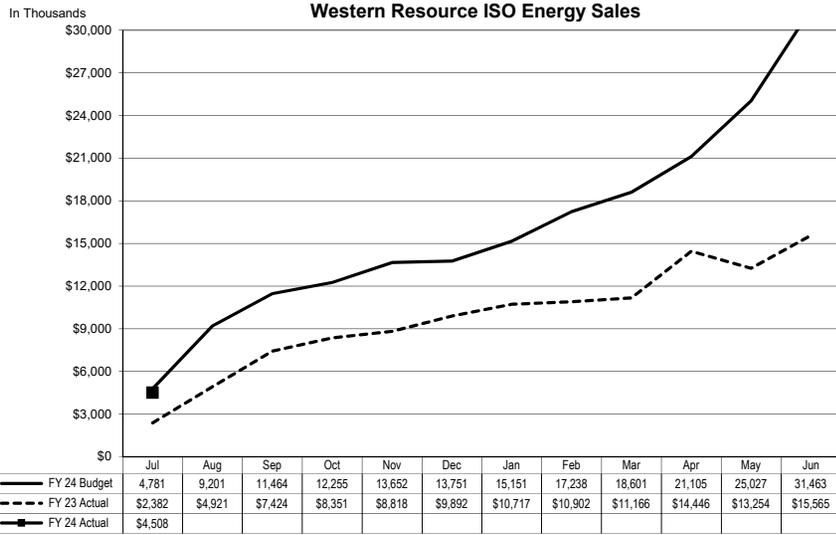


In Thousands

NCPA Contracts ISO Energy Sales



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



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

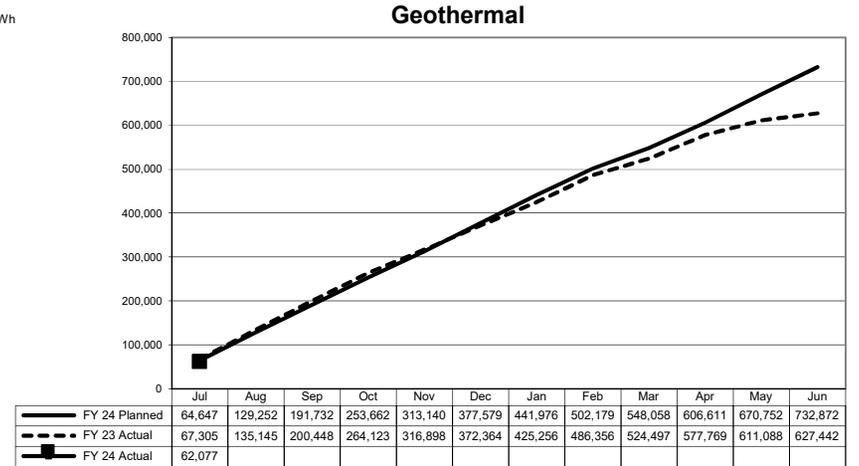
Generation Cost Analysis

\$ in thousands

	Geothermal				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
	Routine O & M	\$ 18,513	\$ 1,597	\$ 25.73	\$ 16,916
Capital Assets/Spare Parts Inventories	11,032	283	4.56	10,750	97%
Other Costs	12,998	925	14.91	12,072	93%
CA ISO Charges	984	53	0.85	931	95%
Debt Service	3,482	290	4.67	3,192	92%
Annual Budget	47,009	3,148	50.71	43,861	93%
Less: Third Party Revenue					
Interest Income	150	33	0.54	117	78%
ISO Energy Sales	65,632	3,565	57.43	62,067	95%
Ancillary Services Sales	-	-	-	-	0%
Effluent Revenues	750	-	-	750	100%
Misc	113	9	0.15	104	92%
	66,646	3,608	58.12	63,038	95%
Net Annual Budget Cost to Participants	\$ (19,637)	\$ (460)	\$ (7.41)	\$ (19,177)	98%
Net Generation--MWh @ Meter	732,872	62,077			
\$/MWh (A)	\$ (31.55)	\$ (12.08)			

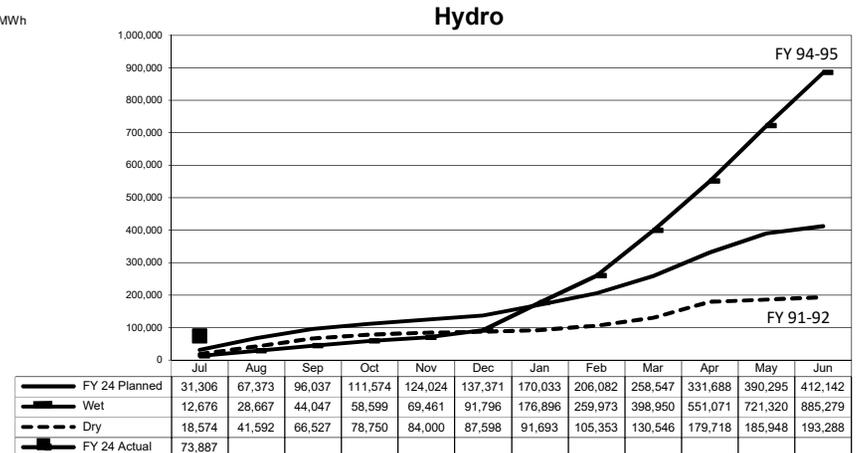
MWhs Generated

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
	Routine O & M	\$ 10,555	\$ 835	\$ 11.30	\$ 9,720
Capital Assets/Spare Parts Inventories	6,445	436	5.91	6,008	93%
Other Costs	4,706	334	4.52	4,372	93%
CA ISO Charges	1,298	339	4.59	959	74%
Debt Service	34,646	2,887	39.08	31,759	92%
Annual Budget	57,650	4,832	65.40	52,818	92%
Less: Third Party Revenue					
Interest Income	150	13	0.18	137	91%
ISO Energy Sales	47,892	5,089	68.88	42,803	89%
Ancillary Services Sales	4,579	21	0.29	4,558	100%
Misc	-	0	0.00	(0)	0%
	52,622	5,124	69.35	47,498	90%
Net Annual Budget Cost to Participants	\$ 5,029	\$ (292)	\$ (3.95)	\$ 5,320	
Net Generation--MWh @ Meter	412,142	73,887			
\$/MWh (A)	\$ (71.86)	\$ (43.03)			

In MWh



Footnotes:

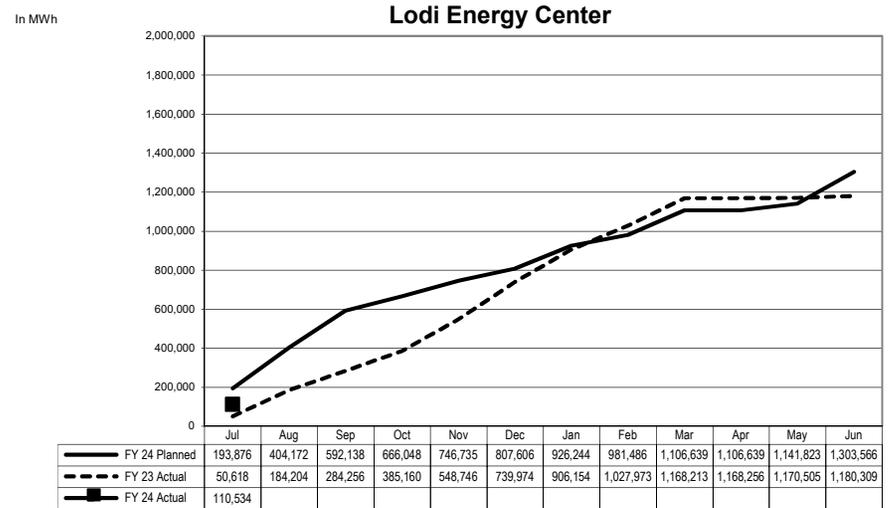
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

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

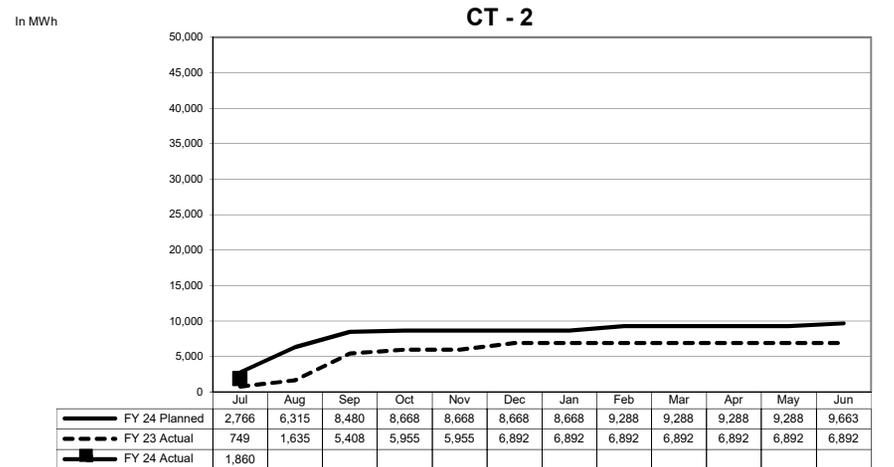
Generation Cost Analysis

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 10,580	\$ 1,093	\$ 9.89	\$ 9,488	90%
Fuel	71,518	4,211	38.10	67,306	94%
GHG Allowance Costs	13,985	37	0.33	13,948	100%
CA ISO Charges and Energy Purchases	1,364	410	3.71	953	70%
Capital Assets/Spare Parts Inventories	3,913	219	1.98	3,694	94%
Other Costs	9,445	517	4.68	8,928	95%
Debt Service	25,992	2,166	19.60	23,826	92%
Annual Budget	136,797	8,653	78.28	128,144	94%
Less: Third Party Revenue					
Interest Income	250	92	0.84	158	63%
ISO Energy Sales	123,919	7,789	70.46	116,130	94%
Ancillary Services Sales	2,011	13	0.11	1,998	99%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	13,612	37	0.33	13,575	100%
Misc	-	-	-	-	0%
	139,791	7,930	71.75	131,861	94%
Net Annual Budget Cost to Participants	\$ (2,994)	\$ 723	\$ 6.54	\$ (3,717)	124%
Net Generation--MWh @ Meter	1,303,566	110,534			
\$/MWh (A)	\$ (22.24)	\$ (13.06)			

MWhs Generated



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,674	\$ 129	\$ 69.51	\$ 1,545	92%
Fuel and Pipeline Transport Charges	1,177	55	29.66	1,122	95%
GHG Allowance Costs	171	-	-	171	100%
Capital Assets/Spare Parts Inventories	390	2	1.21	387	99%
Other Costs	728	47	25.53	681	93%
CA ISO Charges	19	20	10.61	(1)	-3%
Debt Service	5,058	422	226.60	4,637	92%
Annual Budget	9,217	675	363.12	8,542	93%
Less: Third Party Revenue					
Interest Income	42	27	14.42	15	36%
ISO Energy Sales	2,828	236	126.64	2,592	92%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	951	169	90.76	782	82%
GHG Allowance Credits	171	-	-	171	100%
Misc	-	-	-	-	0%
	3,992	431	231.82	3,560	89%
Net Annual Budget Cost to Participants	\$ 5,226	\$ 244	\$ 131.30	\$ 4,981	95%
Net Generation--MWh @ Meter	9,663	1,860			
\$/MWh (A)	\$ 17.30	\$ (95.30)			



Footnotes:

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

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

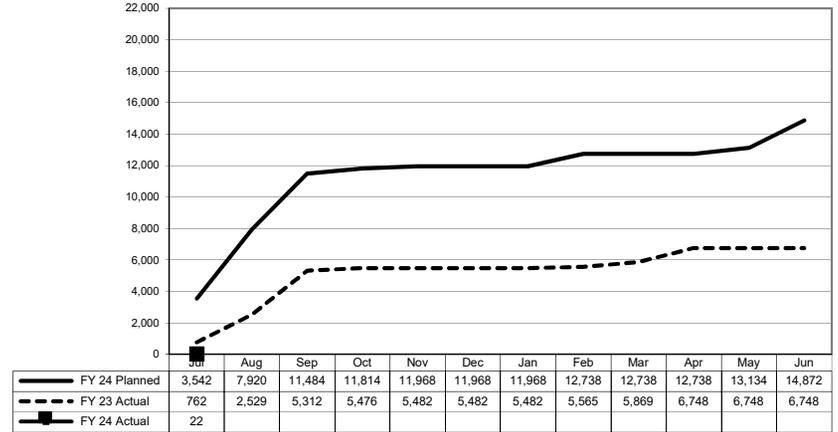
Generation Cost Analysis

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,597	\$ 203	\$ 9,049.60	\$ 2,394	92%
Fuel and Pipeline Transport Charges	2,388	0	1.83	2,388	100%
Capital Assets/Spare Parts Inventories	1,045	58	2,580.74	987	94%
Other Costs	852	66	2,933.36	786	92%
CA ISO Charges	50	93	4,176.90	(43)	-86%
Debt Service	-	-	-	-	-
Annual Budget	6,932	419	18,742.43	6,513	94%
Less: Third Party Revenue					
Interest Income	55	11		44	81%
ISO Energy Sales	4,552	139	6,200.56	4,413	97%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	-	-	-	0%
	4,607	149	6,200.56	4,458	97%
Net Annual Budget Cost to Participants	\$ 2,325	\$ 270	\$ 12,065.64	\$ 2,055	88%
Net Generation--MWh @ Meter	14,872	22			
\$/MWh (A)	\$ 156.32	\$ 12,065.64			

MWhs Generated

In MWh

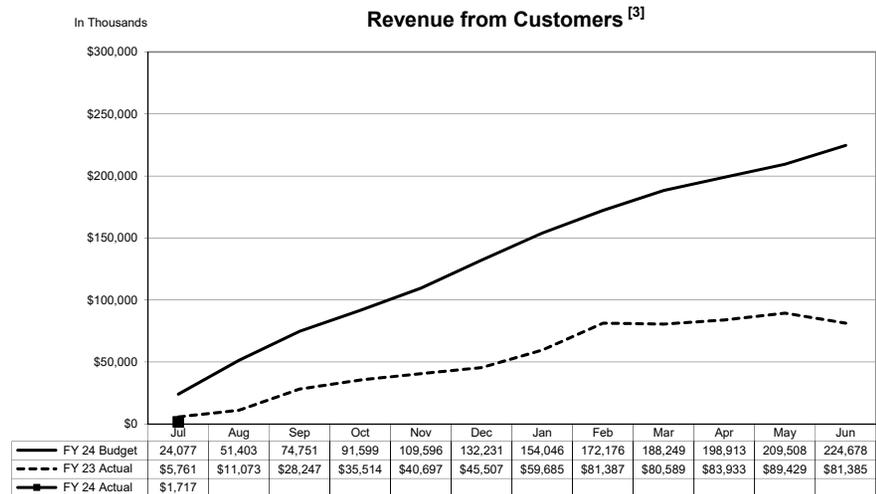
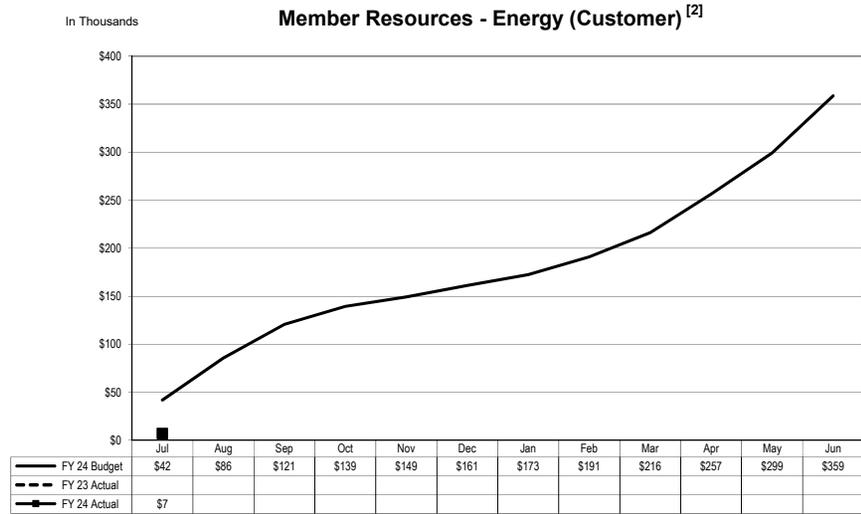
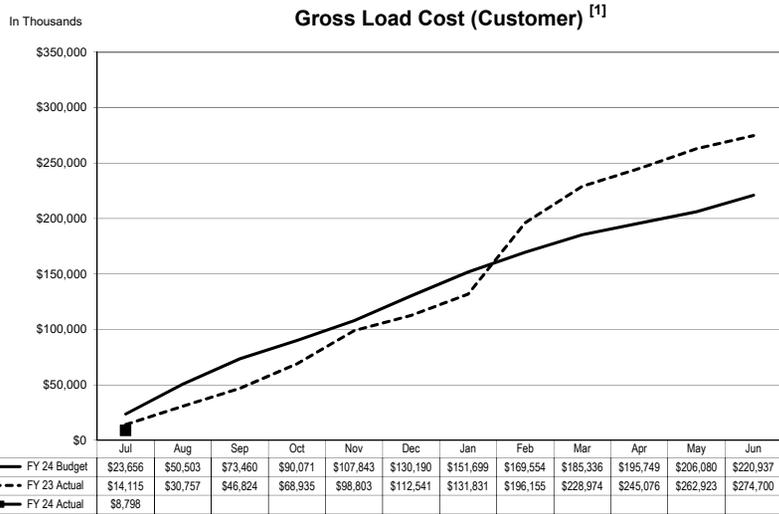
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Footnotes:

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

**Annual Budget Cost
NCPA Customers
As of July 31, 2023**



- Notes:
- 1 Energy purchased by customers
 - 2 Power generators and customer owned resources
 - 3 Pertains to all customers