



Northern California Power Agency
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BUSINESS PROGRESS REPORT

2023

June

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Generation Costs & Reliability

Combustion Turbine Project

Unit Operation for May 2023

Unit	Availability		Production		Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	0.0 MWh	CAISO / CAISO
	99.9%	99.9%	Unit 2	0.0 MWh	
Curtailments, Outages, and Comments:					
Unit 1:	5/31 @ 10:00 - 10:38; DOT pipeline emergency shutdown valve test, OMS 13650117				
Unit 2:	5/31 @ 10:00 - 10:38; DOT pipeline emergency shutdown valve test, OMS 13650124				
Unit	Availability		Production		Reason for Run
CT1 Lodi	49.25%		0.3 MWh		TESTING
Curtailments, Outages, and Comments:					
4/20 @ 14:43 - 5/16 @ 17:38; Ground fault on station service underground cable, OMS 13441657.					
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	90.6%		2,250 MWh		CAISO & TESTING
Curtailments, Outages, and Comments:					
5/09 @ 00:00 - 5/10 @ 23:20; Fuel gas leak repair, OMS 13532527 5/15 @ 15:55 - 5/16 @ 14:45; CTG excitation trouble, OMS 13572107					

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for May 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	100	%	6,732	MWh	U 4 down for maint. outage
Southeast Geysers Effluent Pipeline	95	%	182.05	mgallons	Average flow rate: 4,022 gpm
Southeast Solar Plant	N/A		128,614	KWh	Year-to-date KWh: 1,502,653
Bear Canyon Pump Station Zero Solar	N/A		124,314	KWh	Year-to-date KWh: 1,111,425

* Accounts for an additional 1,674 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for May 2023

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	95.51%	63411 MWh	CV Unit 1 – Out of Service on 5/22/23 to 5/24/23 from 2221 to 0750 for High Tailwater
Collierville Unit 2	94.92%	62657 MWh	CV Unit 2 – Out of Service on 5/3/23 from 1336 to 1713 for Bearing Oil Supply trouble and on 5/21/23 from 0633 to 1701 for Bearing Oil Supply Trouble and on 5/22/23 to 5/24/23 from 2222 to 053 for High Tailwater
Spicer Unit 1	98.36%	360 MWh	NSM1- Out of Service on 5/21/23 from 0752 to 2006 for PGE work at Salt Springs
Spicer Unit 2	98.36%	302 MWh	NSM2- Out of Service on 5/21/23 from 0752 to 2006 for PGE work at Salt Springs
Spicer Unit 3	96.29%	185 MWh	NSM3- Out of Service on 5/21/23 to 5/22/23 from 0752 to 1132 for PGE work at Salt Springs

Operations & Maintenance Activities:

- CMMS work orders
- Winter Access Issues

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

- There were no Lost Time, or Cal OSHA Recordable accidents in the month of May. There was one vehicle accident. On May 5, a vehicle crossed over into the lane of a Geo employee driving up to the facility, and made contact with the employee's vehicle. There were no injuries reported with the accident however there was some damage to the employee's company-assigned vehicle.
- 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 May 20, 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.

May 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	921	110	2,966	3,950
Work Hours Since Last Recordable	81,065	23,522	448,038	2,951,416
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	5,700	2,829	10,870	6,963
Work Hours without LTA	513,634	286,496	859,582	2,573,434
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 May 20, 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

	May 2023		Calendar Year 2023	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	329.08 5/16 @ 1800	179,822	331.16 2/27 @ 1200	915,146
SVP	667.13 5/19 @ 2200	383,671	667.13 5/19 @ 2200	1,869,746
MSSA	962.76 5/19 @ 1900	563,493	962.76 5/19 @ 1900	2,784,892

Last Year 2022 Data*

	May 2022		Calendar Year 2022	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	392.74 5/25 @ 1700	184,129	511.56 9/6 @ 1600	895,639
SVP	619.25 5/25 @ 1500	378,117	687.74 9/6 @ 1300	1,806,979
MSSA	1006.73 5/25 @ 1600	562,246	1176.2 9/6 @ 1400	2,702,618

*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	331.16 2/27 @ 1200
SVP	687.74 MW on 9/6/22 @ 1300	667.13 5/19 @ 2200
MSSA	1176.20 MW on 9/6/22 @ 1400	962.76 5/19 @ 1900

- 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		
	May 2023	Calendar Year 2023
MSSA % Within the Band	89.47%	96.88%

CAISO sent an overgeneration (oversupply) notice for HE11-16, 5/7/23
 CAISO sent an overgeneration (oversupply) notice for HE15, 5/8/23

Pooling, Portfolio Planning & Forecasting

- NCPA Pool loads during May 2023 were 179,822 MWh versus the budget forecast of 188,355 MWh, resulting in a forecast error of 4.75%. The current weather outlook for June 2023 is for below normal temperatures and average rainfall. The Pool's June load forecast is 197,383 MWh compared with extrapolated actuals of 194,391 MWh as of May 16, 2023.
- Lodi Energy Center (LEC) ran 19 hours and produced 2,250 MWh. Due to the abundance of hydro generation LEC is expected to run very little during June.
- During May 2023, 0.93" of rain was recorded at the Big Trees gauge. May average rainfall at Big Trees is 1.26". New Spicer Meadows storage increased by just over 72,900 acre feet in May.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been maintained at \$90/MWh. Releases from NSMR have been held closer to minimums for the majority of May (this due to lower elevation snowmelt and increased river side flows below NSMR).
- New Spicer Meadows storage as of May 31, 2023 was 141,803 acre feet. The historical average storage at the end of May is 138,307 acre feet. As of June 21st, storage was 188,585 acre feet.
- Combined Calaveras Project generation for the Pool in May 2023 totaled 63,321MWh, down from 77,913MWh in April 2023.
- Western Base Resource (BR) deliveries for the Pool during May 2023 were 77,160 MWh. Displacement program energy totaled 5,226 MWh. The Pool's share of expected total delivery from the Western Base Resource for June 2023 is 63,447 MWh, with 40,183 MWh having been delivered through June 19, 2023.
- The PG&E Citygate gas index averaged \$3.84 / MMBtu during the month of May as compared to an average of \$5.57 for April. June's 2023 average City Gate gas price is \$2.97 through the 19th. The July 2023 PG&E Citygate forward price is \$4.56 / MMBtu.
- Day-Ahead PG&E DLAP electricity prices for May averaged \$21.53 / MWh On-Peak and \$18.59 Off-Peak, with a high of \$103.84 and a low of -\$19.51. DLAP prices have averaged \$28.05 On-Peak and \$8.83 Off-Peak for the period June 1st through the 19th, with a low price of -\$7.57. The forward power prices for July are \$79.83 On-Peak and \$6.79 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 August 2023:
 - Monthly System Resource Adequacy Demonstration (filed June 17, 2023)
 - Monthly Supply Plan (filed June 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 RA Workshop: Current Processes and Interoperability with the CPUC's Slice of Day Reform

CAISO provided an overview of the CAISO RA program and processes. PG&E provided an overview of the CPUC Slice of Day framework. Stakeholders discussed CAISO-specific questions that arose in the CPUC's Slice of Day workshops and discussed CAISO's approach to collect information on Slice of Day for RA Year 2024 and address compliance as a part of RA Enhancements for RA Year 2025. CAISO gave other LRAs in the CAISO footprint an opportunity to share any near-term changes being considered to their RA programs (e.g., PRM and resource counting).

NCPA's comments are summarized as follows:

- NCPA concurs with CAISO's approach to treat the CPUC's Slice of Day reform (test year) as informational only.
- NCPA is especially appreciative of CAISO's recognition that not all CAISO LSEs are CPUC-jurisdictional, and that any potentially significant changes to the Resource Adequacy program embodied in the CAISO Tariff will affect all LSEs in the CAISO and will require the participation and buy-in of the non-CPUC-jurisdictional LSEs.
- NCPA further supports CAISO's view that a deliberative approach to RA reform is the best policy, and that any material changes to the Resource Adequacy program embodied in the CAISO Tariff will need to be coordinated with the evolving Day Ahead Market Enhancements and Extended Day Ahead Market policy initiatives. NCPA looks forward to participating in this process.
- The LRAs for each of NCPA's members have all adopted Resource Adequacy programs that meet or exceed the existing default criteria in the current CAISO Tariff. NCPA believes that these programs have functioned well. NCPA, and its members, are also following with great interest the California Energy Commission proceeding charged with reviewing and possibly revising the Planning Reserve Margin recommendations for California LSEs. To the extent that the outcome of that proceeding requires a change in the PRM, NCPA anticipates that its member LRAs would fully consider any recommended or required adjustments. NCPA is not currently aware of whether any of its member LRAs are contemplating a slice-of-day approach. NCPA expects that member RA programs will evolve to incorporate all applicable requirements. NCPA will therefore be involved in the proposed Resource Adequacy Enhancements stakeholder process, to ensure that any proposed tariff changes meet its members' needs.

Draft Tariff Language Day Ahead Market Enhancements

- NCPA provided redlines and comments clarifying certain cost allocation provisions specific to NCPA's status as a Load Following Metered Subsystem such as its loads' exemption from Residual Unit Commitment costs and netting imbalance reserve product costs based on its balanced portfolio.

Capacity procurement mechanism enhancements

The initiative is comprised of at least two tracks. Track 1 addresses five operational and process enhancement issues, and the California ISO is planning to take Track 1 for approval at the March 2023 Board of Governors meeting. Track 2 will re-examine the Capacity Procurement Mechanism (CPM) soft offer cap and will likely require a longer stakeholder process.

CAISO held a stakeholder workshop for Track 2 on May 11, 2023. The CAISO tariff requires CAISO to open a stakeholder initiative every four years at the latest to examine the CPM soft offer cap and consider whether it needs to be changed. Such examination is due in 2023. CAISO is not proposing to update Tariff provisions at this time so more substantial CPM and resource adequacy reforms will be considered in subsequent tracks and initiatives. CAISO went on to provide background on CPM and its methodology utilizing the CEC Cost of Generation Study and Model of a merchant-constructed mid-cost, 550 MW combined cycle with duct firing or similar advanced combined cycle resource that resulted in a Calculated Soft Offer Cap Price of \$75.67/kW-year. CEC updated inputs for its existing model resulting in \$88.09/kW-year.

NCPA submitted comments generally in support of CAISO's proposals. Comments are summarized as follows:

- NCPA supports continued use of existing Tariff 43A.4.1.1.2 requirements to calculate CPM Soft Offer Cap by utilizing the CEC cost of generation model for calculating the levelized going forward fixed cost of energy of a merchant-constructed mid-cost, 550 MW combined cycle with duct firing or similar advanced combined cycle resource. More specifically, NCPA supports the track 2 scope to continue calculating the CPM Soft Offer Cap based on the updated CEC-provided figures using the ISO tariff-defined methodology and formula: $120\% \times \text{levelized going-forward fixed costs of 550 MW combined cycle with duct firing}$. NCPA does not support using a different reference resource at this time (e.g., storage resources) to calculate the CPM Soft Offer Cap.
- NCPA supports the fixed cost outputs from the CEC cost of generation model and the levelized going forward fixed cost of energy principle serving as the basis of the CEC model. Using the levelized cost of a 550 MW gas turbine continues to be reasonable. While NCPA recognizes that storage resource CPM procurement has increased during the recent year, a majority of CPM procured capacity is still supplied by natural gas fired generation, and natural gas fired generation still represents a majority of the generation capacity installed in the CAISO BAA.

- NCPA supports the CPM Track 2 proposed scope which is to consider whether the CPM Soft Offer Cap should be updated based on CEC-provided figures using the ISO tariff-defined methodology and formula: 120% x levelized going-forward fixed costs of 550 MW combined cycle with duct firing. NCPA supports targeting Board approval in Q1 2024.

Western

- Recently the Major Projects and Planning Committee (MPPC) chair position became vacant, NCPA has agreed to fill the vacancy of MPPC chair to support the WBR.
- NCPA Pool received 82,386 MWh of Base Resource (BR) energy in May 2023. This includes displaced energy of 5,226 MWh. Estimated MEEA savings is \$79,300 and estimated displacement savings is \$53,600.
- June 2023 WAPA Twelve-Month Rolling Forecast of CVP Generation and Base Resource.
 - FY 2023 BR Generations (actuals October 2022 through May 2023; projection June 2023 through September 2023)
 - Projected FY23 BR Generation using 90% forecast is about 25% below the historical average.
 - Projected FY23 BR Generation using 50% forecast is about 20% 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 June through December 2023 is about 35% than the BR received during WY2017.
- 2023 Integrated Resource Plan
 - 5-Year Plan for 2024 – 2028 and Annual Update for 2022 is due on July 1, 2023.
 - Second draft was sent to members on 6/2. Comments are due on Wednesday 6/14.
- Re-initiation of Consultation of the Long-Term Operations (ROC on LTO) – Trinity Component
 - Staff presented Reclamation’s update on ROC on LTO from the May 2023 CVP Customer Meeting.
 - 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 opinions 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 in the process of drafting the Environmental Impact Statement – Preliminary Alternatives.

- WAPA has recently become involved in the Trinity component of the ROC on LTO.
 - WAPA, a cooperating agency will advocate for a due diligence consideration of Power benefits in the alternative selection and throughout the ROC on LTO process.
 - A small group of power customers including NCPA is actively participating in discussions with WAPA.
- Reclamation provided the draft alternatives for the Trinity Component of the ROC on LTO on June 5, 2023. There is a three week comment period. WAPA requested more time to review/comment but no updates yet.
 - WAPA is meeting with power customers to discuss the Trinity alternatives on 6/9.
 - WAPA will have a follow up meeting with Reclamation the week of 6/12.
- WAPA summary of issue and Trinity Power Subgroup Meeting:

Reclamation is seeking to reevaluate the operations of the CVP due to environmental laws and regulations. This process is referred to as the Re-initiation of Consultation on the Long-Term Operation (ROC on LTO) (See Background Below). Reclamation is seeking to complete the Record of Decision (ROD) for the ROC on LTO in Feb 2024 by selecting one of the 4 proposed alternatives. The outcome of this may have significant impacts to the power benefit of the CVP. WAPA has recently become involved in the Trinity component of the ROC on LTO. Reclamation is set to provide a document, at the end of May, to describe draft alternatives for the Trinity component of the ROC on LTO. WAPA is a cooperating agency and will advocate for a due diligence consideration of Power benefits in the alternative selection and throughout the ROC on LTO process. Reclamation has stated there will be a three week “red flag” comment period on the draft alternatives. NCPA is concerned that is not sufficient time and have communicated that to Reclamation. The issue is being elevated to the regional leadership level.

- Background on ROC on LTO:
 1. Reclamation's Federal Register Notice of Intent to prepare an EIS from February 2022 --[Federal Register :: Notice of Intent To Prepare an Environmental Impact Statement and Hold Public Scoping Meetings on the 2021 Endangered Species Act Re-initiation on Section 7 Consultation on the Long-Term Operation of the Central Valley Project and State Water Project](#)
 2. Reclamation's website that houses information related to the 2021 ROC on LTO where you can find the Scoping Report that was released in June 2022, among other resources --[2021 Consultation on the Coordinated LTO of the CVP and SWP | BDO | Area Offices | California-Great Basin | Bureau of Reclamation \(usbr.gov\)](#)
- Background to the Trinity Component of ROC on LTO:

[Trinity County Board of Supervisors 05-16-2023 - YouTube](#)
Starting at 00:21:30
Focus on Alternatives at 01:53:00
- Background to the Trinity River Restoration Program
<https://www.trrp.net/>

Interconnection Affairs

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.

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
- Refunds could be allowed as early as June 20

2022-2023 Transmission Planning Process

- CAISO presented their draft transmission in April of 2023. CAISO found the need for 46 projects totaling ~\$9.3B:
 - 24 reliability driven projects - \$1.8B
 - 22 policy driven project – \$7.5B
 - No Economic projects
- May 2023, the CAISO presented its revised draft transmission plan for approval at the Board of Governors meeting
- The revised plan identified 45 projects totaling ~\$7.3B

- Board of Governors approved the revised transmission plan. Approval authorizes cost recovery for the 45 projects through CAISO transmission rates and initiates competitive solicitation process for three policy driven projects
- The Trout Canyon-Lugo 500 kV Line project, totaling \$2 billion, was initially recommended as a policy-driven project eligible for competitive solicitation, but was held back pending additional analysis of stakeholder input. It may be considered as an extension to this planning cycle or in the next planning cycle
 - The delay arose in part from an April 25, 2023 submittal from a developer, Lotus Infrastructure Partners to consider an alternative project (the Mead-Adelanto Project Upgrade). This project converts an existing HVAC to a HVDC operation, increasing capacity from 1,291 MW AC to 3,500 MW DC
 - NextEra, Grid Liance and C.O.R.D. (Coalition for Renewal Development) responded against Lotus' project in May 2023 based on both procedural grounds (submitted too late) and on the effectiveness of the project
- NCPA opposed projects based on a sensitivity portfolio approval including the Trout Canyon-Lugo project
- NCPA Filed comments/letter at May BOG Meeting stating:
 - With \$7.3 billion in estimated new investment, the Revised Draft 2022-2023 Transmission Plan will be the most expensive plan in CAISO's history
 - Highlighted the high voltage transmission access charge will increase from under \$15/MWh today to over \$22/MWh in a decade
 - Several projects being considered for approval would not be justified considering the base case alone, but rather are being proposed because of information provided in sensitivity cases
 - CAISO correctly held back the Trout Canyon-Lugo 500 kV project, which was not shown to be needed in the base case studies. Other projects, too, could be held back or re-evaluated in a future plan as key study assumptions continue to evolve
 - NCPA urges the Board to ensure that it is taking all appropriate steps to evaluate whether each project being approved is the most cost-effective way to meet California's transmission needs, and that the plan remains consistent with realistic forecasts and changing system conditions over time
- Final transmission plan will be posted on June 30, 2023

CPUC Resolution E-5252

- Two negotiated processes related to FERC TO rate cases are set to expire at the end of 2023
 - PG&E's Stakeholder Transmission Asset Review (STAR)
 - SCE's Stakeholder Review Process (SRP)
- Current stakeholder processes for IOU self-approved projects are temporary and inconsistent
- CPUC approved Resolution E-5252 in April 2023 to establish the Transmission Project Review Process to be effective Jan 01, 2024
- E-5252 and the TPR Process are needed due to:
 - Substantial escalation in electric transmission investment
 - Utility Self-Approved projects, currently comprised of 63% of transmission capital additions, are not reviewed and approved by the CAISO or the CPUC
 - Robust transmission data will benefit numerous Commission programs and proceedings (including at FERC) and will increase the transparency of transmission capital investments
- Items excluded from the Transmission Review Process are as follows:
 - Not a venue to reconsider CAISO approved projects
 - TPR dispute resolution procedure are limited to implementation of the TRP itself
 - E-5252 does not invoke Commission ratemaking authority over transmission assets or for the Commission to conduct transmission planning, which both fall under FERC jurisdiction

Debt and Financial Management

- At their June meeting, the Federal Reserve announced a pause in interest-rate hikes, leaving rates at 5% to 5.25% after more than a year of consecutive rate increases. Even with the pause, Fed officials suggest further increases may come depending on how close the economy gets to their target of 2% inflation.
- The inflation rate cooled in May to its lowest annual rate in more than two years. The consumer price index increased just 0.1% for the month, bringing the annual level down to 4% from 4.9% in April. That 12-month increase was the smallest since March 2021, when inflation was just beginning to rise to what would become the highest in 41 years.
- The final property loss calculation for Geo's Unit 4 claim was agreed by both parties at a total loss of \$1,997,850. After the \$1 million deductible, FM Global sent NCPA \$997,850 which was deposited into the Geo Maintenance Reserve per the second amendment to Resolution 21-109.

Schedule Coordination Goals

Software Development

- Applications and Enhancements
 - Machine Learning aka Artificial Intelligence image classification using Power Automate was implemented to aid in the streamlining of the Settlements process. This enabled the automated validation of SCADA versus third-party meter values in order to identify correct SQMD for the ARB.
- Integrations
 - On-going various new resource integrations for EBCE, the Pool, and SJCE for end of Q2 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. IS developed a prototype enhancement in ReQLogic in preparation to the GL Accounts Restructuring.

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.
- IS has selected a candidate for the open vacant SCADA Analyst position and is expected to start in mid-July.
- Operations and Support has successfully completed the Enterprise VOIP transition which for the first time in NCPA history all locations are using the same phone product solution and is completely integrated with one another.
- IS has replaced the firewall at Murphys Hydro with the latest refreshed hardware that will be supported over the next several years. Other plant locations will have their firewalls replaced over the coming months.
- IS has completed a project to migrate production datacenter data to a new Storage Array Network (SAN) as the old hardware was coming off support.

NCPA Bills & Settlements

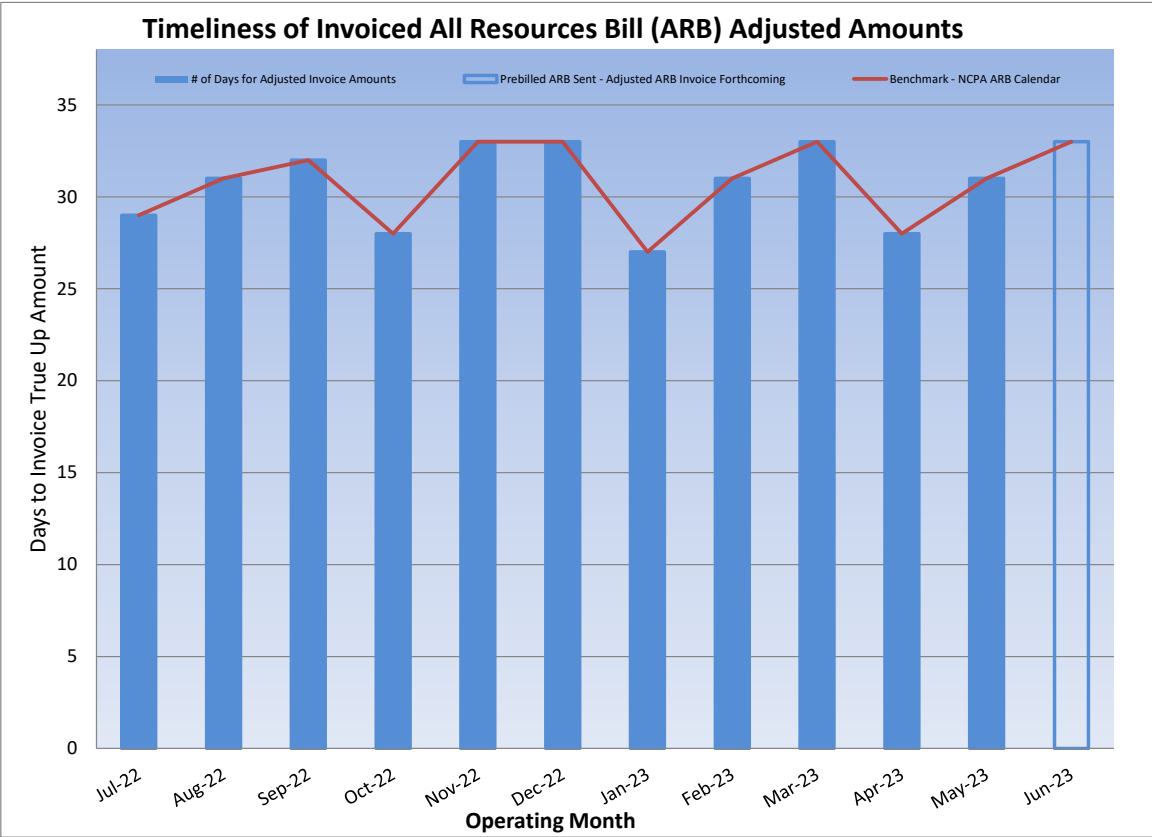
Progress Against the Strategic Plan

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 June 2023 NCPA All Resources Bill (ARB) monthly invoice sent to members on May 23, 2023 contains:

- June 2023 monthly pre-billed budget/forecast amounts;

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



Legislative & Regulatory

Customer Programs Update:

- NCPA issued a Request for Proposals (RFP) on May 3, 2023 seeking telematics based Electric Vehicle (EV) charging management solutions for residential, commuter, and commercial fleet EV charging in Member service territories. The program will support member utility efforts to shift EV charging to high renewable production, low-cost periods and away from on-peak, high carbon-intensive periods of the day, based on utility needs and/or customer preferences. Responses are due by June 21, 2023, and agreements are expected to be in place by September 2023.

Legislative Update:

- Last week, with valuable support from NCPA General Counsel Jane Luckhardt and CFO Monty Hanks, NCPA submitted a comment letter to the Internal Revenue Service (IRS), requesting the IRS state clearly in their clean energy tax credit guidance that joint power agencies are eligible for direct pay provisions within the Inflation Reduction Act (IRA). The comment letter was prepared by Mark Warren, a tax attorney from the Law Firm of Brownstein, Farber, Hyatt and Schreck, and former chief tax counsel to the Senate Finance Committee, who spoke to NCPA and NWPPA members during our recent Federal Policy Conference in Washington DC. On Wednesday, June 14th, the IRS published their IRA clean energy tax credit guidance.
- We are pleased that the stakeholder feedback section accompanying last week's IRS guidance included our suggestion that joint action agencies should qualify as "political subdivisions"—a category of "applicable entities" eligible for direct pay. Although the IRS did not conclude yet that "joint action agencies" are expressly eligible, the IRS did request comment within the next 60 days about consideration of eligible entities as put forward in the stakeholder feedback. NCPA intends to submit comments, echoing the points made in our letter, and arguing that under the existing definition of "applicable entities" in the IRA, joint power agencies like NCPA are "political subdivisions," and are thus eligible. National Conference:



- APPA National Conference: In June, a dozen members of the NCPA delegation attended the American Power Association's National Conference that was held in Seattle, Washington. The conference is the largest public power event held each year and offers NCPA and its members an opportunity to gain insights from industry leaders and experts as well as showcase various projects that NCPA and its members undertaking. NCPA's hydrogen efforts at Lodi Energy Center were highlighted by incoming APPA Board President during his opening remarks and will be showcased later this summer as part of a \$100,000 grant that NCPA received from APPA earlier this year. Earlier at the conference, Lodi Utility Director Jeff Berkheimer led a panel discussion about work being done at Lodi to develop an urban microgrid.

Human Resources

Hires:

Juan Avelar joined NCPA's Geothermal Facility as an Operator Technician III, effective May 22, 2023. Juan joins us from Calpine, where he was a Geothermal Power Plant Operator. In this role, he monitored and operated power plants during startups, normal operations, and shutdowns. Juan's daily duties also included operating Chemical and Combustion Burner Abatement systems and maintaining water chemistry in the Power Plant Cooling Water system. Before working at Calpine, Juan served in the United States Navy as a Nuclear Machinist Mate. Juan brings 13 years of experience.

Intern Hires:

The Agency welcomed Lauren Kalsbeek, Student Assistant III, on May 16, 2023. Lauren will spend the summer interning with the City of Redding.

Rileen Maydwell joined NCPA Headquarters on May 30, 2023, as a Student Assistant III (Human Resources).

Katie Tozier joined NCPA Headquarters on June 12, 2023, as a Student Assistant III (Communications, Legislative and Regulatory).

Brandon Venethongkham joined NCPA's Lodi Energy Center on June 12, 2023, as a Student Assistant III.

Promotions:

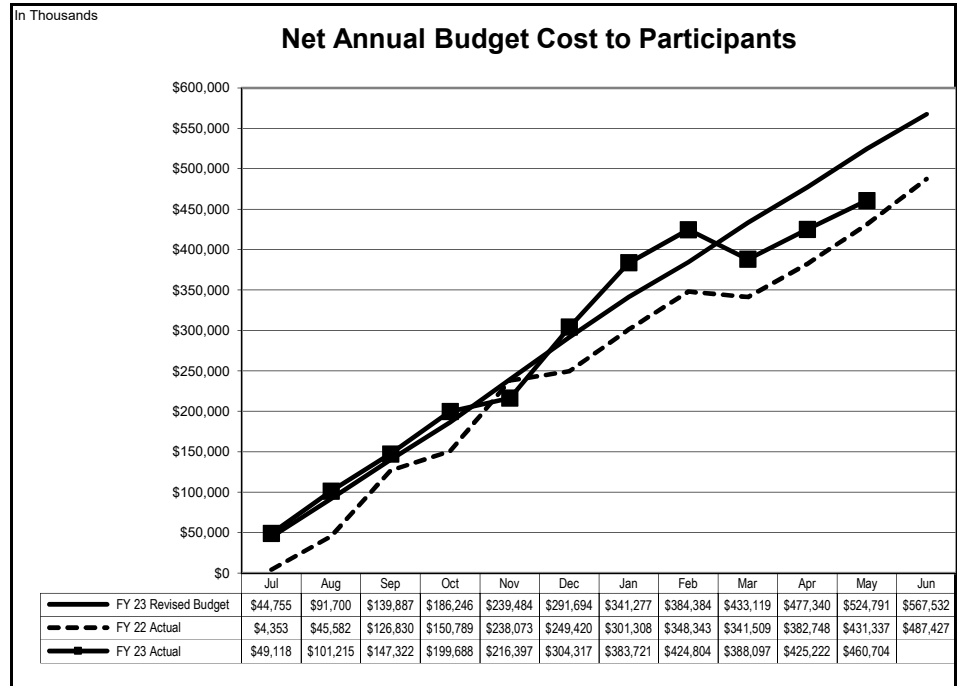
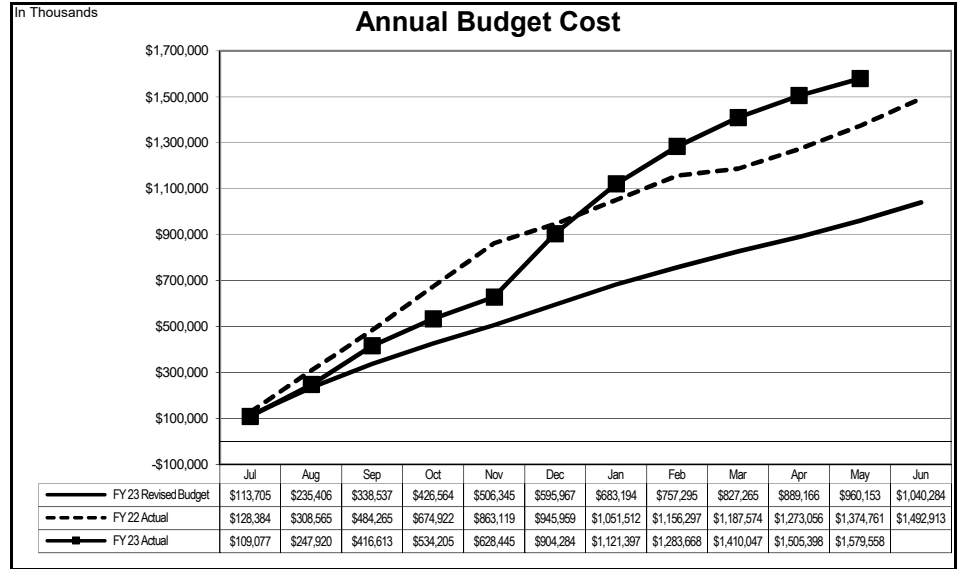
None.

Separations:

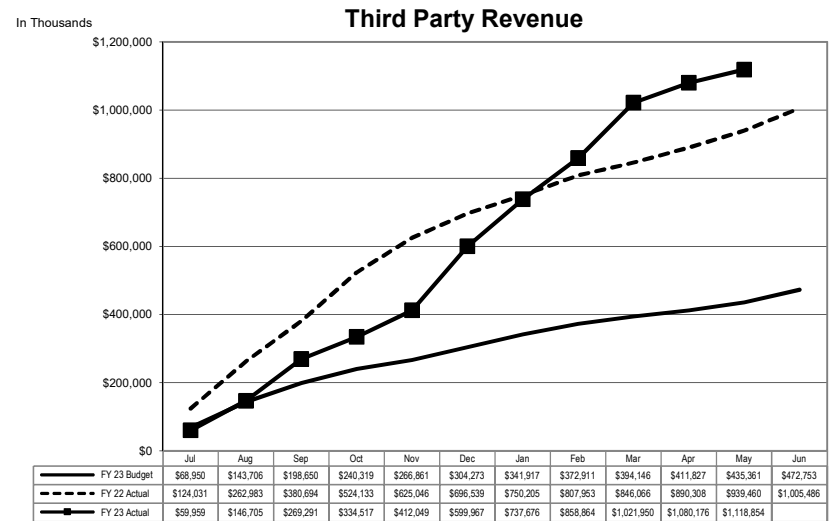
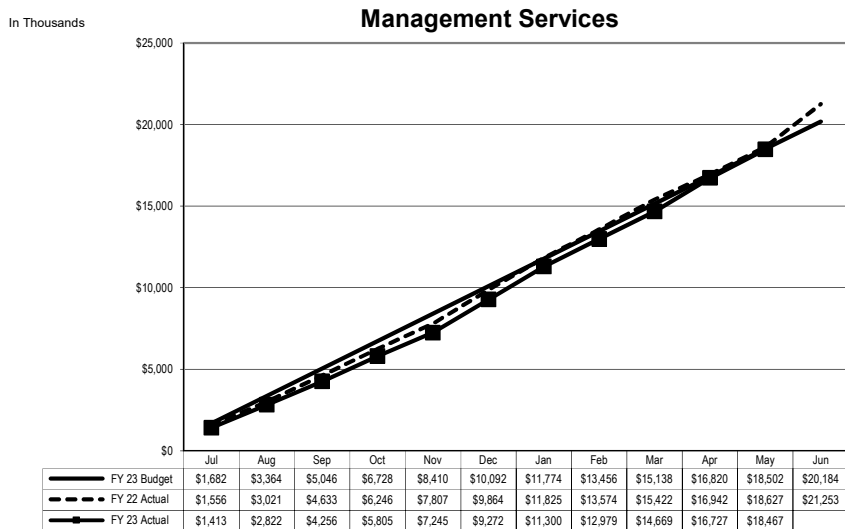
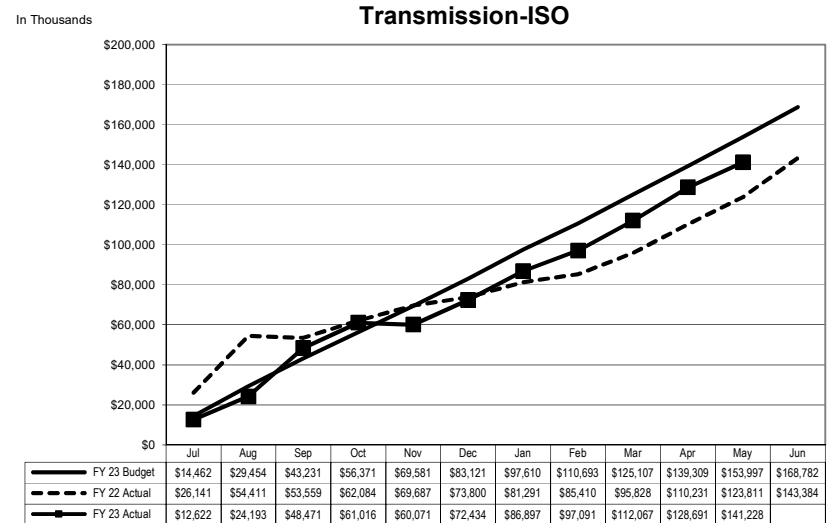
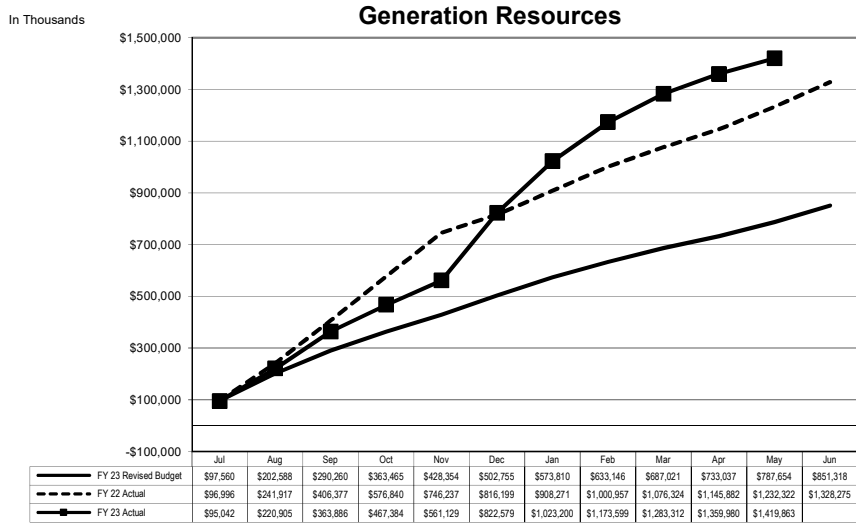
Maria Wong Chang resigned from her position as Power Settlements Analyst I at our Headquarters office on June 1, 2023.

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

In Thousands	Program			
	Revised Budget	Actual	Under(Ovr) Budget	YTD % Remaining
GENERATION RESOURCES				
NCPA Plants				
Hydroelectric	55,514	56,387	\$ (873)	-2%
Geothermal Plant	46,583	39,492	7,091	15%
Combustion Turbine No. 1	5,602	5,558	44	1%
Combustion Turbine No. 2 (STIG)	10,361	8,561	1,801	17%
Lodi Energy Center	137,737	190,024	(52,287)	-38%
	255,797	300,021	(44,224)	-17%
Member Resources - Energy	63,024	86,796	(23,772)	-38%
Member Resources - Natural Gas	2,474	2,318	156	6%
Western Resource	26,100	17,615	8,486	33%
Market Power Purchases	35,533	51,570	(16,036)	-45%
Load Aggregation Costs - ISO	467,469	958,039	(490,570)	-105%
Net GHG Obligations	921	3,505	(2,584)	-281%
	851,318	1,419,863	(568,545)	-67%
TRANSMISSION				
Independent System Operator	168,782	141,228	27,554	16%
MANAGEMENT SERVICES				
Legislative & Regulatory				
Legislative Representation	2,231	1,714	518	23%
Regulatory Representation	715	648	66	9%
Western Representation	723	251	472	65%
Customer Programs	615	449	166	27%
	4,284	3,062	1,222	29%
Judicial Action	460	564	(104)	-23%
Power Management				
System Control & Load Dispatch	7,504	6,415	1,089	15%
Forecasting & Prescheduling	3,044	2,482	562	18%
Industry Restructuring	438	415	23	5%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,032	853	179	17%
Gas Purchase Program	77	49	27	35%
Market Purchase Project	112	72	40	36%
	12,208	10,287	1,921	16%
Energy Risk Management	150	186	(37)	-24%
Settlements	1,012	570	442	44%
Integrated System Support	405	364	41	10%
Participant Pass Through Costs	1,666	1,282	383	23%
Support Services	-	2,153	(2,153)	
	20,184	18,467	1,717	9%
TOTAL ANNUAL BUDGET COST	1,040,284	1,579,558	(539,274)	-52%
LESS: THIRD PARTY REVENUE				
Plant ISO Energy Sales	193,457	311,908	(118,450)	-61%
Member Resource ISO Energy Sales	49,954	110,573	(60,619)	-121%
Member Owned Generation ISO Energy Sales	118,709	206,169	(87,460)	-74%
Revenue from Customers	-	89,429	(89,429)	
Customer Owned Generation ISO Energy Sales	-	2,371	(2,371)	
NCPA Contracts ISO Energy Sales	34,944	56,083	(21,139)	-60%
Western Resource ISO Energy Sales	26,527	13,254	13,272	50%
Load Aggregation Energy Sales	-	177,503	(177,503)	
Ancillary Services Sales	5,514	3,953	1,560	28%
Transmission Sales	110	101	9	8%
Western Credits, Interest & Other Income	43,537	147,509	(103,971)	-239%
	472,753	1,118,854	(646,101)	-137%
NET ANNUAL BUDGET COST TO PARTICIPANTS	567,532	460,704	\$ 106,827	19%

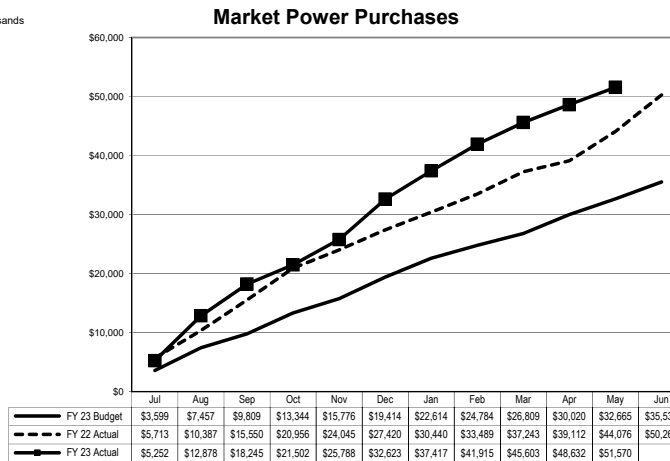
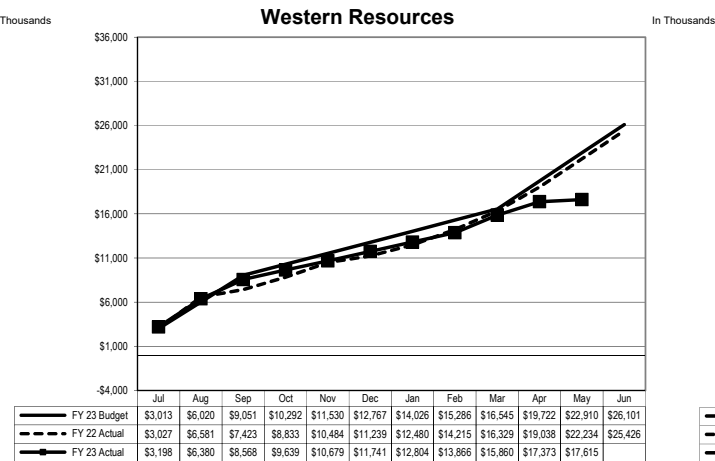
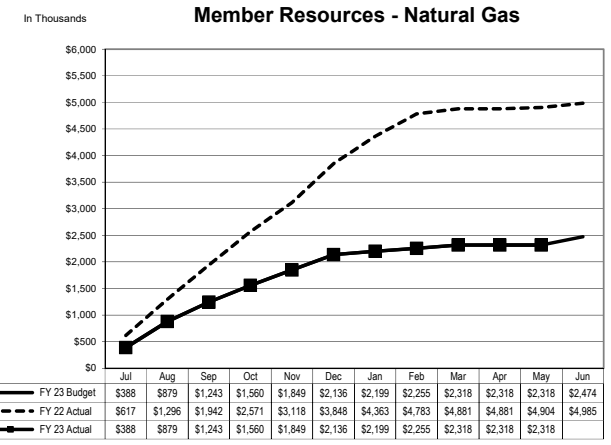
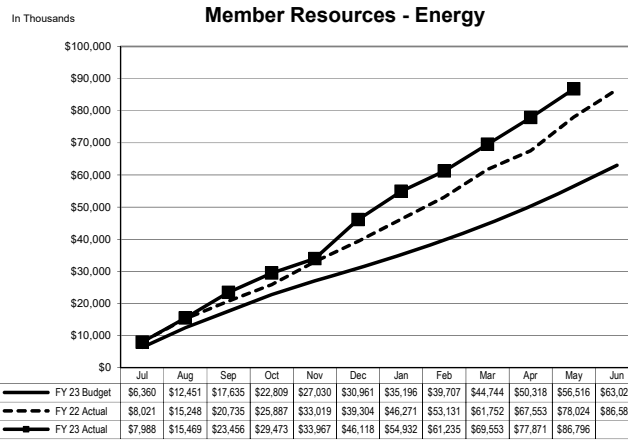
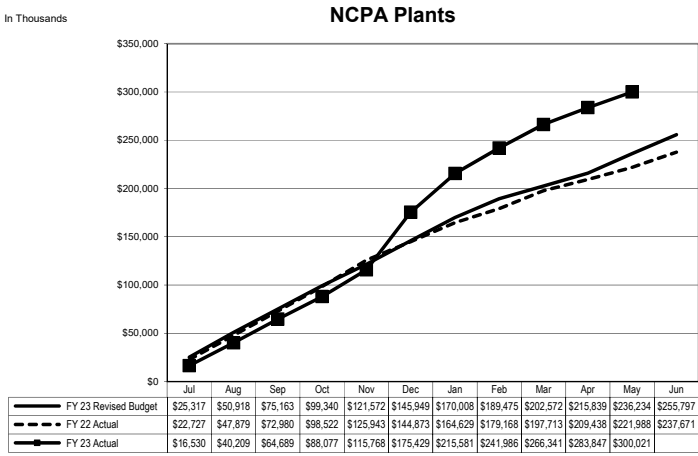


Annual Budget Budget vs. Actual By Major Area As of May 31, 2023



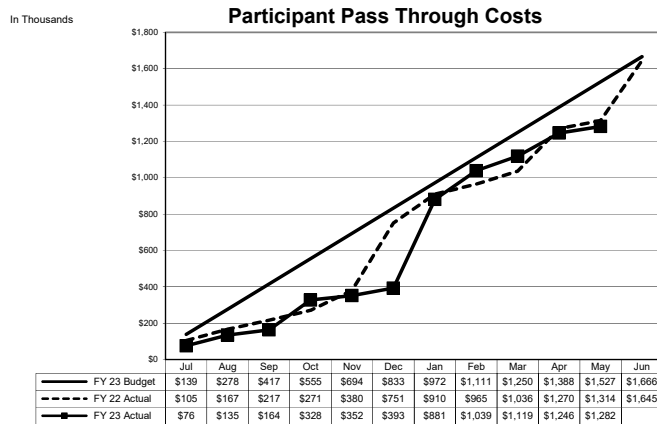
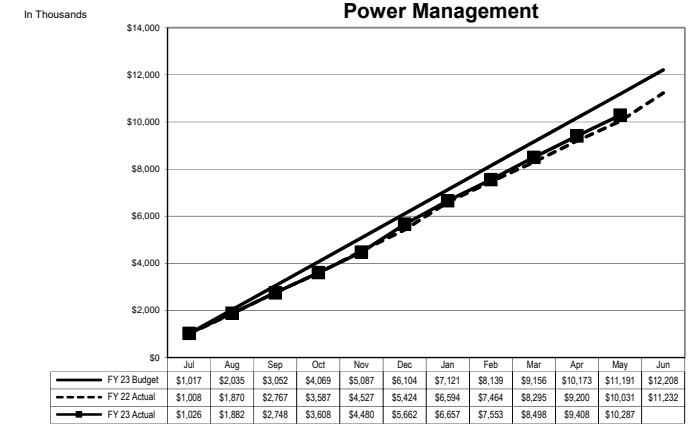
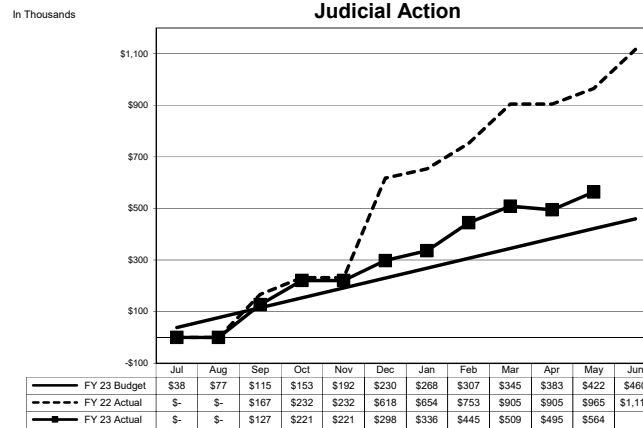
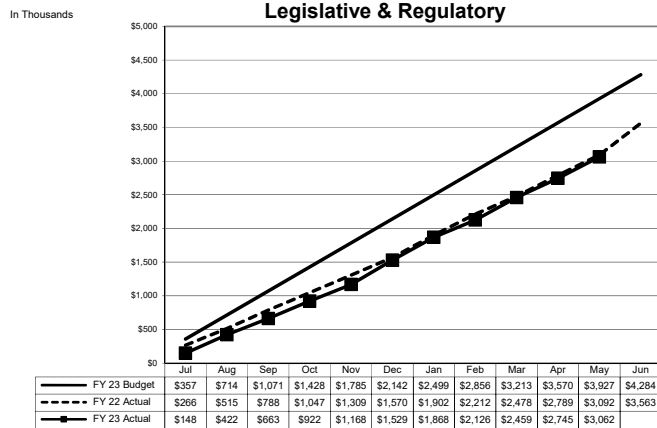
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

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



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

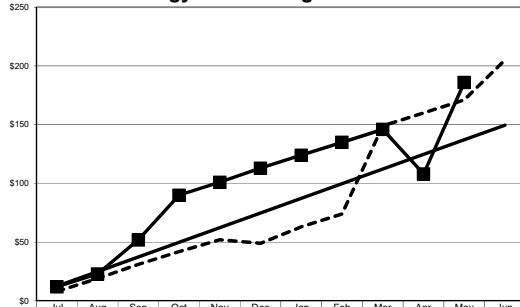
Annual Budget Cost Management Services Analysis By Source As of May 31, 2023



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

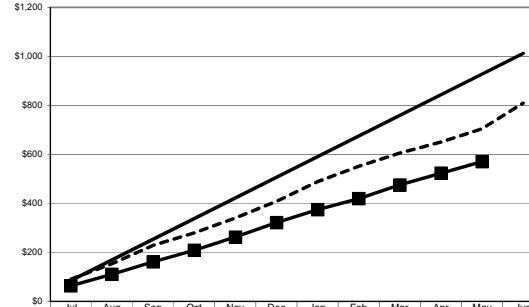
In Thousands

Energy Risk Management



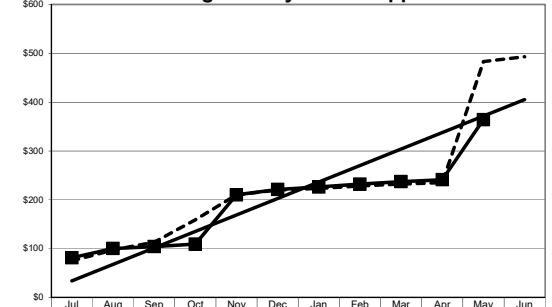
In Thousands

Settlements



In Thousands

Integrated Systems Support



	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	

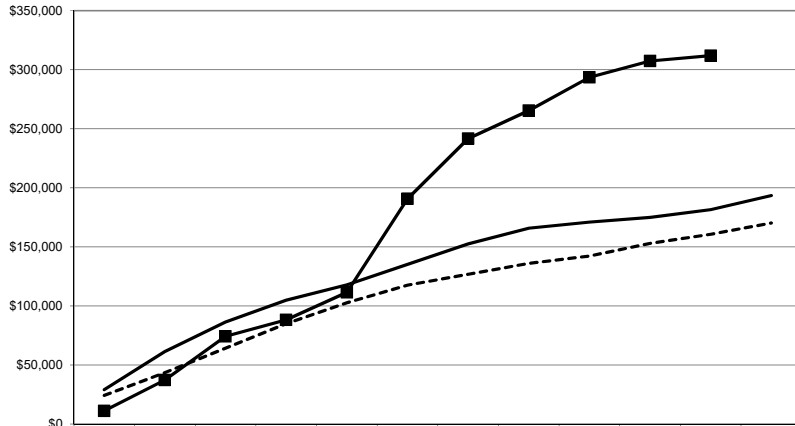
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	\$84	\$169	\$253	\$337	\$422	\$506	\$590	\$675	\$759	\$843	\$928	\$1,012
FY 22 Actual	\$90	\$153	\$228	\$279	\$340	\$408	\$488	\$551	\$605	\$650	\$704	\$809
FY 23 Actual	\$63	\$110	\$161	\$208	\$262	\$321	\$374	\$419	\$475	\$523	\$570	

	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	

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

In Thousands

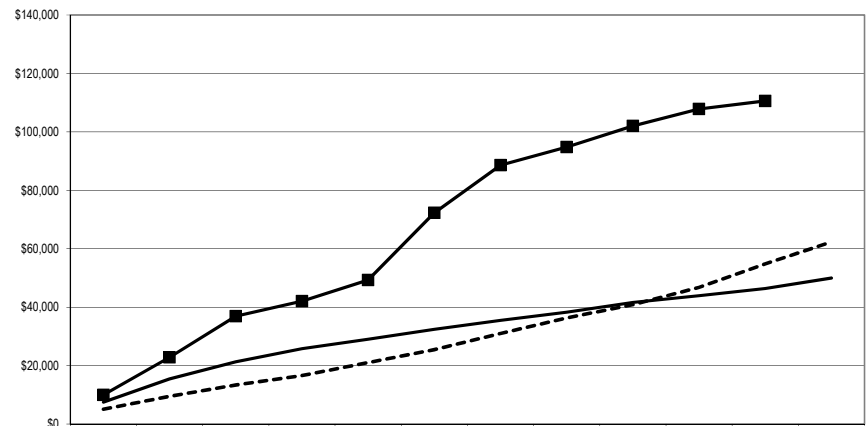
Plant ISO Energy Sales



	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	\$307,459	\$311,908	

In Thousands

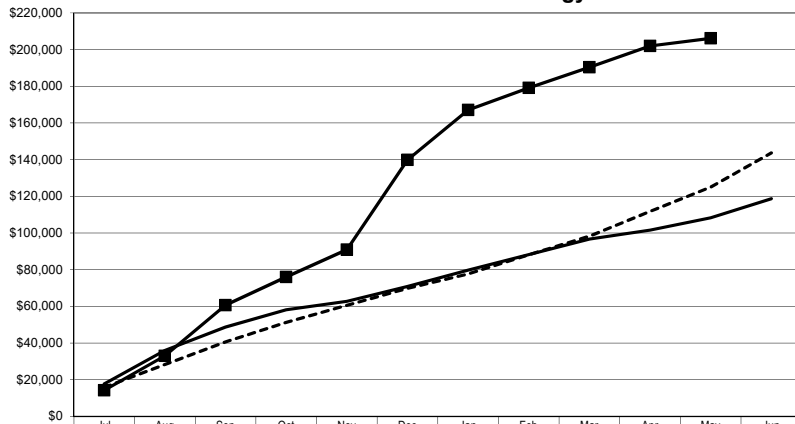
Member Resource ISO Energy Sales



	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	

In Thousands

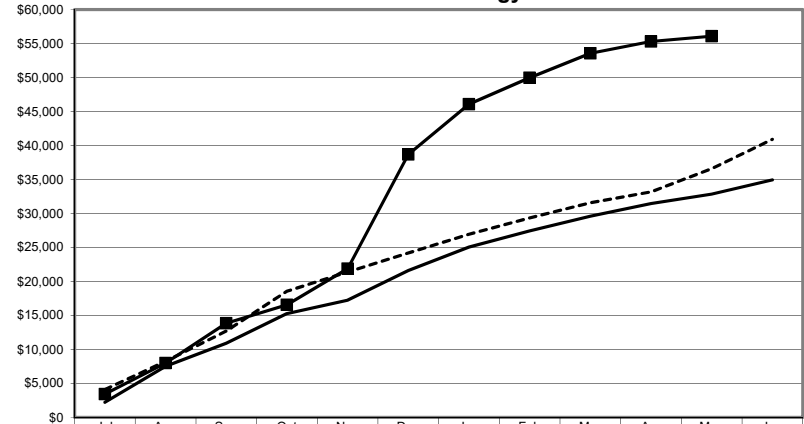
Member Owned Generation ISO Energy Sales



	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	

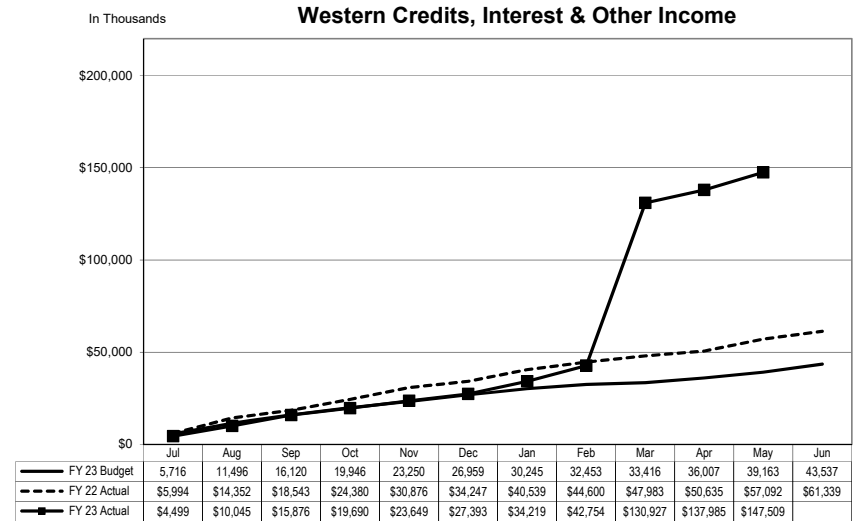
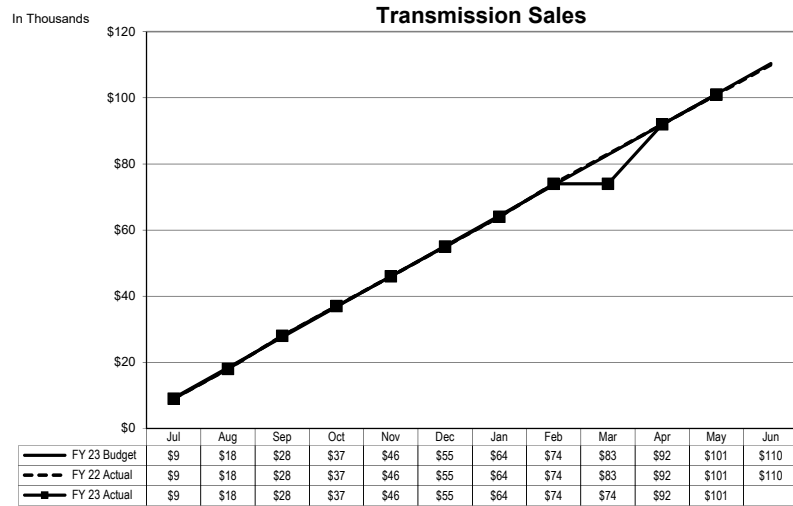
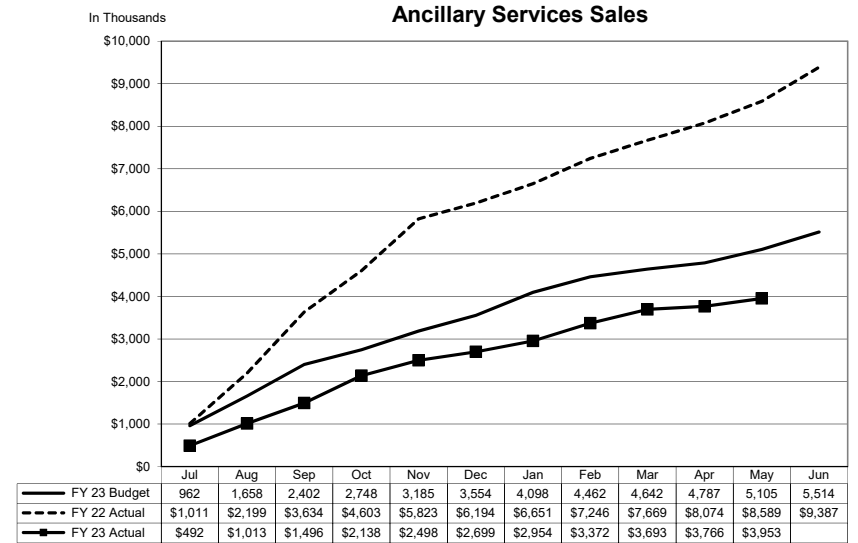
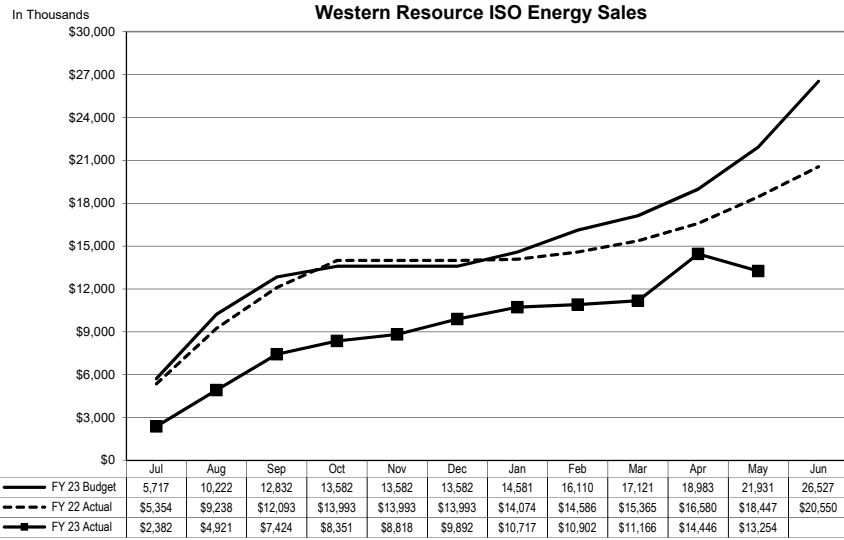
In Thousands

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	

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



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

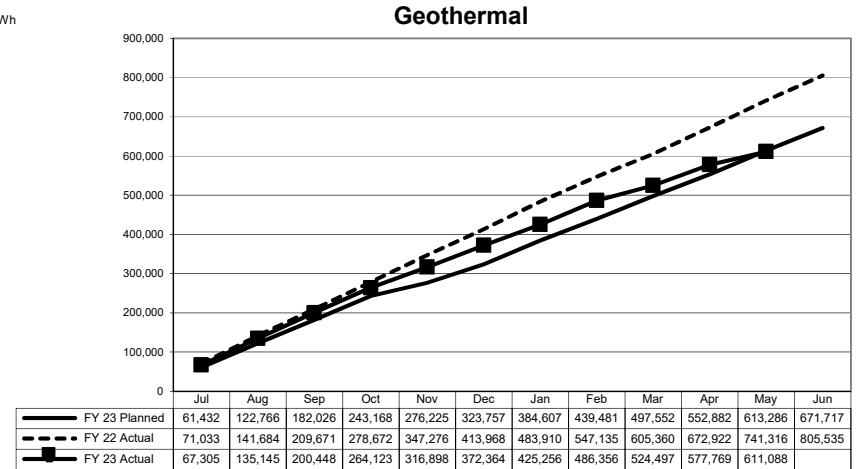
Generation Cost Analysis

\$ in thousands

	Geothermal				
	Revised		\$/MWh	Under(Over)	YTD %
	Budget	Actual	Actual	Budget	Remaining
Routine O & M	\$ 19,698	\$ 19,548	\$ 31.99	\$ 150	1%
Capital Assets/Spare Parts Inventories	10,151	3,798	6.21	6,353	63%
Other Costs	12,657	11,719	19.18	939	7%
CA ISO Charges	604	1,244	2.04	(640)	-106%
Debt Service	3,473	3,184	5.21	289	8%
Annual Budget	46,583	39,492	64.63	7,091	15%
Less: Third Party Revenue					
Interest Income	150	262	0.43	(112)	-75%
ISO Energy Sales	42,271	64,019	104.76	(21,748)	-51%
Ancillary Services Sales	-	-	-	-	0%
Effluent Revenues	750	1,244	2.04	(494)	-66%
Misc	113	104	0.17	8	7%
	43,284	65,630	107.40	(22,346)	-52%
Net Annual Budget Cost to Participants	\$ 3,299	\$ (26,138)	\$ (42.77)	\$ 29,437	892%
Net Generation--MWh @ Meter	671,717	611,088			
\$/MWh (A)	\$ (0.26)	\$ (47.98)			

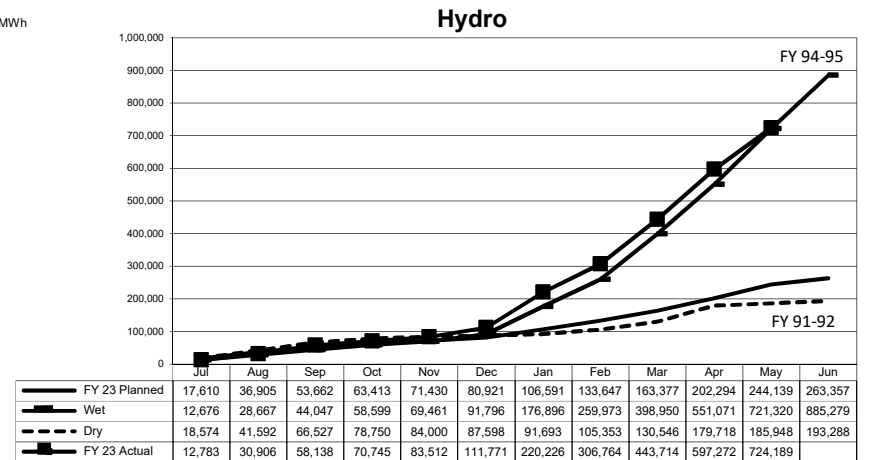
MWhs Generated

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh	Under(Over)	YTD %
	Budget	Actual	Actual	Budget	Remaining
Routine O & M	\$ 10,203	\$ 7,897	\$ 10.91	\$ 2,306	23%
Capital Assets/Spare Parts Inventories	4,270	3,942	5.44	328	8%
Other Costs	3,993	4,277	5.91	(284)	-7%
CA ISO Charges	1,237	7,443	10.28	(6,206)	-502%
Debt Service	35,811	32,827	45.33	2,984	8%
Annual Budget	55,514	56,387	77.86	(873)	-2%
Less: Third Party Revenue					
Interest Income	150	211	0.29	(61)	-41%
ISO Energy Sales	22,182	75,274	103.94	(53,092)	-239%
Ancillary Services Sales	1,224	3,162	4.37	(1,938)	-158%
Misc	-	6	0.01	(6)	0%
	23,556	78,653	108.61	(55,097)	-234%
Net Annual Budget Cost to Participants	\$ 31,958	\$ (22,266)	\$ (30.75)	\$ 54,224	
Net Generation--MWh @ Meter	263,357	724,189			
\$/MWh (A)	\$ (14.63)	\$ (76.07)			

In MWh



Footnotes:

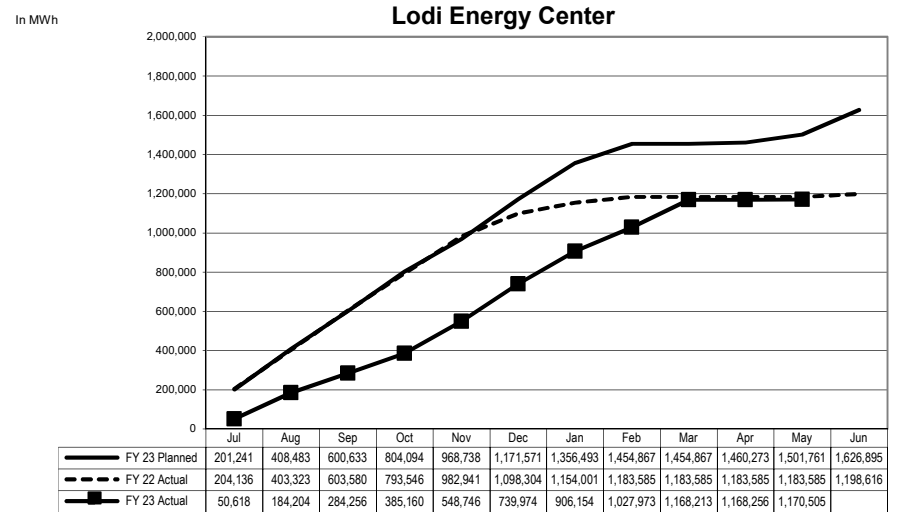
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

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

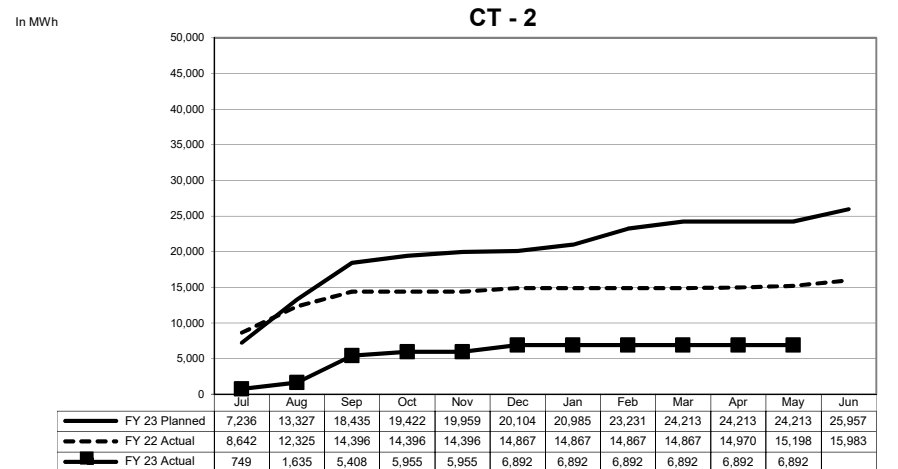
Generation Cost Analysis

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 9,826	\$ 9,836	\$ 8.40	\$ (10)	0%
Fuel	64,819	121,026	103.40	(56,207)	-87%
GHG Allowance Costs	20,250	14,174	12.11	6,076	30%
CA ISO Charges and Energy Purchases	2,970	8,931	7.63	(5,961)	-201%
Capital Assets/Spare Parts Inventories	3,631	3,470	2.96	161	4%
Other Costs	10,244	8,756	7.48	1,488	15%
Debt Service	25,996	23,830	20.36	2,166	8%
Annual Budget	137,737	190,024	162.34	(52,287)	-38%
Less: Third Party Revenue					
Interest Income	250	1,130	0.97	(880)	-352%
ISO Energy Sales	121,620	166,181	141.97	(44,562)	-37%
Ancillary Services Sales	2,318	524	0.45	1,794	77%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	19,710	14,174	12.11	5,536	28%
Misc	-	10	0.01	(10)	0%
	143,897	182,018	155.50	(38,121)	-26%
Net Annual Budget Cost to Participants	\$ (6,160)	\$ 8,006	\$ 6.84	\$ (14,165)	230%
Net Generation--MWh @ Meter	1,626,895	1,170,505			
\$/MWh (A)	\$ (19.77)	\$ (13.52)			

MWhs Generated



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,616	\$ 1,221	\$ 177.15	\$ 395	24%
Fuel and Pipeline Transport Charges	2,227	1,666	241.75	561	25%
GHG Allowance Costs	424	-	-	424	100%
Capital Assets/Spare Parts Inventories	220	-	-	220	100%
Other Costs	643	584	84.76	59	9%
CA ISO Charges	148	429	62.29	(281)	-190%
Debt Service	5,084	4,660	676.21	424	8%
Annual Budget	10,361	8,561	1,242.16	1,801	17%
Less: Third Party Revenue					
Interest Income	42	133	19.31	(91)	-217%
ISO Energy Sales	4,331	2,540	368.52	1,792	41%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,775	8,041	1,166.82	(6,266)	-353%
GHG Allowance Credits	424	-	-	424	100%
Misc	-	3	0.37	(3)	0%
	6,572	10,717	1,555.02	(4,145)	-63%
Net Annual Budget Cost to Participants	\$ 3,789	\$ (2,156)	\$ (312.87)	\$ 5,945	157%
Net Generation--MWh @ Meter	25,957	6,892			
\$/MWh (A)	\$ (49.88)	\$ (989.08)			



Footnotes:

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

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

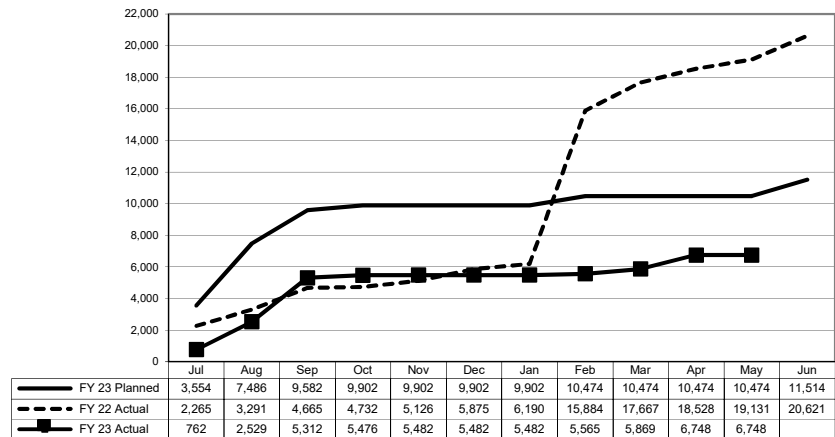
Generation Cost Analysis

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,530	\$ 2,234	\$ 331.01	\$ 296	12%
Fuel and Pipeline Transport Charges	1,214	1,258	186.48	(45)	-4%
Capital Assets/Spare Parts Inventories	800	585	86.64	215	27%
Other Costs	882	834	123.63	48	5%
CA ISO Charges	176	647	95.82	(471)	-268%
Debt Service	-	-	-	-	-
Annual Budget	5,602	5,558	823.58	44	1%
Less: Third Party Revenue					
Interest Income	55	75		(20)	-36%
ISO Energy Sales	3,053	3,893	576.92	(840)	-28%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	-	-	-	0%
	3,108	3,968	576.92	(859)	-28%
Net Annual Budget Cost to Participants	\$ 2,493	\$ 1,590	\$ 235.61	\$ 903	36%
Net Generation--MWh @ Meter	11,514	6,748			
\$/MWh (A)	\$ 216.54	\$ 235.61			

MWhs Generated

In MWh

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Footnotes:

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