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BUSINESS PROGRESS REPORT

September 2022

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Generation Costs & Reliability

Combustion Turbine Project

Unit Operation for August 2022

Unit	Availability		Production			Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	375.5	MWh	CAISO / CAISO
	100.0%	100.0%	Unit 2	377.4	MWh	
Curtailments, Outages, and Comments:						
Unit 1: Normal operation.						
Unit 2: Normal operation.						
Unit	Availability		Production			Reason for Run
CT1 Lodi	97.42%		1,040.9 MWh			CAISO
Curtailments, Outages, and Comments:						
8/16 @ 14:43 - 8/17 @ 09:56; Power Quality Meter Failure; OMS #'s 12257771, 12258906						
Unit	Availability		Production			Reason for Run
CT2 STIG	59.7%		857.0 MWh			CAISO
Curtailments, Outages, and Comments:						
8/17 @ 19:11 - 8/30 @ 07:13; Oil fire and recovery, OMS #12265177						
Unit	Availability		Production			Reason for Run
LEC	100.0%		133,587 MWh			CAISO
Curtailments, Outages, and Comments:						
8/16 @ 16:54-18:38; ST ONLY - High Vibration Trip						

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for August 2022

Unit	Availability	Net Electricity Generated/Water Delivered	Out-of-Service/Descriptors
Unit 1	100 %	19,982 MWh	U1 had no outages for the month
Unit 2	100 %	*19,518 MWh	U2 had no outages for the month
Unit 3	N/A %	N/A -	Unit 3 remains out of service.
Unit 4	100 %	28,344 MWh	U4 had no outages for the month
Southeast Geysers Effluent Pipeline	96 %	65.5 mgallons	Average flow rate: 1,449 gpm
Southeast Solar Plant	N/A	192,351 KWh	Year-to-date KWh: 1,355,197
Bear Canyon Pump Station Zero Solar	N/A	122,373 KWh	Year-to-date KWh: 1,103,036

* Accounts for an additional 535 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for August 2022

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	100%	3822 MWh	CV Unit 1 – No Outages.
Collierville Unit 2	99.48%	12303 MWh	CV Unit 2 – Out of service on 8/30/22 from 1000 to 1353 for collector ring brushes/governor program modifications.
Spicer Unit 1	100%	1437 MWh	NSM1- No Outages
Spicer Unit 2	100%	337 MWh	NSM2- No Outages
Spicer Unit 3	99.15%	222 MWh	NSM3- Out of Service on 8/12/22 from 0207 to 0622 for PAC trouble and on 8/18/22 from 1332 to 1533 for Governor Oil Pump Replacement

Operations & Maintenance Activities:

- CMMS work orders
- NSM Annual Outage Prep
- BC HBV Seal Replacement

Engineering

- Awarded dive contract for McKays Intake Cleaning
- ICS Evaluation by FM Global
- Conducted annual DSOD and FERC Dam Safety Inspections
- Conducted noxious weed survey and removal
- Awarded bid for Upper Utica DSSMR preparation
- Mobilized Lake Alpine Dam contractor

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

- There were no Cal OSHA recordable incidents, Lost Time accidents, or vehicle accidents in the month of August.
- 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 August 27, 2022.
- 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.

August 2022 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	0	0	0
Days since Recordable	685	309	2,700	3,684
Work Hours Since Last Recordable	57,637	63,770	410,067	2,853,486
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	5,434	2,563	10,604	6,697
Work Hours without LTA	490,206	227,980	820,611	2,475,504
Vehicle Incident (month)	0	0	0	0
Vehicle Incident (calendar year)	0	0	2	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 August 27, 2022.

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 2022 Data

	August 2022		Calendar Year 2022	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	442.05 8/16 @ 1800	218,976	442.05 8/16 @ 1800	1,518,048
SVP	645.81 8/16 @ 1700	405,477	647.57 6/21 @ 1700	2,987,301
MSSA	1085.82 8/16 @ 1700	624,453	1086.35 6/21 @ 1800	4,505,349

Last Year 2021 Data*

	August 2021		Calendar Year 2021	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	401.5 8/27 @ 1800	206,257	440.56 6/17 @ 1700	1,508,493
SVP	591.96 8/27 @ 1500	372,651	591.96 8/27 @ 1500	2,694,348
MSSA	985.88 8/27 @ 1700	578,908	1025.46 6/17 @ 1700	4,202,841

*Last year's data added for comparison purposes only

System Peak Data

	All Time Peak Demand	2022 Peak Demand
NCPA Pool	517.83 MW on 7/24/06 @ 1500	442.05 8/16 @ 1800
SVP	647.57 MW on 6/21/22 @ 1700	647.57 6/21 @ 1700
MSSA	1086.35 MW on 6/21/22 @ 1800	1086.35 6/21 @ 1800

- 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		
	August 2022	Calendar Year 2022
MSSA % Within the Band	98.52%	98.36%

- There were no PG&E PSPS events.
- CAISO System Alerts, Warnings, and Emergencies:
 - 1325 8/12/22 [202202618] Restricted Maintenance Operations issued 1200-2200 for August 15, 2022.
 - 1328 8/12/22 [202202619] Restricted Maintenance Operations issued 1200-2200 for August 16, 2022.
 - 1330 8/12/22 [202202620] Restricted Maintenance Operations issued 1200-2200 for August 17, 2022.
 - 1331 8/12/22 [202202621] Restricted Maintenance Operations issued 1200-2200 for August 18, 2022.
 - 1554 8/16/22 The California ISO has issued a Flex Alert for the CAISO Grid effective Wednesday, August 17, 2022. Californians are urged to conserve electricity from August 17 at 4:00 PM to August 17 at 9:00 PM to avoid power disruptions
 - 1135 8/29/22 [202202637] Restricted Maintenance Operations issued 1200-2200 for August 31, 2022.
 - 1137 8/29/22 [202202638] Restricted Maintenance Operations issued 1200-2200 for September 1, 2022.
 - 1138 8/29/22 [202202639] Restricted Maintenance Operations issued 1200-2200 for September 2, 2022.
 - 1139 8/29/22 [202202640] Restricted Maintenance Operations issued 1200-2200 for September 3, 2022.
 - 1141 8/29/22 [202202641] Restricted Maintenance Operations issued 1200-2200 for September 4, 2022.
 - 1143 8/29/22 [202202642] Restricted Maintenance Operations issued 1200-2200 for September 5, 2022.
 - 1144 8/29/22 [202202643] Restricted Maintenance Operations issued 1200-2200 for September 6, 2022.
 - 1153 8/31/22 The California ISO has issued a Flex Alert for the CAISO Grid effective Wednesday, August 31, 2022. Californians are urged to conserve electricity from August 31 at 4:00 PM to August 31 at 9:00 PM to avoid power disruptions
 - 1204 8/31/22 CAISO EEA Watch NOTICE [202202645] The California ISO has issued an Energy Emergency Alert (EEA) Watch Notice for the CAISO Grid, effective 08/31/2022 17:00 through 08/31/2022 20:00. Reason: The ISO is anticipating high loads and temperatures across |the CAISO Grid
 - 1447 8/31/22 The California ISO has issued a Flex Alert for the CAISO Grid effective Thursday, September 1, 2022. Californians are urged to conserve electricity from September 1 at 4:00 PM to September 1 at 9:00 PM to avoid power disruptions
 - 1510 8/31/22 CAISO EEA 1 NOTICE [202202647] The California ISO has issued an Energy Emergency Alert (EEA) 1 Notice for the CAISO Grid, effective 08/31/2022 17:00 through 08/31/2022 20:00. Reason: The ISO is anticipating high loads and temperatures across the |CAISO Grid

- 1522 8/31/22 CAISO EEA Watch NOTICE [202202648] The California ISO has issued an Energy Emergency Alert (EEA) Watch Notice for the CAISO Grid, effective 09/01/2022 18:00 through 09/01/2022 19:00. Reason: The ISO is anticipating high loads and temperatures across the CAISO Grid
- There were no CAISO Oversupply Potential Notifications.
- CAISO Real-time Contingency Dispatches (RTCD):
 - RTCD event 1446 hours 8/31/22

Pooling, Portfolio Planning & Forecasting

- NCPA Pool loads during August 2022 were 218,977 MWh versus the budget forecast of 211,149 MWh, resulting in a forecast error of 3.57%. The current weather outlook after the September 2022 heatwave is for normal temperatures and little rainfall. The Pool's September load forecast is 192,962 MWh compared with extrapolated actuals of 201,672 MWh as of September 13, 2022. Actuals loads for the first 10 days of September came in higher than forecast due to high temperatures.
- Lodi Energy Center (LEC) ran 590 hours out of a possible 744 producing 133,586 MWh. Natural gas and power prices are significantly higher than a year ago due to the low reservoir levels throughout the state and the recent heatwave.
- During August 2022, 0.00" of rain was recorded at the Big Trees gauge. August average rainfall at Big Trees is 0.26". New Spicer Meadows storage decreased by just over 12,300 acre feet in August.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been maintained at \$250/MWh. Releases from NSMR have been ramped up to meet and maintain the June 1st summer minimum Big Trees flows of 150 cfs.
- New Spicer Meadows storage as of August 31, 2022 was 104,304 acre feet. The historical average storage at the end of August is 117,212 acre feet. As of September 14th, storage was 94,076 acre feet.
- Combined Calaveras Project generation for the Pool in August 2022 totaled 8,955MWh, up from 6,218 MWh in July 2022.
- Western Base Resource (BR) deliveries for the Pool during August 2022 were 18,632 MWh. Displacement program energy totaled 0 MWh. The Pool's share of expected total delivery from the Western Base Resource for September 2022 is 5,000 MWh.
- The PG&E Citygate gas index averaged \$9.76 / MMBtu during the month of August as compared to an average of \$7.86 for July. September's current average price is \$9.64 through the 14th. The October 2022 PG&E Citygate forward price is \$9.29 / MMBtu.

- Day-Ahead PG&E DLAP electricity prices for August averaged \$109.34 / MWh On-Peak and \$91.84 Off-Peak, with a high of \$328.82. DLAP prices have averaged \$212.31 On-Peak and \$126.98 Off-Peak for the period September 1st through the 14th. The forward power prices for October are \$102.39 On-Peak and \$84.77 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 November 2022:
 - Monthly System Resource Adequacy Demonstration (filed September 17, 2022)
 - Monthly Supply Plan (filed September 17, 2022)

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:

EIM Resource Sufficiency Evaluation Phase 1B

Phase 1B of this initiative enhances the accuracy and equitable application of the WEIM resource sufficiency evaluation (RSE). The phase 1B enhancements aim to resolve outstanding concerns regarding the accuracy of the RSE that were raised by stakeholders in the phase 1 initiative. As part of the phase 1B initiative, the ISO will analyze the impact of load conformance on WEIM transfers, the interplay of WEIM transfers with hourly block exports, and the performance of the methodology to estimate uncertainty requirements.

- Revised draft final proposal
 - The CAISO is not proposing to include load conformance in the WEIM RSE test obligations for any BAA.
 - No changes to how net-load uncertainty is tested for in the WEIM RSE
 - WEIM RSE will be revised to use the quantile regression methodology once FRP Refinements initiative is implemented
 - Proposing to not re-introduce the intertie uncertainty adder
 - Proposing to not consider lower priority exports from the CAISO BAA in the CAISO BAA's WEIM RSE obligation but non-CAISO BAAs may count them as supply
 - If necessary, transfer curtailment would occur manually outside of the market
 - WEIM Energy Assistance Transfers
 - leverage an existing constraint to ensure a WEIM BAA cannot export itself into a capacity deficiency
 - CAISO will monitor use of Energy Assistance Transfers
 - Under marginal pricing principles, all load in the deficient BAA would be settled at resultant LMPs
 - Propose to allocate the assistance energy revenue by net WEIM export to WEIM BAAs who have passed the WEIM RSE
 - Energy Assistance Transfers optional for each BAA

- Next steps:
 - Sep 15, 2022 meeting and comments due
 - Week of Sep 26, 2022 Final Proposal
 - Sep 27, 2022 comments due on draft tariff language
 - Week of Oct 3, 2022 meeting
 - Oct 26, 2022 Joint WEIM Governing Body and Board of Governors meeting

Energy Storage Enhancements

This initiative aims to enhance the optimization, dispatch, and settlement of energy storage and other similarly-situated resources, through developing bid enhancements to help resources accurately represent their marginal costs in the real-time market; ensure the ISO has sufficient state-of-charge to cover critical hours; and explore modifications to the ISO's exceptional dispatch and bid cost recovery mechanisms.

- Sep 12, 2022 Workshop
 - Covered issues with regulation deliverability from storage and potential solutions
 - Propose to update the state of charge equation so that it reflects regulation awards
 - Require bids alongside ancillary service awards
- Next steps:
 - CAISO will discuss Energy Storage Enhancements policy at the Market Surveillance meeting on Sep 19, 2022.

Extended Day-Ahead Market

This initiative will develop an approach to extend participation in the day-ahead market to the Western Energy Imbalance Market (WEIM) entities in a framework similar to the existing WEIM approach for the real-time market, rather than requiring full integration into the California ISO balancing area. The extended day-ahead market (EDAM) will improve market efficiency by integrating renewable resources using day-ahead unit commitment and scheduling across a larger area.

- Revised straw proposal changes:
 - Transmission Commitment in EDAM
 - Firm and conditional firm point-to-point transmission rights not scheduled ahead of the Day-Ahead Market (10 a.m.) will be made available to the market to support EDAM transfers
 - The design also includes a proposed mechanism for transmission providers to recover potential foregone transmission revenues resulting from their participation in EDAM.
 - EDAM Resource Sufficiency Evaluation (RSE)
 - Firm energy contracts, i.e., WSPP Schedule C contracts, will count toward the EDAM RSE provided new tagging requirement is met
 - The revised proposal focuses on an administrative surcharge under all conditions to incentivize meeting the RSE
 - The pooled WEIM RSE approach is proposed, where EDAM entities passing the EDAM RSE are evaluated together, rather than individually, in the WEIM RSE.

- Convergence bidding:
 - This proposal maintains the one-year transition period to convergence bidding for EDAM entities.
 - Transfer Revenue and Congestion Revenue Allocation
 - There will be a generally applicable 50:50 sharing of transfer revenues across all interfaces between EDAM BAAs, subject to commercial arrangements that may require exceptions.
 - In addition, in instances where congestion arises from an internal intertie constraint enforced within a BAA, the ISO will allocate the congestion revenue fully to the BAA where the constraint is modeled.
 - GHG Accounting and Reporting
 - The EDAM will start with the resource specific approach to GHG accounting
- Next steps:
 - Sep 20, 2022 Comments due on revised straw proposal
 - Sep 2022 Draft tariff framework posting
 - Oct 19, 2022 Draft final proposal posting
 - Nov 02-03, 2022 Meeting
 - Nov 03, 2022 Draft tariff posting
 - Nov 18, 2022 Comments due on draft final proposal and draft tariff language
 - Dec 07, 2022 Final proposal posting
 - Dec 14, 2022 ISO Board of Governors and WEIM Governing Body joint meeting

Transmission Services and Market Scheduling Priorities Phase 2

As part of the Market Enhancements for Summer 2021 Readiness initiative conducted earlier in the year, the ISO committed to undertaking an initiative to develop a long-term, holistic, framework for establishing scheduling priorities in the ISO market. This initiative will evaluate the development of this holistic, long-term, framework while also evaluating near-term enhancements to the current scheduling priority framework that can be implemented by next summer.

- Straw proposal
 - Calculation of Available Transfer Capability (ATC) across the ISO interties accessible to establish wheeling through scheduling priority. Wheeling through transactions with reserved ATC have equal priority to load while those without will have lower priority.
 - ATC calculated in rolling 13 month, monthly increments and daily increments ahead of DA market close.
 - Assessing ATC on first come first served basis
 - Demonstrate a supply contract and prepay for transmission
 - Consideration of enhancement where requests compete for limited ATC based on duration of supply contract
 - Ability to request a study for establishing scheduling priority for longer than 1-year (in yearly increments)
 - ATC calculated as:
 - Total Transfer Capability of an intertie, less;
 - Existing Transmission Commitments, Transmission Ownership Rights, and Native load needs, less;

- Transmission Reliability Margin to account for different aspects of uncertainty, less;
 - Capacity Benefit Margin setting aside transmission for emergency imports.
 - Calculating Native Load Needs Approaches:
 - 1) Native load needs derived based on historical monthly Resource Adequacy showings.
 - 2) Native load needs derived based on historical import flows across interties attributable to serving native load
 - Import volumes during net load peak hour for month
 - Import volumes during the five highest net load peak hours for the month
 - Import volumes averaged during highest 10% of net load peak hours for the month
 - 3) Native load needs derived based upon the “higher of” approach 1 and 2.
 - Proceeding with a Transmission Upgrade & ISO Funding of an Upgrade
 - After completing the studies, the ISO will share the study results with the entity submitting the request.
 - If a transmission upgrade is needed, the study results will provide a description of the upgrade along with the costs of the upgrade
 - The ISO will have first choice to move forward with the project as a reliability, economic, or public policy transmission project if it meets the applicable criteria under the tariff. If so, the Participating TO will pay for the upgrade and the ISO will reimburse the facility study cost to the original requestor and any other requesting party who paid for the study.
 - If the ISO does not approve the project under one of these transmission categories, the requestor can choose whether to proceed with the transmission upgrade.
 - Pursuing a Transmission Upgrade
 - To the extent a transmission upgrade is needed to accommodate the long-term wheeling priority, the requestor has the ability to pursue that upgrade
 - The requestor would be responsible for funding the total cost of the transmission upgrade consistent with the current requirements of a merchant transmission line.
 - Upon completion of upgrade and upon taking service requestor would collect transmission credits. Should there be eligibility for Congestion Revenue Rights (CRR) allocation?
 - Compensation Framework for Wheeling Through Scheduling Priority
 - The ISO considered a compensation framework that may be compatible with the current transmission rate structure; only one rate for high voltage transmission, currently \$16.43.MWh
 - Proposing that wheeling through scheduling priority pay for transmission based on duration of the underlying supply contract.
 - Provides parity with RA imports contribution to serving ISO load which pays TAC over the gross load.
- Next steps:
 - Sep 16, 2022 Comments due
 - Week of Oct 24, 2022 Revised straw proposal posting
 - Week of Nov 14, 2022 Comments due
 - Week of Jan 09, 2023 Draft Final Proposal posting
 - Week of Jan 16, 2023 Meeting
 - Week of Jan 30, 2023 Comments due
 - Jan-Feb 2023 Draft tariff language and business requirement specifications

- Week of Feb 20, 2023 Final proposal posted
- Week of Feb 27, 2023 meeting
- Mar 2023 WEIM Governing Body and Board of Governors meeting

Price formation enhancements

This initiative will explore several topics related to price formation in the California ISO markets focused on real-time market pricing. Scarcity prices are important to attract supply and incent resources to be available and perform. They are also important to provide appropriate price signals to reduce demand. Recent energy shortages and associated prices in the ISO real-time market have emphasized the need for the ISO to review and enhance its scarcity pricing provisions. Consequently, 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.

- Next steps:
 - Sep 21, 2022 Meeting
 - Nov 10, 2022 Web meeting
 - Dec 12, 2022 Comments due

Resource Adequacy Enhancements

- CAISO delayed further work on RA Enhancements indefinitely in order to align bid insertion, must offer obligation, and flexible RA proposals with DAME, EDAM, and CPUC stakeholder initiatives. No schedule is currently available other than fall 2023 implementation.

Day-Ahead Market Enhancements

- Next steps
 - Sep 14, 2022 Workshop
 - Oct 6, 2022 Revised straw proposal posting
 - Oct 14, 2022 Meeting
 - Oct 28, 2022 Comments due

Transmission Access Charge Structure Enhancements

- Initiative draft final proposal is complete and the initiative is currently on hold pending developments from Extend Day Ahead Market to EIM initiative.

Western

Western Base Resource Tracking (NCPA Pool)

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-22	51,082	26,633	(24,449)	\$1,733,503	\$ 65.09	\$ (0.41)	\$ 68.38
Aug-22	33,542	18,632	(14,910)	\$1,733,503	\$ 93.04	\$ 2.72	\$ 80.68
Sep-22	20,613	-	0	\$1,605,598	\$ 77.89	\$ -	\$ 85.62
Oct-22	8,931	-	0	\$662,777	\$ 74.21	\$ -	\$ 94.19
Nov-22	-	-	0	\$662,777	\$ -	\$ -	\$ 98.96
Dec-22	-	-	0	\$662,777	\$ -	\$ -	\$ 99.04
Jan-23	12,388	-	0	\$662,777	\$ 53.50	\$ -	\$ 91.39
Feb-23	18,712	-	0	\$662,777	\$ 35.42	\$ -	\$ 84.39
Mar-23	12,955	-	0	\$662,777	\$ 51.16	\$ -	\$ 82.93
Apr-23	41,280	-	0	\$1,699,926	\$ 41.18	\$ -	\$ 71.66
May-23	74,195	-	0	\$1,699,926	\$ 22.91	\$ -	\$ 56.74
Jun-23	78,807	-	0	\$1,699,926	\$ 21.57	\$ -	\$ 46.17
1/ As forecasted in NCPA 22/23 Budget							
2/ = (Western Cost + Restoration Fund)/BR Delivered, for Pool Participants only.							
3/ = (MEEA LMP - PG&E LAP LMP) using public market information (i.e. not settlement quality).							
4/ Based on BR Delivered (Actual) when available and BR Forecast in all other cases. Includes CAISO LMP impact.							

- NCPA Pool received 18,632 MWh of Base Resource (BR) energy in August 2022 with an estimated MEEA savings of \$50,720. There was zero MWh displaced energy in August.

Interconnection Affairs

PG&E Update

CAISO Initiative – Interconnection Process Enhancements Phase 2

CAISO is exploring opportunities for more viable projects to move forward toward COD, make more interconnection related data available to the public, and explore different cost allocation methodologies.

Notable Proposed Changes

1. Should the allocation of TPD require a PPA that procures the project's RA capacity for some minimum term?
NCPA Comment: NCPA supports efforts to ensure more viable projects will move forward, however where the Interconnection Customer (IC) is also the off taker for a projects output, the IC should be allowed to provide supporting information to satisfy such requirements without a formal PPA.
2. Should the ISO re-consider an alternative cost allocation treatment for network upgrades to local (below 200 KV) systems where the associated generation benefits more than, or other than, the customers within the service area of the Participating TO owning the facilities?

NCPA Comment: NCPA supports the allocation methodologies of costs to those that receive the benefits. We request PG&E provide data showing available investment before the 15 percent cap is reached. NCPA further supports LV facilities to be competitively bid, which can also reduce the overall cost to ratepayers.

CAISO Initiative – 2022-2023 Transmission Planning Process Final Study Plan

Notable Proposed Changes

1. Inter-Agency High Electrification Project

CPUC and CEC leadership began discussing higher electrification forecasts even as the 2021 IEPR was winding down.

As a result of inter-agency discussions, the lead staff of the Energy Agencies (CEC, CPUC) and CAISO agreed to collectively develop an assessment of the transmission system impacts of a scenario with higher electrification than expected to be included in the original 2021 IEPR adopted demand forecast.

This analysis was initially considered to be a sensitivity to supplement the regular inputs to the 2022-23 TPP.

As the initial Inter Agency High Electrification (IAHE) scenario was being finalized agency leadership directed development of a second scenario focused on transportation.

Eventually, agency and CAISO leadership determined that the Additional Transportation Electrification grid planning scenario, and complementary generation resource portfolio should be the “base case” for this TPP cycle.

NCPA Comments

1. The base case should not be updated and load forecast in the original study plan should be used for the base case. NCPA supports studying the high electrification scenario as a sensitivity.
2. NCPA cautions the CAISO of cost containment in case the high electrification scenarios do not materialize.
3. NCPA encourages the CAISO to consider all potentially lower cost alternative methods including non-wires solutions, dynamic line ratings, and the use of the existing transmission.
4. NCPA further notes: Existing resources are evaluating the uses, economics, and feasibility of converting existing gas fired generators to green hydrogen as highlighted by CEC’s [IEPR Commissioner Workshop on Role of Hydrogen in California’s Clean Energy](#)

CAISO Initiative – Transmission Planning Process Enhancements

Three (3) Enhancements

1. Adjust the timeline for the release of the draft transmission plans from the end of January to the end of March, targeting approval in each year's May Board of Governors meetings.
2. Enable approvals for major long lead time transmission projects needed beyond the current 10 year planning horizon.
3. Retaining policy-driven transmission upgrade capacity for the specific policy purpose for which it was developed.

NCPA Comments

1. Market conditions and resources availability can change over time, ISO should reassess policy capacity allocation in each planning cycle.

Debt and Financial Management

- The consumer price index (CPI) rose 8.3% over the past year in August worsening the cost woes for U.S. households and NCPA budgets. The hotter-than-expected inflation report sent the stock market tumbling. Prices rose broadly outside of the energy sector which showed one major bright spot with gasoline prices dropping 10.6%.
- The acceleration in inflation should clinch the case for the Federal Reserve to lift interest rates by at least 0.75 percentage points at its meeting next week. This approach to cool the economy comes at the risk of tipping the U.S. into an economic downturn. The next Fed meeting is scheduled for September 20-21.
- With an increase in rates, it will make borrowing costs higher. However, increased rates will benefit the Agency in regard to our investment strategy. As our bonds mature, we will be able to reinvest these proceeds in higher-yielding investments increasing the interest income receipts and strengthening our buying power.

Schedule Coordination Goals

Software Development

- Applications and Enhancements under development
 - Development of the Renewable Portfolio Standards application continues and data validation continues. Rollout delayed pending completion of other higher priority projects
 - IS team successfully upgraded about 75% of the Oracle databases to 2019 since the beginning of September, targeting completion of the remaining databases by the end of the month.
- IS currently working in collaboration with Accounting and the consultants to streamline the agency's Budgeting Process and Accounting Reports.

Network

- SCADA and Networking team continue to work with a variety of customers in an effort to integrate several new wind, solar and hydro resources,
 - Deer Creek – IS team is currently working with NID staff to collect the required information needed to perform a successful integration of the Deer Creek hydro resource by end of 2022.
 - Luciana Solar – IS is coordinating with the necessary technical teams to setup communications to the resource. Network telemetry has been established with an expectation to test curtailment logic in the coming weeks. We anticipate Dispatch to have full monitoring and control capabilities by end of the summer.
 - Antelope 1B Solar – telemetry has been established and initial point testing has been successful. Curtailment logic testing is scheduled to be completed in the next coming weeks.
- IS has begun the process of upgrading network and server equipment at the Primary and Backup Control Centers. This effort will refresh several aging systems and also prepare infrastructure needs required for NERC CIP Medium impact.
- Operations and Support continues to work with VOIP vendor Integration Partners and ISP Consolidated Communications (CCI) to replace HQ and Disaster Recovery Center (DRC) phone systems and migrate to Session Initiation Protocol (SIP) from a legacy PRI circuit. Cutover is expected to be completed this Fall.
- The Ops and Support team successfully migrated 17 existing Oracle 12 database to Oracle 2019 as part of a Phase 1 & 2. Next phase is to migrate the remaining 3 by end of September
- IS continues to work with facilities to replace an outdated visitor management software program with a new solution called Splan. This work includes setting up new servers and working with our security vendor to install the necessary applications and services. Expected to be completed by the fall.

NCPA Bills & Settlements

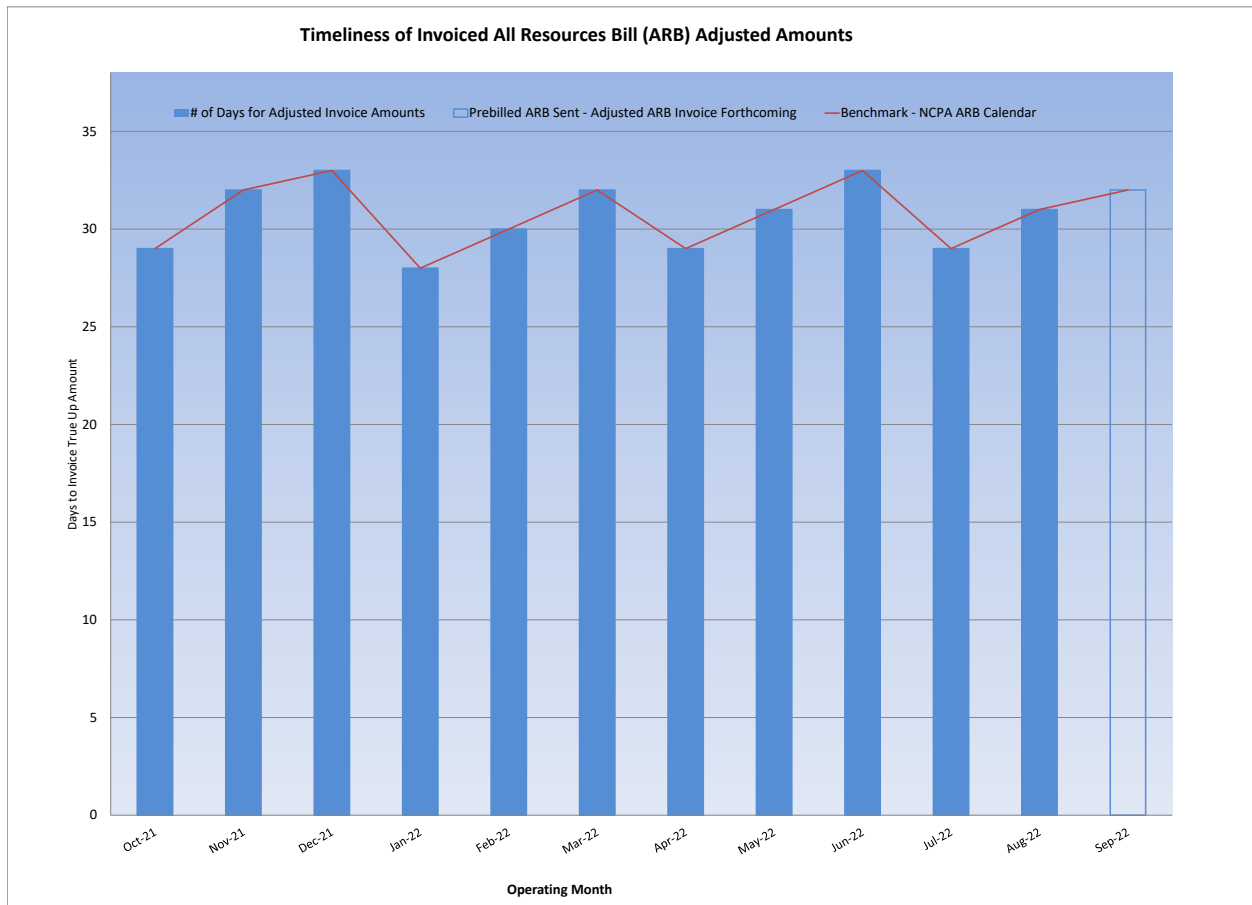
Progress Against the Strategic Plan

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 September 2022 NCPA All Resources Bill (ARB) monthly invoice sent to members on August 23, 2022 contains:

- September 2022 monthly pre-billed budget/forecast amounts;
- August 2022 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- June 2022 (2nd Adjustment) NCPA Project settlement true-up and T+20 business day recalculated CAISO settlement true-up allocations;
- April 2022 (3rd Adjustment) T+70 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;

- August 2021 (4th Adjustment) T+11-month recalculated CAISO settlement true-up allocations;
- December 2020 (5th Adjustment) T+18-month recalculated CAISO settlement true-up allocations;
- September 2019 (6th Adjustment) T+33-month recalculated CAISO settlement true-up;
- June 2019 (7th Adjustment) T+36-month CAISO settlement true-up;



Legislative & Regulatory

State Legislative Update

- California's legislative session concluded at the end of August, and NCPA played an important role in shaping the outcome of several pieces of energy legislation. NCPA engaged in several policy discussions surrounding funding for hydrogen development and support for sediment removal at NCPA's hydropower facilities. We also worked closely with our public power partners to secure key provisions that protect local decision-making and provide flexibility for utility program implementation.

Human Resources

Hires:

None.

Intern Hires:

None.

Promotions:

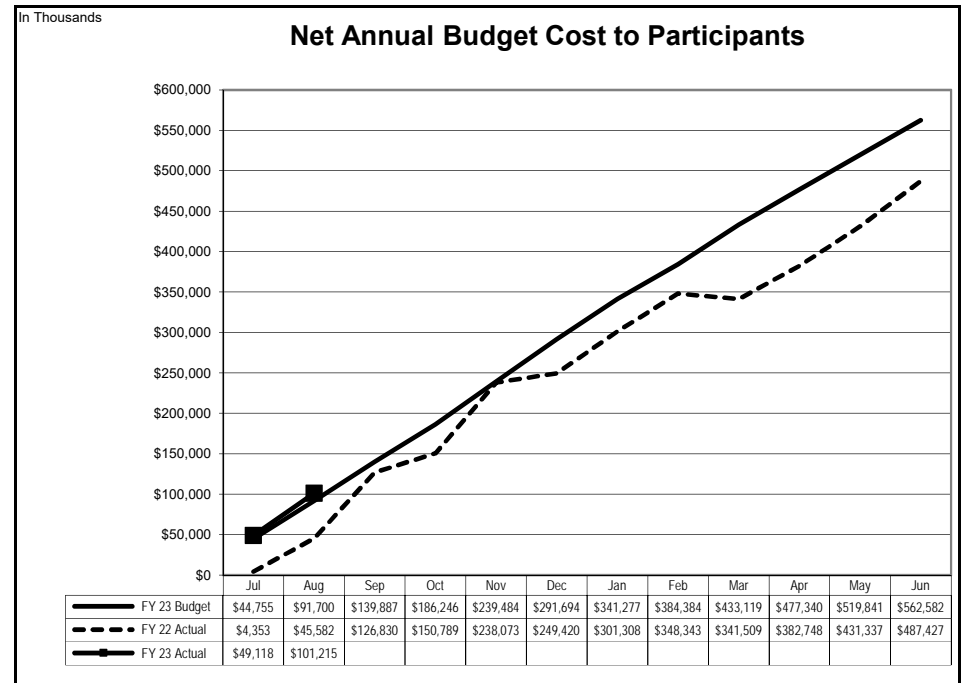
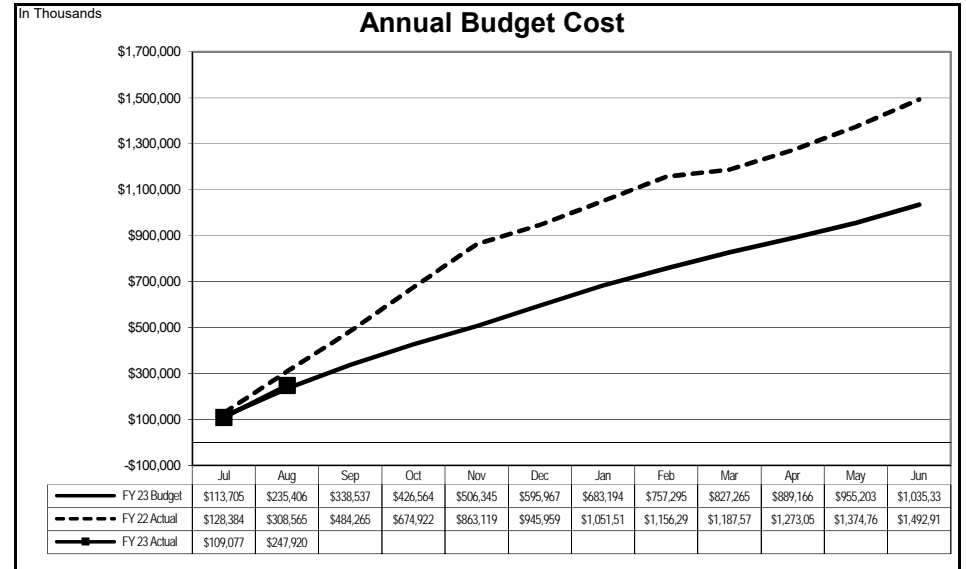
Cheryl Bolt was promoted to Administrative Assistant/Office Administrator II effective September 11, 2022. Cheryl joined NCPA in 2017 as an Office Assistant II, and since then she has formed collaborative relationships with NCPA staff and Members, provided administrative and operational support to multiple departments, and assisted Accounting with auditing Agency-wide credit card transactions. In Cheryl's new position, she will be providing continued support to the accounting department as well as administrative support to NCPA's Support and Shared Services program.

Separations:

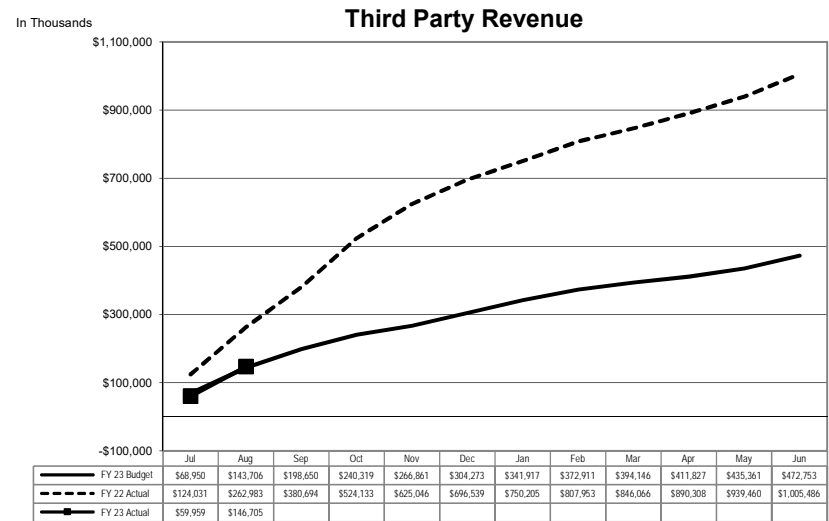
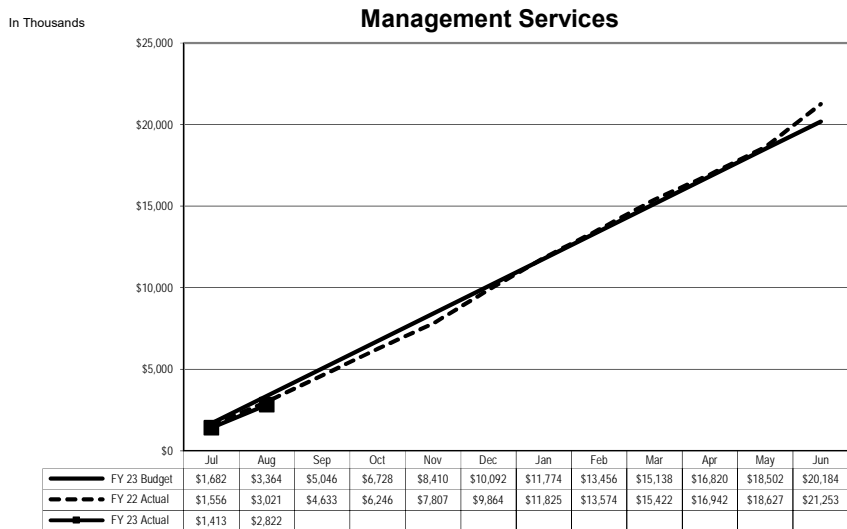
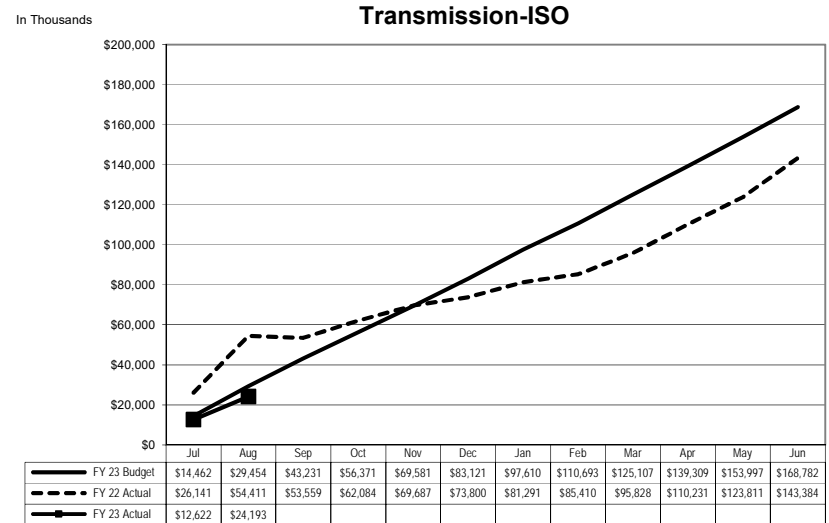
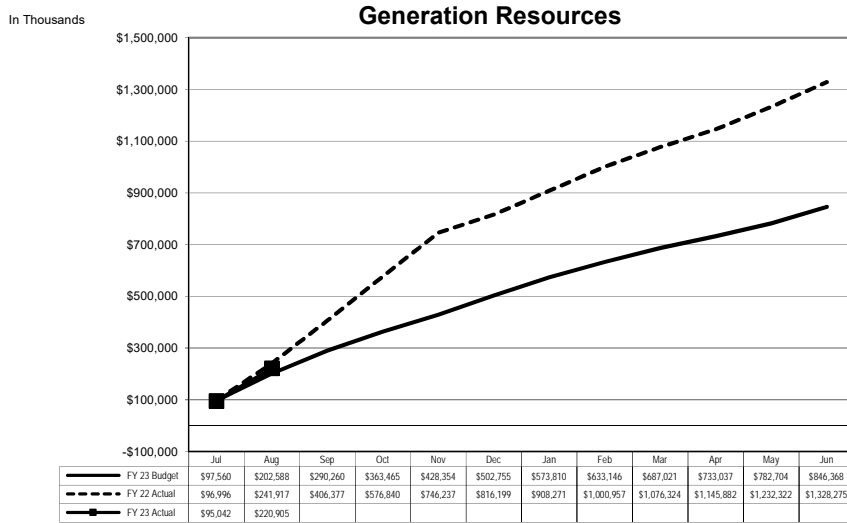
None.

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

In Thousands	Program			
	Annual Budget	Actual	Under(Ovr) Budget	YTD % Remaining
GENERATION RESOURCES				
NCPA Plants				
Hydroelectric	55,514	9,355	\$ 46,159	83%
Geothermal Plant	41,633	6,917	34,716	83%
Combustion Turbine No. 1	5,602	951	4,651	83%
Combustion Turbine No. 2 (STIG)	10,361	1,456	8,906	86%
Lodi Energy Center	137,737	21,532	116,205	84%
	250,847	40,209	210,637	84%
Member Resources - Energy	63,024	15,469	47,554	75%
Member Resources - Natural Gas	2,474	879	1,595	64%
Western Resource	26,100	6,380	19,720	76%
Market Power Purchases	35,533	12,878	22,655	64%
Load Aggregation Costs - ISO	467,469	143,388	324,081	69%
Net GHG Obligations	921	1,701	(780)	-85%
	846,368	220,905	625,463	74%
TRANSMISSION				
Independent System Operator	168,782	24,193	144,589	86%
MANAGEMENT SERVICES				
Legislative & Regulatory				
Legislative Representation	2,231	215	2,016	90%
Regulatory Representation	715	98	617	86%
Western Representation	723	34	689	95%
Customer Programs	615	74	540	88%
	4,284	422	3,862	90%
Judicial Action	460	-	460	100%
Power Management				
System Control & Load Dispatch	7,504	1,226	6,278	84%
Forecasting & Prescheduling	3,044	416	2,628	86%
Industry Restructuring	438	76	362	83%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,032	141	891	86%
Gas Purchase Program	77	9	68	89%
Market Purchase Project	112	13	99	88%
	12,208	1,882	10,325	85%
Energy Risk Management	150	23	127	85%
Settlements	1,012	110	902	89%
Integrated System Support	405	100	305	75%
Participant Pass Through Costs	1,666	135	1,531	92%
Support Services	-	150	(150)	
	20,184	2,822	17,362	86%
TOTAL ANNUAL BUDGET COST	1,035,334	247,920	787,414	76%
LESS: THIRD PARTY REVENUE				
Plant ISO Energy Sales	193,457	37,232	156,226	81%
Member Resource ISO Energy Sales	49,954	22,848	27,106	54%
Member Owned Generation ISO Energy Sales	118,709	33,017	85,692	72%
Revenue from Customers	-	11,073	(11,073)	
Customer Owned Generation ISO Energy Sales	-	181	(181)	
NCPA Contracts ISO Energy Sales	34,944	8,003	26,941	77%
Western Resource ISO Energy Sales	26,527	4,921	21,606	81%
Load Aggregation Energy Sales	-	18,353	(18,353)	
Ancillary Services Sales	5,514	1,013	4,501	82%
Transmission Sales	110	18	92	83%
Western Credits, Interest & Other Income	43,537	10,045	33,493	77%
	472,753	146,705	326,048	69%
NET ANNUAL BUDGET COST TO PARTICIPANTS	562,582	101,215	\$ 461,366	82%

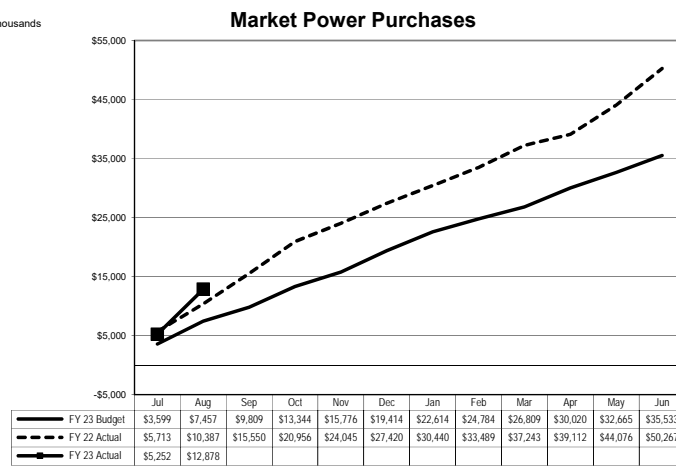
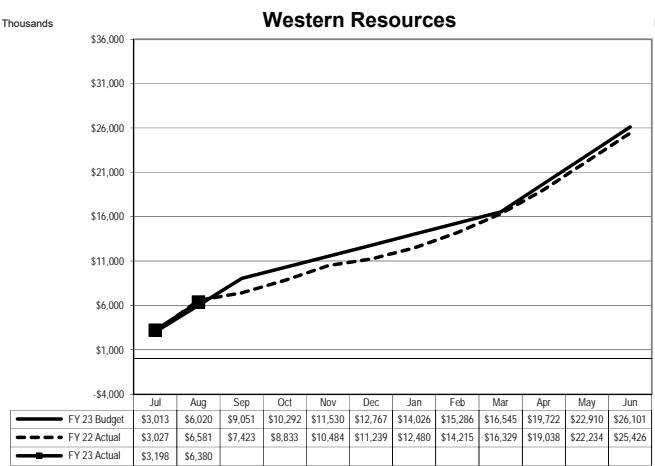
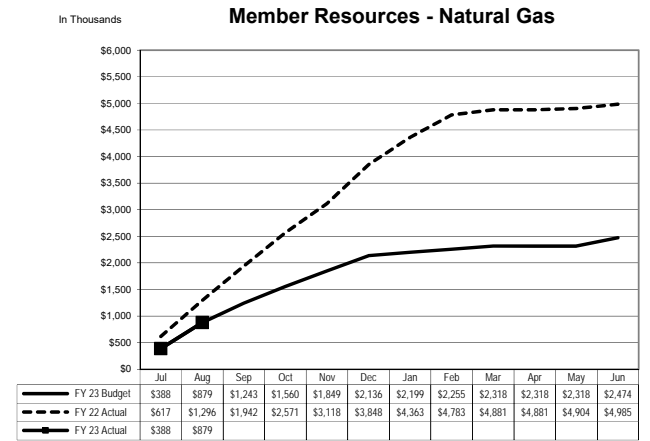
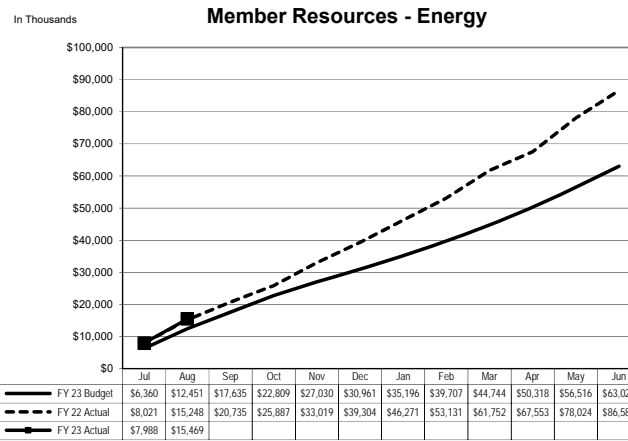
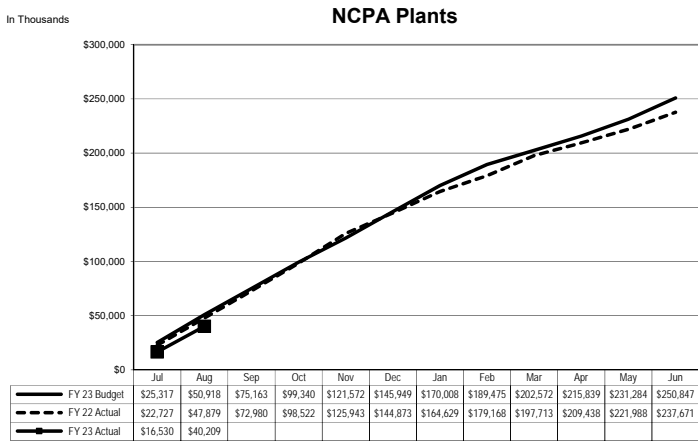


**Annual Budget
Budget vs. Actual By Major Area
As of August 31, 2022**



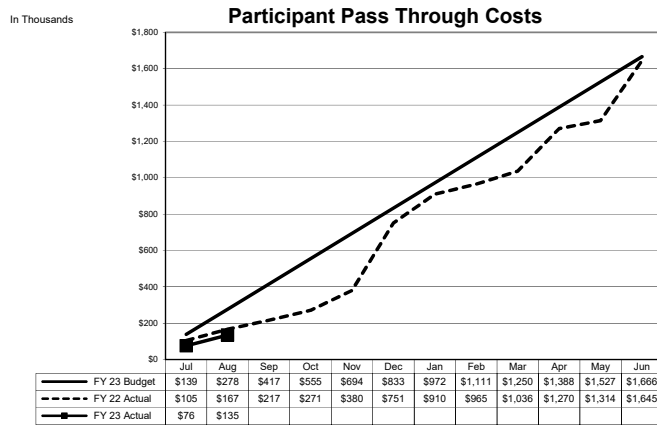
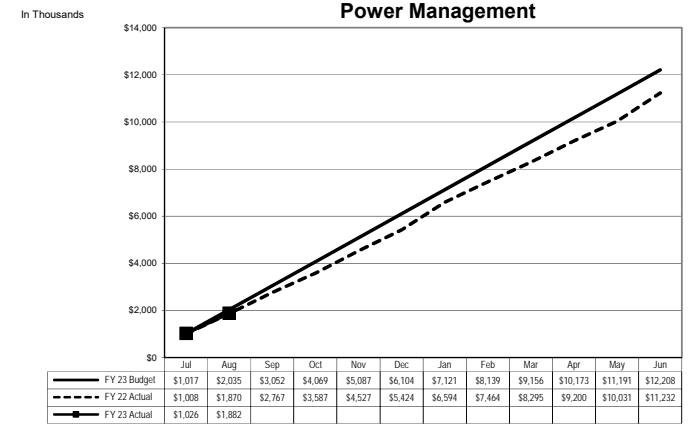
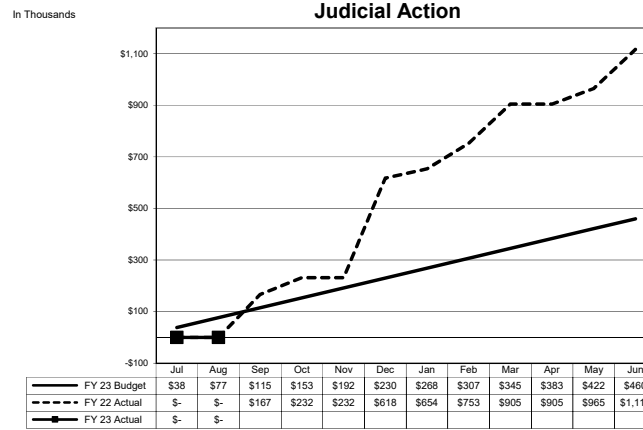
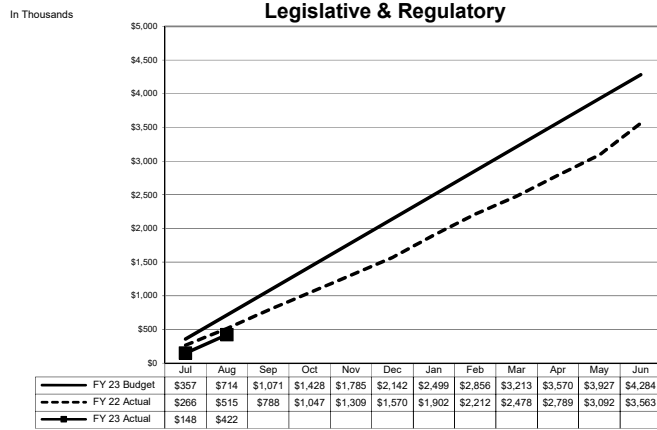
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

Annual Budget Cost Generation Resources Analysis By Source As of August 31, 2022



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

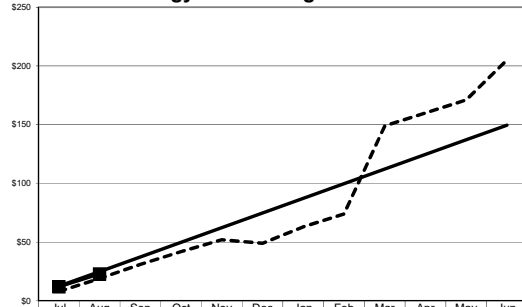
**Annual Budget Cost
Management Services Analysis By Source
As of August 31, 2022**



**Annual Budget Cost
Management Services Analysis By Source
As of August 31, 2022**

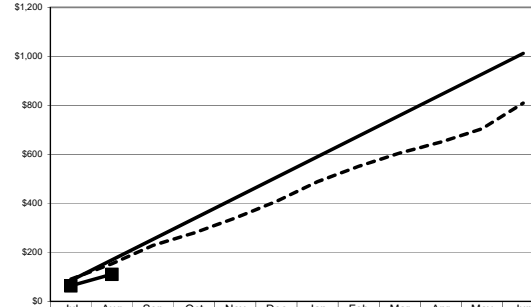
In Thousands

Energy Risk Management



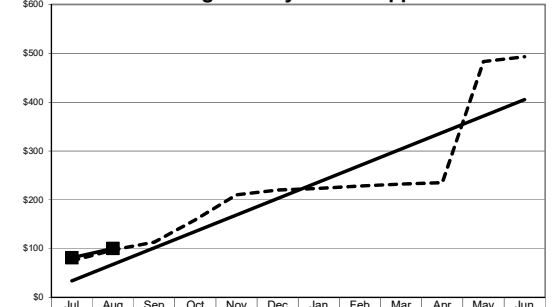
In Thousands

Settlements



In Thousands

Integrated Systems Support

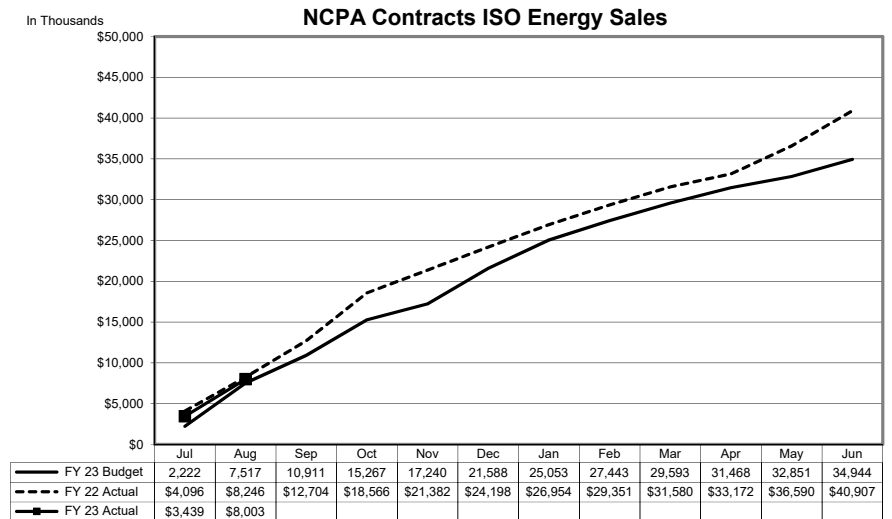
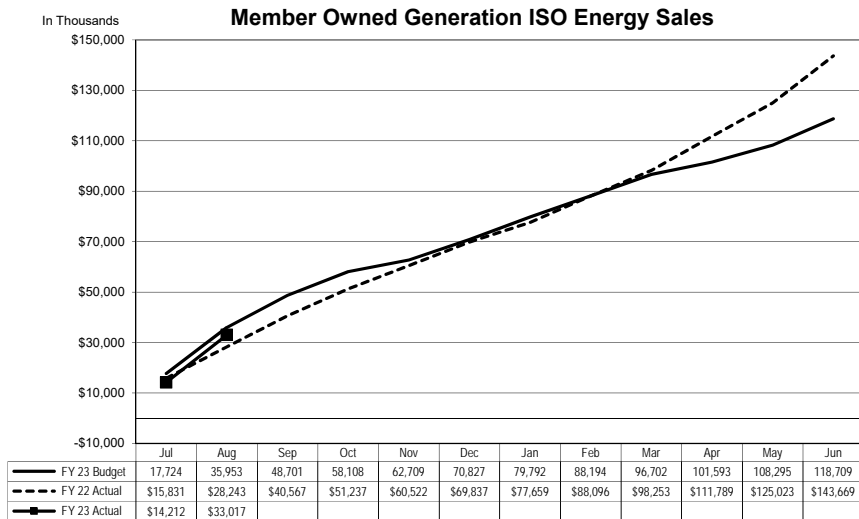
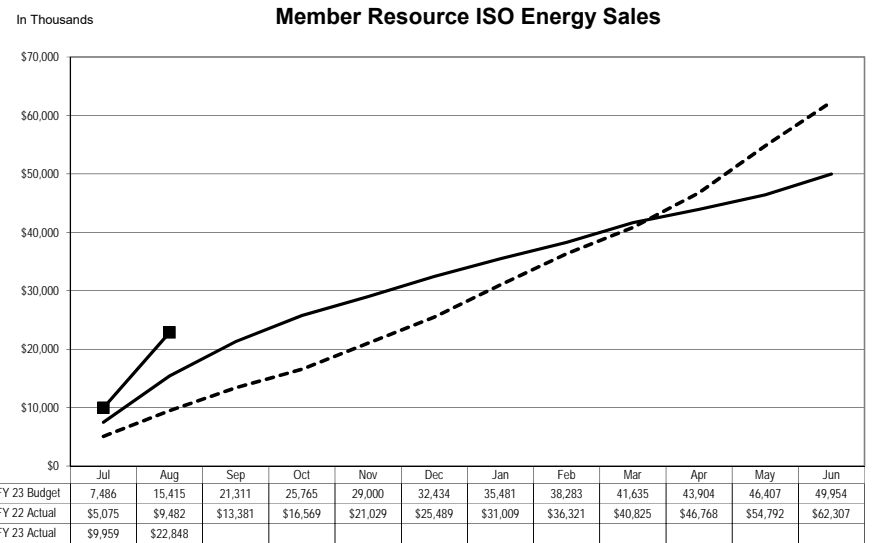
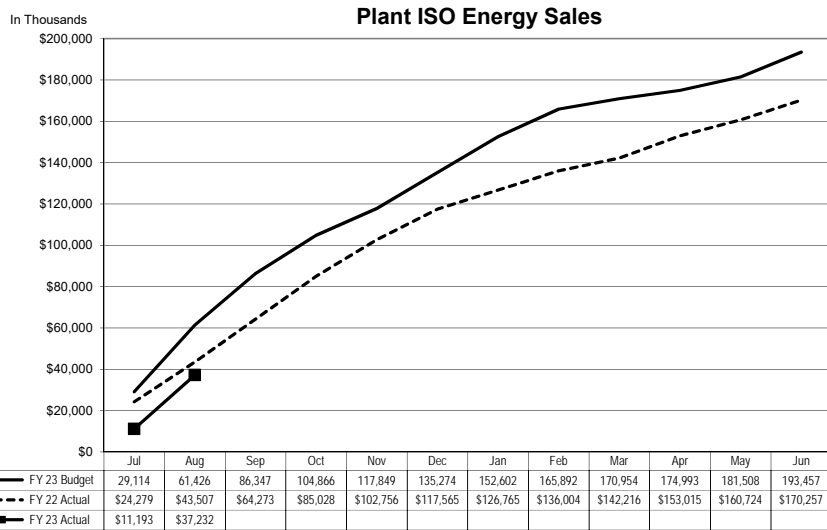


	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	\$12	\$25	\$37	\$50	\$62	\$75	\$87	\$100	\$112	\$125	\$137	\$150
FY 22 Actual	\$8	\$19	\$31	\$42	\$52	\$49	\$63	\$74	\$149	\$160	\$171	\$205
FY 23 Actual	\$12	\$23										

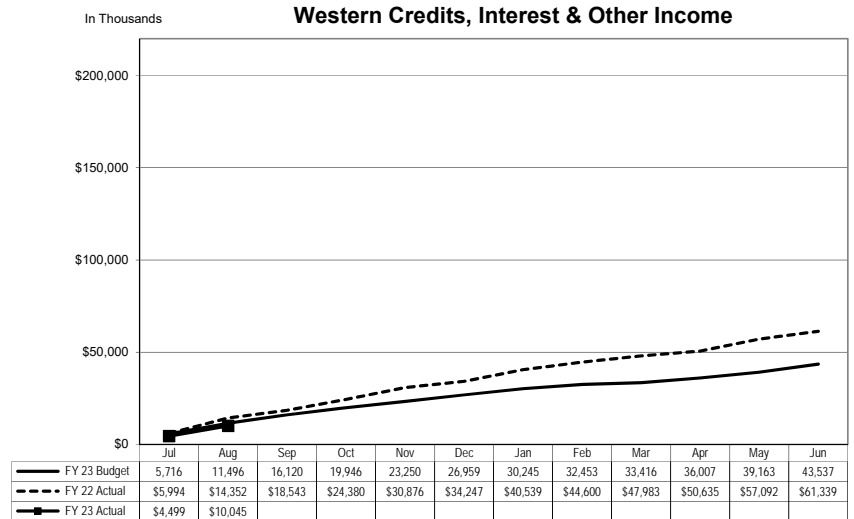
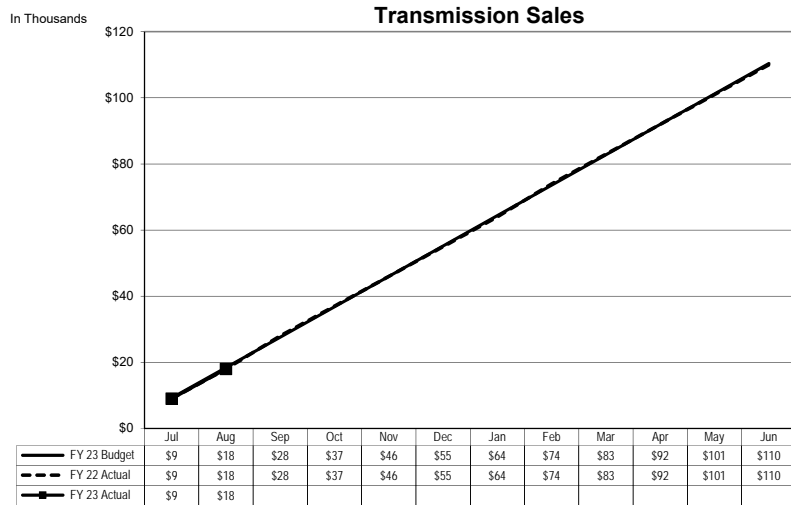
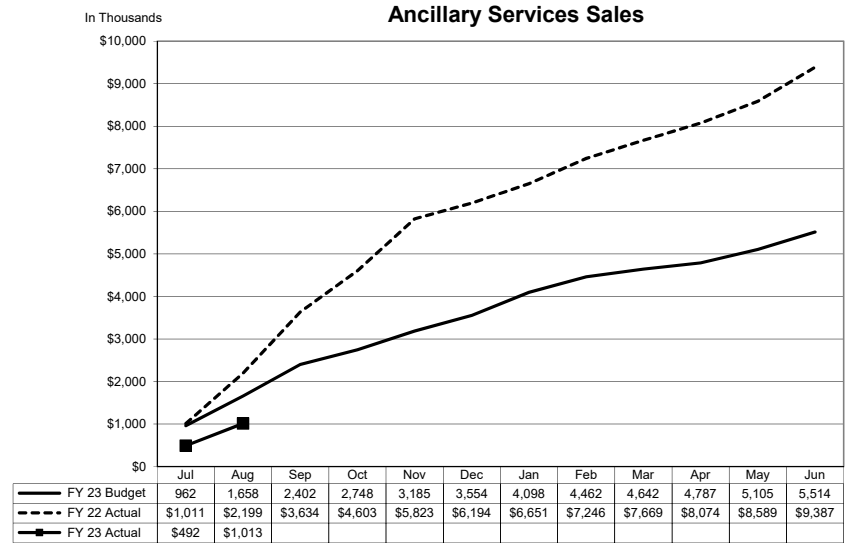
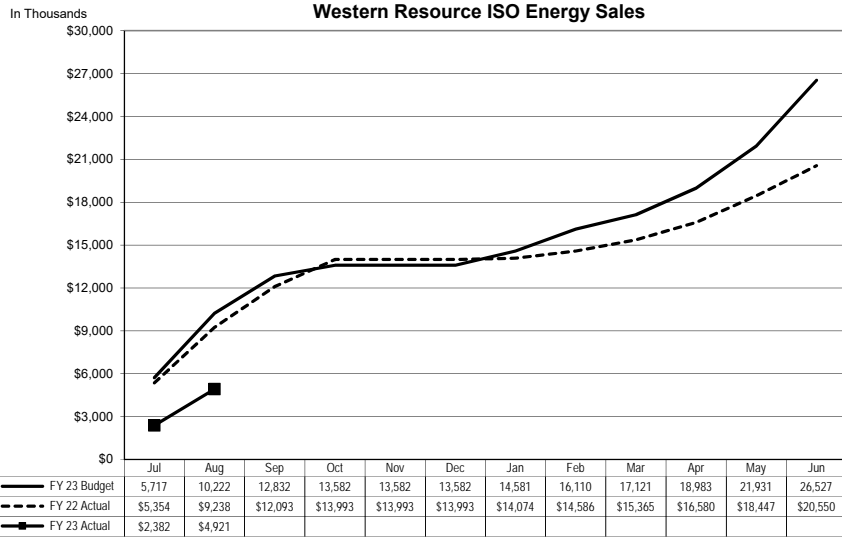
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 23 Budget	\$84	\$169	\$253	\$337	\$422	\$506	\$590	\$675	\$759	\$843	\$928	\$1,011
FY 22 Actual	\$90	\$153	\$228	\$279	\$340	\$408	\$488	\$551	\$605	\$650	\$704	\$809
FY 23 Actual	\$63	\$110										

	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										

**Annual Budget Cost
Third Party Revenue Analysis By Source
As of August 31, 2022**



**Annual Budget Cost
Third Party Revenue Analysis By Source
As of August 31, 2022**



**Annual Budget
NCPA Generation Detail Analysis By Plant
As of August 31, 2022**

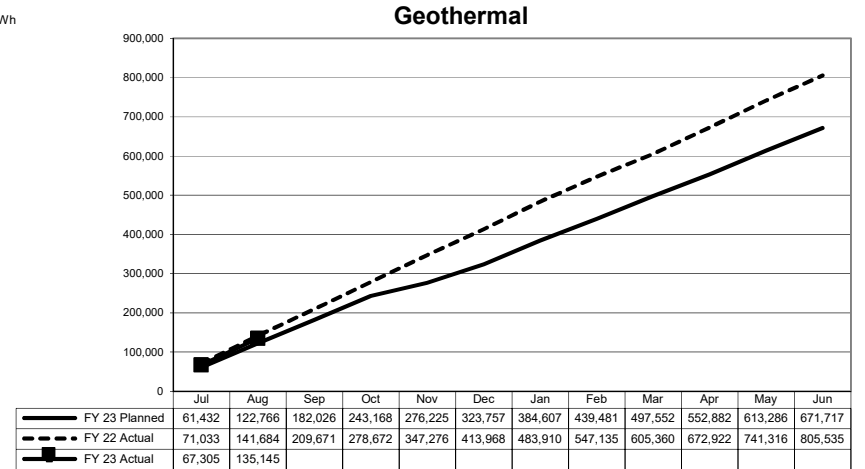
Generation Cost Analysis

\$ in thousands

	Geothermal				
	Budget	Actual	\$/MWh	Under(Over)	YTD %
			Actual	Budget	Remaining
Routine O & M	\$ 17,798	\$ 3,103	\$ 22.96	\$ 14,694	83%
Capital Assets/Spare Parts Inventories	7,401	863	6.39	6,537	88%
Other Costs	12,357	2,227	16.48	10,131	82%
CA ISO Charges	604	145	1.07	459	76%
Debt Service	3,473	579	4.28	2,894	83%
Annual Budget	41,633	6,917	51.18	34,716	83%
Less: Third Party Revenue					
Interest Income	150	20	0.15	130	87%
ISO Energy Sales	42,271	11,590	85.76	30,681	73%
Ancillary Services Sales	-	-	-	-	0%
Effluent Revenues	750	-	-	750	100%
Misc	113	19	0.14	94	83%
	43,284	11,629	86.05	31,655	73%
Net Annual Budget Cost to Participants	\$ (1,651)	\$ (4,712)	\$ (34.86)	\$ 3,061	-185%
Net Generation--MWh @ Meter	671,717	135,145			
\$/MWh (A)	\$ (7.63)	\$ (39.15)			

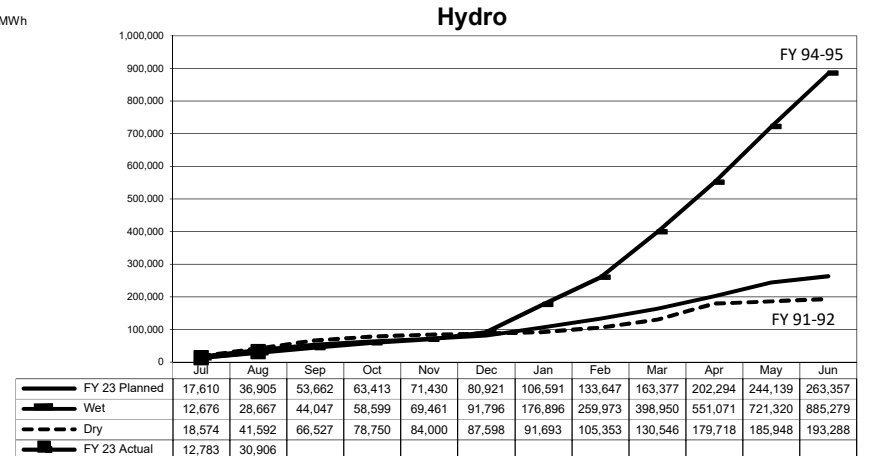
MWhs Generated

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh	Under(Over)	YTD %
			Actual	Budget	Remaining
Routine O & M	\$ 10,203	\$ 1,004	\$ 32.48	\$ 9,199	90%
Capital Assets/Spare Parts Inventories	4,270	606	19.60	3,664	86%
Other Costs	3,993	706	22.86	3,287	82%
CA ISO Charges	1,237	1,070	34.62	167	13%
Debt Service	35,811	5,969	193.12	29,843	83%
Annual Budget	55,514	9,355	302.69	46,159	83%
Less: Third Party Revenue					
Interest Income	150	12	0.39	138	92%
ISO Energy Sales	22,182	5,167	167.19	17,015	77%
Ancillary Services Sales	1,224	889	28.76	335	27%
Misc	-	-	-	-	0%
	23,556	6,068	196.34	17,488	74%
Net Annual Budget Cost to Participants	\$ 31,958	\$ 3,287	\$ 106.35	\$ 28,672	
Net Generation--MWh @ Meter	263,357	30,906			
\$/MWh (A)	\$ (14.63)	\$ (86.77)			

In MWh



Footnotes:

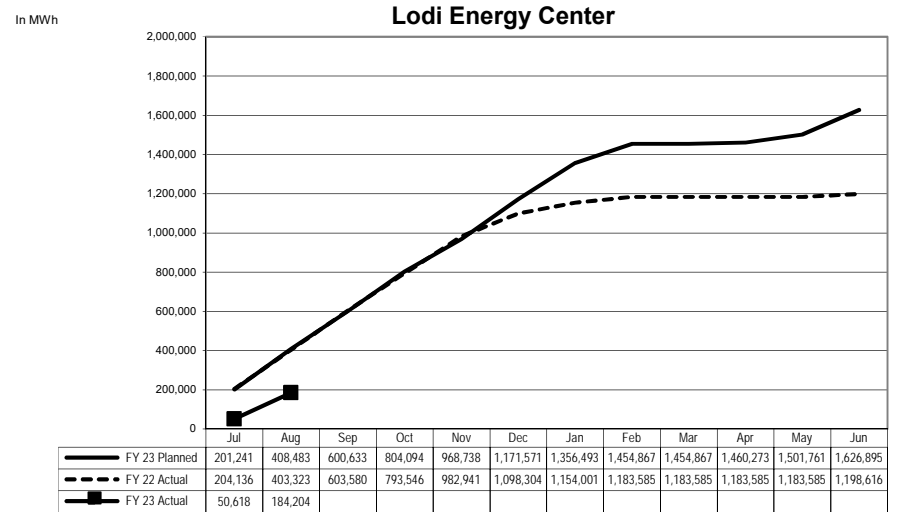
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

**Annual Budget
NCPA Generation Detail Analysis By Plant
As of August 31, 2022**

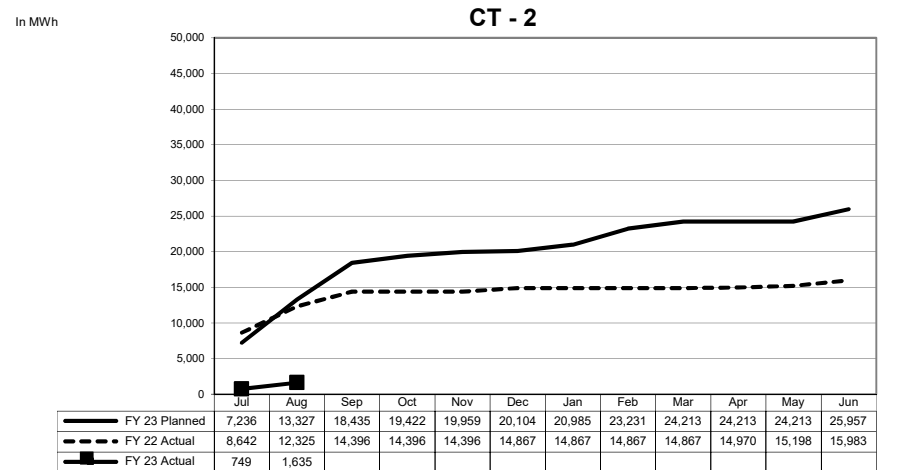
Generation Cost Analysis

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 9,826	\$ 1,335	\$ 7.25	\$ 8,491	86%
Fuel	64,819	13,282	72.10	51,537	80%
GHG Allowance Costs	20,250	-	-	20,250	100%
CA ISO Charges and Energy Purchases	2,970	897	4.87	2,073	70%
Capital Assets/Spare Parts Inventories	3,631	178	0.96	3,454	95%
Other Costs	10,244	1,507	8.18	8,737	85%
Debt Service	25,996	4,333	23.52	21,664	83%
Annual Budget	137,737	21,532	116.89	116,205	84%
Less: Third Party Revenue					
Interest Income	250	64	0.35	186	75%
ISO Energy Sales	121,620	19,144	103.93	102,475	84%
Ancillary Services Sales	2,318	99	0.54	2,218	96%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	19,710	239	1.30	19,471	99%
Misc	-	-	-	-	0%
	143,897	19,546	106.11	124,350	86%
Net Annual Budget Cost to Participants	\$ (6,160)	\$ 1,985	\$ 10.78	\$ (8,145)	132%
Net Generation--MWh @ Meter	1,626,895	184,204			
\$/MWh (A)	\$ (19.77)	\$ (12.74)			

MWhs Generated



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,616	\$ 258	\$ 157.92	\$ 1,358	84%
Fuel and Pipeline Transport Charges	2,227	174	106.39	2,053	92%
GHG Allowance Costs	424	-	-	424	100%
Capital Assets/Spare Parts Inventories	220	-	-	220	100%
Other Costs	643	176	107.77	467	73%
CA ISO Charges	148	-	-	148	100%
Debt Service	5,084	847	518.37	4,237	83%
Annual Budget	10,361	1,456	890.46	8,906	86%
Less: Third Party Revenue					
Interest Income	42	6	3.44	36	87%
ISO Energy Sales	4,331	345	211.01	3,986	92%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,775	463	283.33	1,312	74%
GHG Allowance Credits	424	-	-	424	100%
Misc	-	-	-	-	0%
	6,572	814	497.77	5,758	88%
Net Annual Budget Cost to Participants	\$ 3,789	\$ 642	\$ 392.68	\$ 3,147	83%
Net Generation--MWh @ Meter	25,957	1,635			
\$/MWh (A)	\$ (49.88)	\$ (125.69)			



Footnotes:

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

**Annual Budget
NCPA Generation Detail Analysis By Plant
As of August 31, 2022**

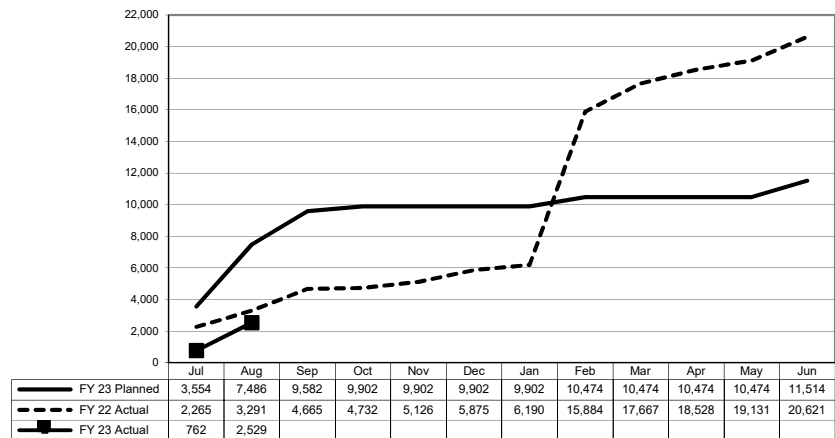
Generation Cost Analysis

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,530	\$ 418	\$ 165.15	\$ 2,112	83%
Fuel and Pipeline Transport Charges	1,214	129	51.15	1,084	89%
Capital Assets/Spare Parts Inventories	800	104	41.18	696	87%
Other Costs	882	143	56.43	739	84%
CA ISO Charges	176	157	61.89	19	11%
Debt Service	-	-	-	-	-
Annual Budget	5,602	951	375.80	4,651	83%
Less: Third Party Revenue					
Interest Income	55	6		49	90%
ISO Energy Sales	3,053	985	389.47	2,068	68%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	-	-	-	0%
	3,108	991	389.47	2,118	68%
Net Annual Budget Cost to Participants	\$ 2,493	\$ (40)	\$ (15.88)	\$ 2,533	102%
Net Generation--MWh @ Meter	11,514	2,529			
\$/MWh (A)	\$ 216.54	\$ (15.88)			

MWhs Generated

In MWh

CT - 1



Footnotes:

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