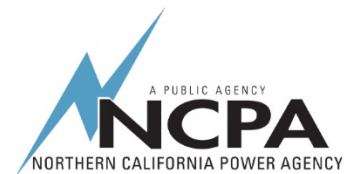




2022

BUSINESS PROGRESS
REPORT

NOVEMBER



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

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Generation Costs & Reliability

Combustion Turbine Project

Unit Operation for October 2022

Unit	Availability		Production			Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	66.9	MWh	CAISO / CAISO
	100.0%	100.0%	Unit 2	69.4	MWh	
Curtailments, Outages, and Comments:						
Unit 1: Normal operation.						
Unit 2: Normal operation.						
Unit	Availability		Production			Reason for Run
CT1 Lodi	100.00%		29.1	MWh		CAISO
Curtailments, Outages, and Comments:						
Normal Operation.						
Unit	Availability		Production			Reason for Run
CT2 STIG	96.8%		533.0	MWh		CAISO
Curtailments, Outages, and Comments:						
10/31 @ 00:00 - 11/1 @ 23:59; Boiler tube repair, OMS 12632830						
Unit	Availability		Production			Reason for Run
LEC	100.0%		100,920	MWh		CAISO
Curtailments, Outages, and Comments:						
10/01 @ 00:00 - 10/15 @ 23:59; LEC plant de-rated to 240MW for HPST vibration issue						

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for October 2022

Unit	Availability	Net Electricity Generated/Water Delivered	Out-of-Service/Descriptors
Unit 1	90.39 %	18,242 MWh	U1 had no outages for the month
Unit 2	90.32 %	*17,106 MWh	U2 had no outages for the month
Unit 3	N/A %	N/A -	Unit 3 remains out of service.
Unit 4	100 %	28,337 MWh	U4 had no outages for the month
Southeast Geysers Effluent Pipeline	57 %	83.82 mgallons	Average flow rate: 1893 gpm
Southeast Solar Plant	N/A	133,118 KWh	Year-to-date KWh: 1,369,468
Bear Canyon Pump Station Zero Solar	N/A	83,120 KWh	Year-to-date KWh: 1,033,367

* Accounts for an additional 743 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for October 2022

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	57.78%	3906 MWh	CV Unit 1 – Out of Service on 10/1/22 to 10/2/22 from 0603 to 0556 for Annual Dual Unit Outage and on 10/17/22 to 10/28/22 from 0715 to 1713 for Unit Annual Maintenance and on 10/28/22 to 10/29/22 from 1927 to 0609 for CB 1412 trouble.
Collierville Unit 2	60.2%	7136 MWh	CV Unit 2 – Out of Service on 10/1/22 to 10/2/22 from 0603 to 2359 for Annual Dual Unit Outage and on 10/3/22 to 10/13/22 from 0000 to 2123 for Unit Annual Maintenance.
Spicer Unit 1	100%	1255 MWh	NSM1- No Outages
Spicer Unit 2	100%	127 MWh	NSM2- No Outages
Spicer Unit 3	97.8%	184 MWh	NSM3- Out of Service on 10/1/22 from 0000 to 1624 for PG&E Distribution work.

Operations & Maintenance Activities:

- CMMS work orders
- CV Dual Unit Outage
- CV Annual Outages
- Lake Alpine Dam- Dam face repairs
- Union Dam – Main Dam grout repairs

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 October.
- 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 October 22, 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.

October 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	741	365	2,756	3,740
Work Hours Since Last Recordable	64,035	75,171	418,006	2,874,484
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	5,490	2,619	10,660	6,753
Work Hours without LTA	496,604	239,381	828,550	2,496,502
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 October 22, 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

	October 2022		Calendar Year 2022	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	333.97 10/5 @ 1800	184,984	511.56 9/6 @ 1600	1,907,759
SVP	603.81 10/19 @ 1600	389,893	687.74 9/6 @ 1300	3,768,826
MSSA	925.79 10/19 @ 1700	574,877	1176.2 9/6 @ 1400	5,676,585

Last Year 2021 Data*

	October 2021		Calendar Year 2021	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	331.7 10/1 @ 1800	180,009	440.56 6/17 @ 1700	1,879,472
SVP	562.28 10/4 @ 1600	363,596	591.96 8/27 @ 1500	3,417,213
MSSA	891.99 10/4 @ 1700	543,605	1025.46 6/17 @ 1700	5,296,685

*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	511.56 9/6 @ 1600
SVP	687.74 MW on 9/6/22 @ 1300	687.74 9/6 @ 1300
MSSA	1176.20 MW on 9/6/22 @ 1400	1176.2 9/6 @ 1400

- 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		
	October 2022	Calendar Year 2022
MSSA % Within the Band	97.96%	98.32%

- 10/03/2022 CAISO Grid TEST NOTICE [202202732] – This is the monthly test of the California ISO Alert, Warning & Emergency (AWE) Notification System
 - Only Test no action required
- PG&E announced a Low Inventory System-Wide OFO for flow day 10/12/2022
 - OFO Stage: 1
 - Inventory Level: Low
 - Noncompliance Charge: \$0.25/Dth
 - Tolerance Band: 5%

Pooling, Portfolio Planning & Forecasting

- NCPA Pool loads during October 2022 were 184,984 MWh versus the budget forecast of 184,665 MWh, resulting in a forecast error of 0.17%. The current weather outlook for November 2022 is near normal temperatures and average rainfall. The Pool's November load forecast is 184,855 MWh compared with extrapolated actuals of 179,971 MWh as of November 14, 2022.
- Lodi Energy Center (LEC) ran 421 hours out of a possible 744 producing 100,923 MWh. Natural gas and power prices are significantly higher than a year ago due to the low reservoir levels throughout the state and high gas prices as Henry Hub.
- During October 2022, 0.0" of rain was recorded at the Big Trees gauge. October average rainfall at Big Trees is 2.59". New Spicer Meadows storage decreased by just over 9,200 acre feet in October.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been maintained at \$250/MWh. Releases from NSMR have been set to meet and maintain the November 1st minimum Big Trees flows of 100 cfs.
- New Spicer Meadows storage as of October 31, 2022 was 80,420 acre feet. The historical average storage at the end of October is 90,827 acre feet. As of November 15th, storage was 78,091 acre feet.
- Combined Calaveras Project generation for the Pool in October 2022 totaled 6,039MWh, down from 13,929 MWh in September 2022.
- Western Base Resource (BR) deliveries for the Pool during October 2022 were 11,637 MWh. Displacement program energy totaled 0 MWh. The Pool's share of expected total delivery from the Western Base Resource for November 2022 is 4,250 MWh, with 1,977 MWh having been delivered through November 4 2022.
- The PG&E Citygate gas index averaged \$7.33 / MMBtu during the month of October as compared to an average of \$8.89 for September. November's current average price is \$8.26 through the 14th. The December 2022 PG&E Citygate forward price is \$7.95 / MMBtu.
- Day-Ahead PG&E DLAP electricity prices for October averaged \$74.31 / MWh On-Peak and \$68.47 Off-Peak, with a high of \$180.87. DLAP prices have averaged \$84.50 On-Peak and \$82.68 Off-Peak for the period November 1st through the 14^h. The forward power prices for December are \$90.79 On-Peak and \$87.65 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 January 2023:
 - Monthly System Resource Adequacy Demonstration (filed November 17, 2022)
 - Monthly Supply Plan (filed November 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:

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.

- Next steps:
 - Nov. 2022 – Final Proposal
 - Dec. 2022 – ISO Board of Governors and WEIM Governing Body Joint Meeting

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.

CAISO published the Draft Final Proposal in October.

- Introduces a requirement that supply offers into the market must have associated transmission reservations.
- Modifies the timeline associated with the voluntary release of transmission under Pathway 2 from 6:00 AM to 9:00 AM of the day ahead in order to provide transmission customers and other entities additional time to plan their daily resource and transmission use.
- Resource Sufficiency Evaluation: Describes the approach for modeling and counting delivered firm energy contracts in the day ahead resource sufficiency evaluation. Separately, the proposal revises the consequences for failing the RSE by including a tiered structure that provides a tolerance band under which a relatively minor failure does not constitute a resource sufficiency evaluation failure, but failures above the

tolerance band are subject to scaled financial administrative surcharges. The proposal provides clarifications on other aspects of the design.

- Makes optional a formally required one year transmission period for implementation of convergence bidding in the EDAM balancing area.
- External Resource Participation – The draft final proposal provides an opportunity for designated network resources located outside of the EDAM footprint to submit bids (economic offers or self-schedules) at the EDAM entity intertie where they are designated to serve load.
- Next steps:
 - Nov 22, 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.

- Next steps:
 - 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:
 - Nov 16, 2022 Web meeting
 - Dec 12, 2022 Comments due

Day-Ahead Market Enhancements

This initiative will explore a new day-ahead product that will address ramping needs between intervals and uncertainty that can occur between the day-ahead and real-time markets.

Fourth revised straw proposal posted Nov 1, 2022.

- Updates description of imbalance reserves' role in EDAM.
- Addresses imbalance reserve net benefits in EDAM.
- Describes the difference between imbalance reserves and reliability capacity, and why the day-ahead market needs both products.
- Updates day-ahead bidding rules for imbalance reserves and reliability capacity.
- Updates resource adequacy day-ahead bidding obligations. Removes must offer obligation for Imbalance Reserve Product.
- Updates resource adequacy real-time bidding obligations. Retains real-time must offer obligation.
- LF-MSSA largely unaffected.

- Next steps
 - Nov 15, 2022 Comments due
 - Nov 30, 2022 Draft final proposal posting
 - Dec 07, 2022 MSC meeting
 - Dec 21, 2022 Comments due

Western

- NCPA Pool received 10,637 MWh of Base Resource (BR) energy in October 2022 with an estimated MEEA savings of \$(7,100). There was zero MWh displaced energy in October.

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

WAPA-SNR plans to file new formula rate schedules for CVP and the COTP under Rate Order No. WAPA-207.

- WAPA intends to file a 5-Year Power Formula Rate for the CVP and COTP, expected rate process. This is for rate schedules that are set to expire on September 30, 2024 and December 31, 2024. Staff provided a summary on the 10/31 informal customer meeting on the overview of Power Repayment Fundamentals, which includes items: Rate Design, PRR, Power Repayment Study and Existing Rate Schedules.
- Highlight: There was a large adjustment to interest based on the reduced obligation to CVP Power. The \$32 Million reduction was a result from Final Cost Allocation Study. WAPA applied the first \$10M in 2022 so the Project Repayment line was \$0 on 2020, 2021 and 2022 PRR. FY 2023 PRR is the lowest since 2007.
- Next informal customer meeting is scheduled on 11/30. Focus is on Transmission & Ancillary Services Repayment Fundamentals.

Interconnection Affairs

CAISO Initiative – 2021-2022 Transmission Planning Process Update

CAISO is in phase 3/the competitive solicitation phase. Projects eligible for competitive bid are:

- New Collinsville 500 kV substation
- New Manning 500 kV substation
- San Jose Area HVDC Lines (Newark to NRS)
- San Jose Area HVDC Line (Metcalf – San Jose)

On Sept 2 – ISO posted four valid project sponsor applications for the New Collinsville and New Manning substation projects:

- Avangrid Networks
- Horizon West Transmission
- LS Power
- Starwood Energy Group

Currently CAISO is in a selection process to determine which sponsor should finance, construct, own, operate and maintain the two 500kV substation projects. Selection report is to be posted on January 23, 2023.

On October 17 – ISO will post valid project sponsors applications for the San Jose HVDC Line projects. Selection report for the HVDC line projects is to be posted on March 3, 2023.

CAISO Initiative – 2022-2023 Transmission Planning Process Update

On Sept 27th and 28th – CAISO hosted a stakeholder call to discuss reliability study results and proposed mitigations by PTOs.

Comments are due Oct 12. Potential NCPA comments:

- Request ISO to make available project list which are being approved as a result of load growth (i.e. additional transportation electrification scenarios).
- Support BAMX comments stating PTO mitigations are not aligning with CAISO's reliability assessment results.

On Nov 17, ISO will post preliminary policy and economic study results.

Rate Case Update – TO18 Refunds

Background

- PG&E calculated refund amount to be \$234M
- PG&E's compliance filing stated ISO is responsible for administering the refunds

- JI protested the refunds calculation citing three issues
- ISO stated it will not issue refunds until there is a FERC Order on PG&E's compliance filing

Current Status

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

Next Steps

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

Debt and Financial Management

- The Fed has been aggressively lifting rates to combat inflation, hoping higher borrowing costs will curb hiring, spending, and investment. During their November meeting, officials increased their benchmark federal-funds rate by 0.75 percentage points—their sixth increase this year—bringing it to a range between 3.75% and 4%.
- The Labor Department released a statement noting that the consumer-price index increased 7.7% in October from the same month a year ago, down from 8.2% in September easing to the slowest pace since January. While October's figures showed inflationary pressures remained elevated, some signs of cooling prices were present in the release. The indexes for used cars and trucks, medical care, apparel, and airline fares all declined over the month.
- Stock prices surged and bond yields dropped sharply after the latest CPI report as traders welcomed signs of ebbing price pressures. Investors are hoping that easing inflation means the Fed might not have to raise interest rates as high as previously feared. The inflation report likely leaves the central bank on course to raise rates by a half-point next month and raises questions over how much higher it will lift them next year.

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
- Integrations
 - Antelope Expansion 1B Solar resource being integrated into the NCPA Pool's portfolio, COD has been pending completion of CAISO approval process. Systems ready once COD is cleared.
- IS currently working in collaboration with Accounting and the consultants to streamline the agency's Budgeting Process and Accounting Reports. System configuration is on-going.
- Development team going through Cross-Training exercises to manage the increasing technical support needs
- IS assisting SVP to transition some of their RIOB and SNCL Settlements processes utilizing NCPA's software technology.

Network

- SCADA and Networking team continues to work with a variety of customers in an effort to integrate several new wind, solar and hydro resources,
 - Deer Creek – This resource integration is currently on hold pending NID contract with PG&E.
 - Antelope 1B Solar – telemetry has been established and initial point testing has been successful. Curtailment logic testing was successfully completed and operations is expecting the resource to go live by end of November.
- IS continues 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 worked with Geo staff to cutover the old plant phone system to the new Agency wide Avaya VOIP solution. Additionally, Headquarters also had their numbers ported over from an old PRI to a new SIP VOIP circuit and transitioned over to the new Enterprise Phone system. Working to migrate the Disaster Recovery Center, Combustion Turbine and Hydro next.
- The IS department, working alongside Power Management, exercised our annual failover to the Disaster Recovery Center. On Friday, October 21st Dispatch and Scheduling operated successfully out of the DRC until the failback on Sunday October 23rd.
- 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.

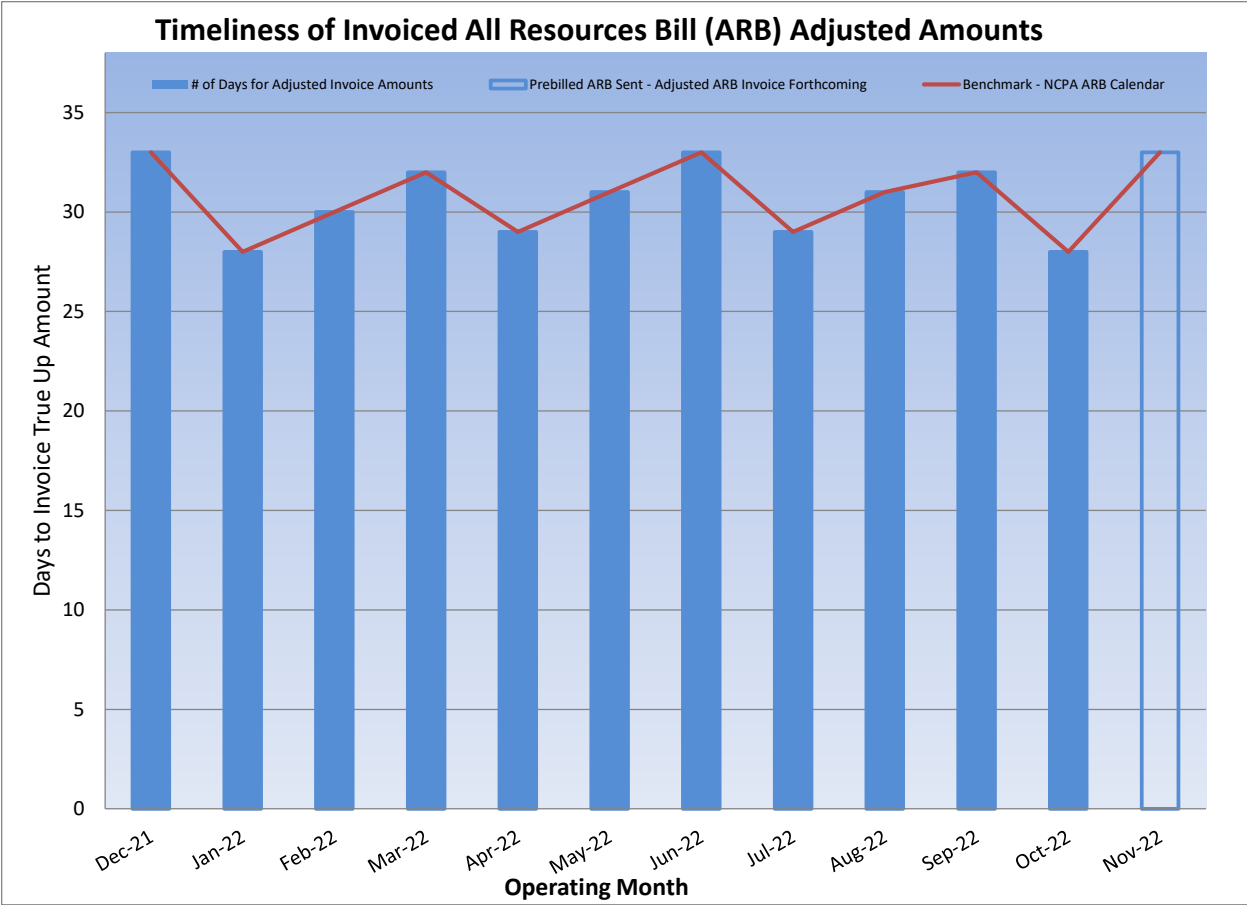
NCPA Bills & Settlements

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 November 2022 NCPA All Resources Bill (ARB) monthly invoice sent to members on October 24, 2022 contains:

- November 2022 monthly pre-billed budget/forecast amounts;
- September 2022 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- August 2022 (2nd Adjustment) NCPA Project settlement true-up and T+20 business day recalculated CAISO settlement true-up allocations;
- June 2022 (3rd Adjustment) T+70 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- October 2021 (4th Adjustment) T+11-month recalculated CAISO settlement true-up allocations;
- November 2019 (6th Adjustment) T+33-month recalculated CAISO settlement true-up;
- August 2019 (7th Adjustment) T+36-month CAISO settlement true-up;



Legislative & Regulatory

- On October 20, Truckee Donner Public Utility District, NCPA, and CMUA co-hosted a field trip to Truckee to discuss CARB’s Advanced Clean Fleets (ACF) proposed regulation and provide an in-field demonstration of utility vehicles. Participants included representatives from CARB, Assemblymember Dahle’s office, and several electric, water, and wastewater utilities. The event included a tour of the TDPUD yard and utility-specific medium-and heavy-duty vehicles and a bus ride through local areas impacted by last year’s snowstorms, and a stop for an in-progress water repair to demonstrate a specialty vehicle in use. The tour was followed by a panel discussion about our key concerns with the ACF regulation, challenges surrounding transitioning to new zero-emission technologies, and the vital role that utility vehicles play in maintaining grid reliability and emergency response.

Human Resources

Hires:

Seneschel Sims joined NCPA Headquarters as an Office Assistant II (Receptionist) effective October 24, 2022. Seneschel joins NCPA from the Placer County Superior Court where she was a Court Clerk I. In this role, she processed, researched and verified court records, filed court documentation, answered and routed incoming phone calls, certified court reports and managed requests to the court from local government agencies and the general public. She brings 20 years of administrative experience. Seneschel holds an Associate of Science degree in Computer Business Administration from Heald College.

Intern Hires:

None.

Promotions:

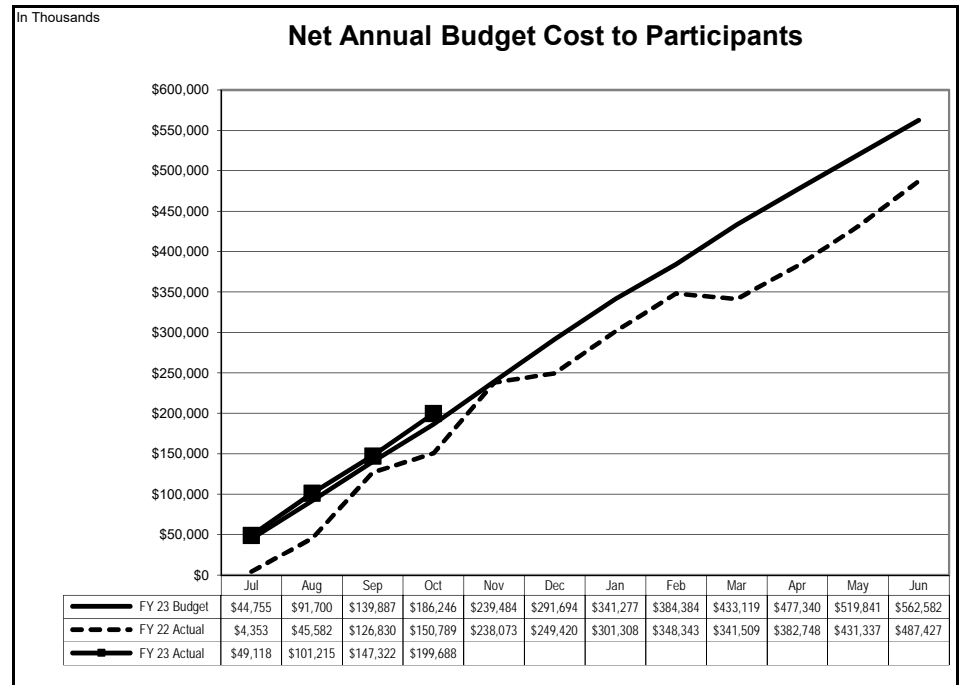
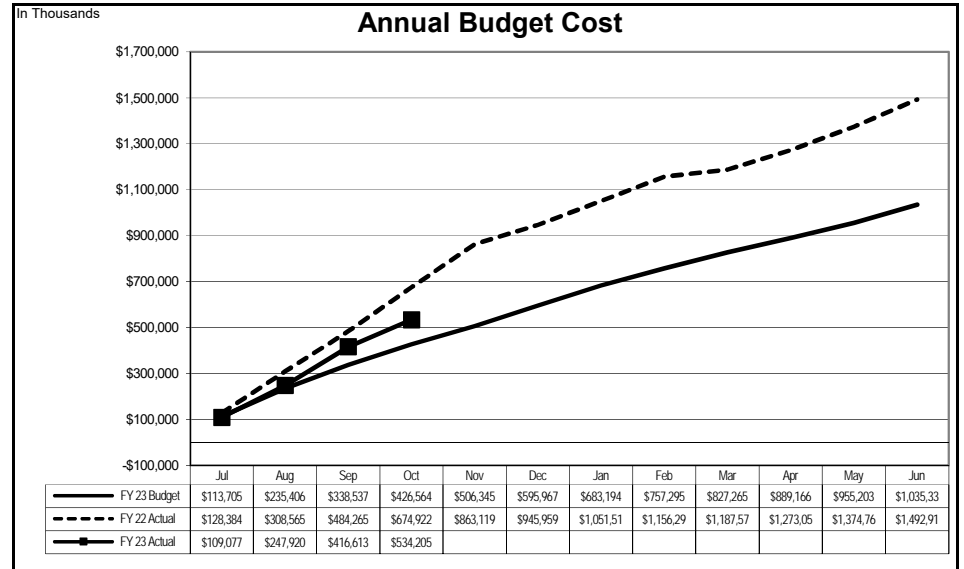
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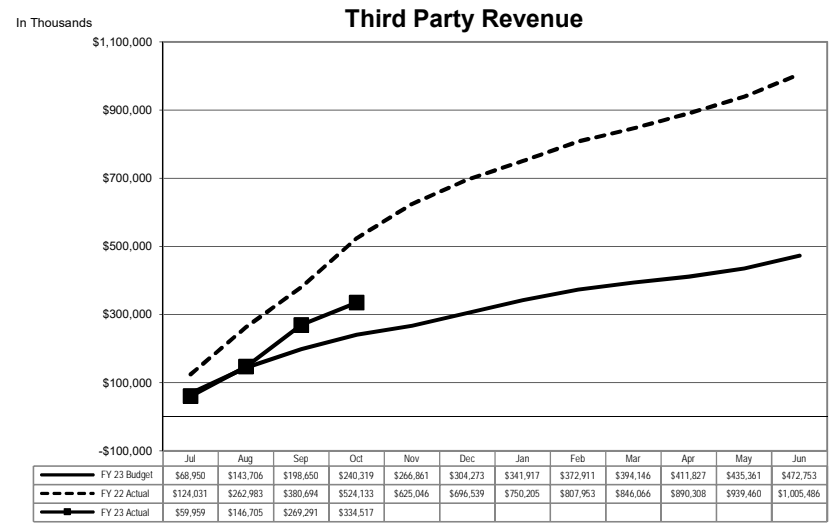
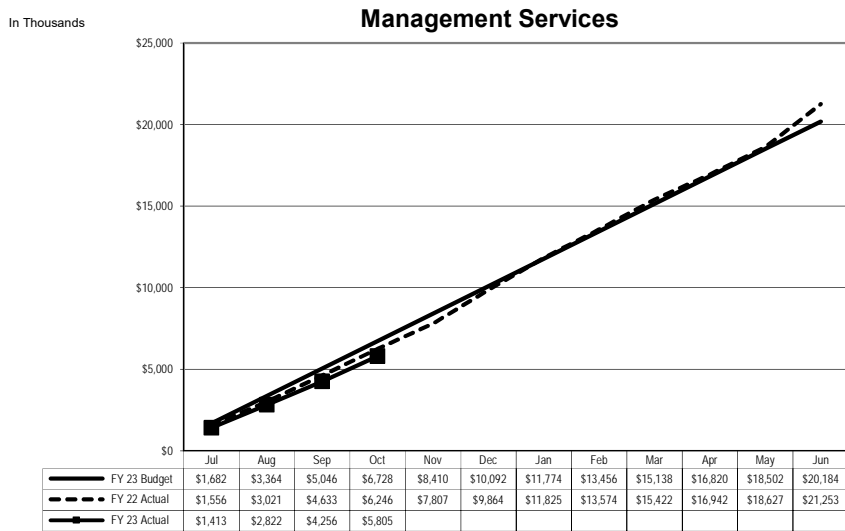
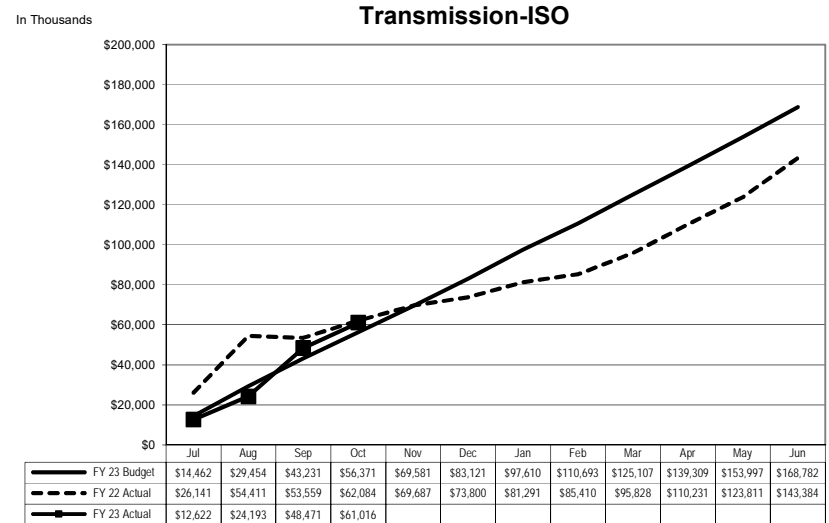
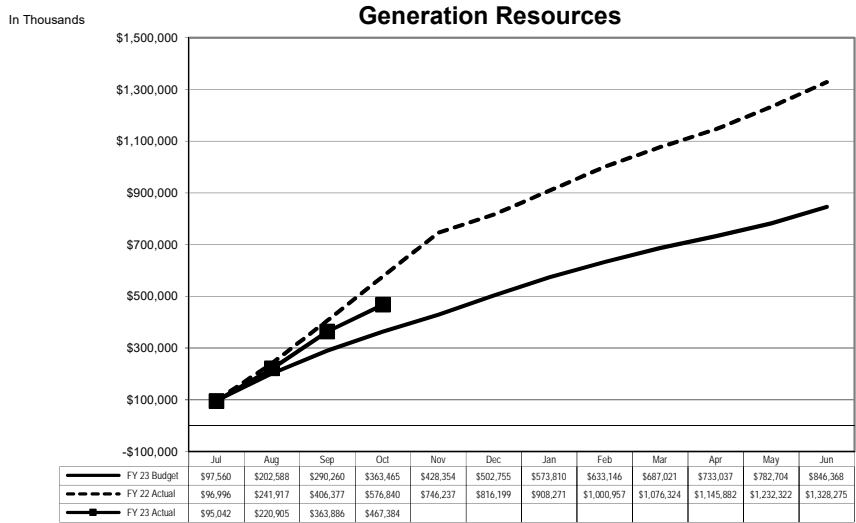
None.

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

In Thousands	Program			
	Annual Budget	Actual	Under(Ovr) Budget	YTD % Remaining
GENERATION RESOURCES				
NCPA Plants				
Hydroelectric	55,514	19,539	\$ 35,975	65%
Geothermal Plant	41,633	14,846	26,787	64%
Combustion Turbine No. 1	5,602	2,611	2,990	53%
Combustion Turbine No. 2 (STIG)	10,361	3,261	7,100	69%
Lodi Energy Center	137,737	47,819	89,918	65%
	250,847	88,077	162,770	65%
Member Resources - Energy	63,024	29,473	33,550	53%
Member Resources - Natural Gas	2,474	1,560	915	37%
Western Resource	26,100	9,639	16,462	63%
Market Power Purchases	35,533	21,502	14,031	39%
Load Aggregation Costs - ISO	467,469	315,431	152,038	33%
Net GHG Obligations	921	1,701	(780)	-85%
	846,368	467,384	378,985	45%
TRANSMISSION				
Independent System Operator	168,782	61,016	107,766	64%
MANAGEMENT SERVICES				
Legislative & Regulatory				
Legislative Representation	2,231	473	1,759	79%
Regulatory Representation	715	221	494	69%
Western Representation	723	81	642	89%
Customer Programs	615	147	468	76%
	4,284	922	3,362	78%
Judicial Action	460	221	239	52%
Power Management				
System Control & Load Dispatch	7,504	2,317	5,187	69%
Forecasting & Prescheduling	3,044	838	2,206	72%
Industry Restructuring	438	148	290	66%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,032	261	770	75%
Gas Purchase Program	77	17	59	77%
Market Purchase Project	112	25	87	78%
	12,208	3,608	8,600	70%
Energy Risk Management	150	90	59	40%
Settlements	1,012	208	804	79%
Integrated System Support	405	109	296	73%
Participant Pass Through Costs	1,666	328	1,338	80%
Support Services	-	319	(319)	
	20,184	5,805	14,379	71%
TOTAL ANNUAL BUDGET COST	1,035,334	534,205	501,129	48%
LESS: THIRD PARTY REVENUE				
Plant ISO Energy Sales	193,457	88,244	105,213	54%
Member Resource ISO Energy Sales	49,954	42,054	7,900	16%
Member Owned Generation ISO Energy Sales	118,709	76,006	42,703	36%
Revenue from Customers	-	35,514	(35,514)	
Customer Owned Generation ISO Energy Sales	-	495	(495)	
NCPA Contracts ISO Energy Sales	34,944	16,565	18,379	53%
Western Resource ISO Energy Sales	26,527	8,351	18,176	69%
Load Aggregation Energy Sales	-	45,424	(45,424)	
Ancillary Services Sales	5,514	2,138	3,375	61%
Transmission Sales	110	37	74	67%
Western Credits, Interest & Other Income	43,537	19,690	23,848	55%
	472,753	334,517	138,235	29%
NET ANNUAL BUDGET COST TO PARTICIPANTS	562,582	199,688	\$ 362,894	65%

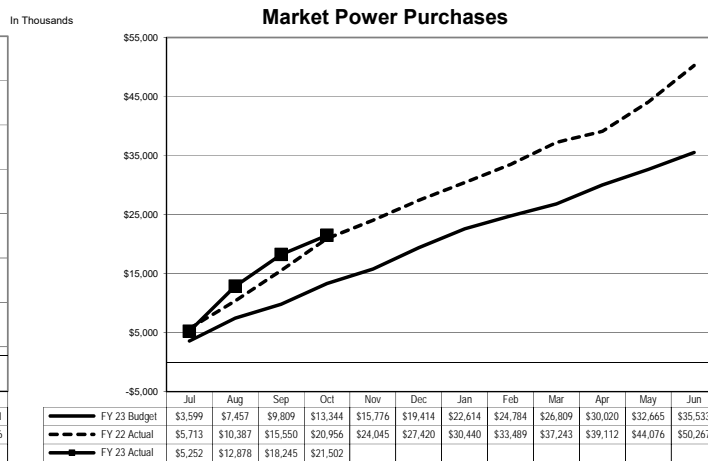
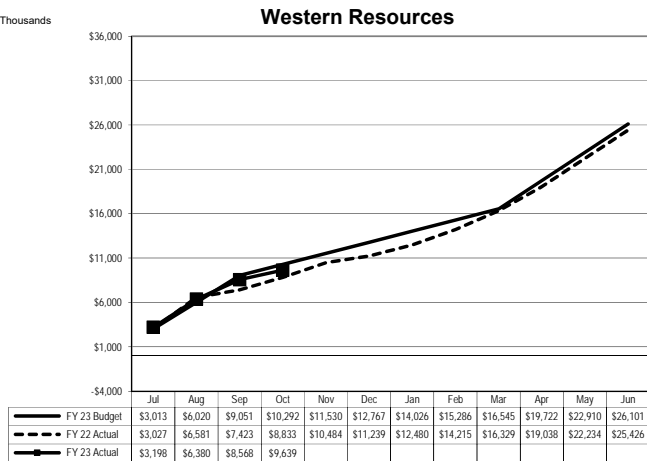
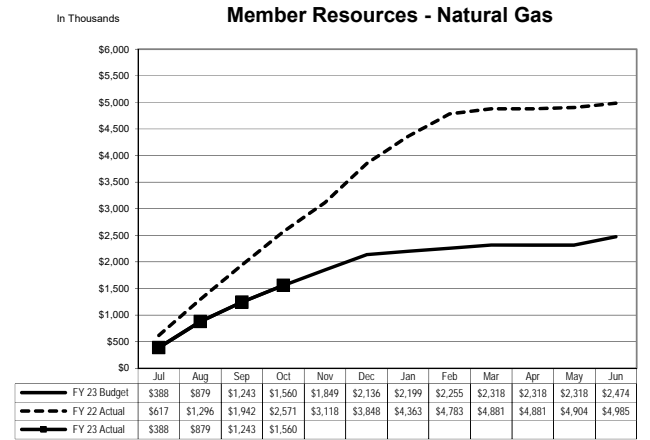
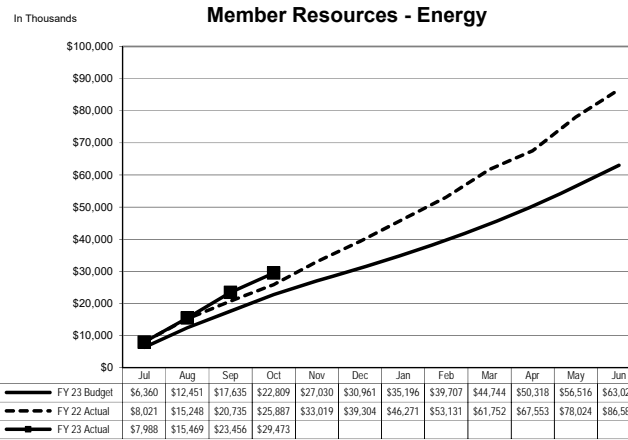
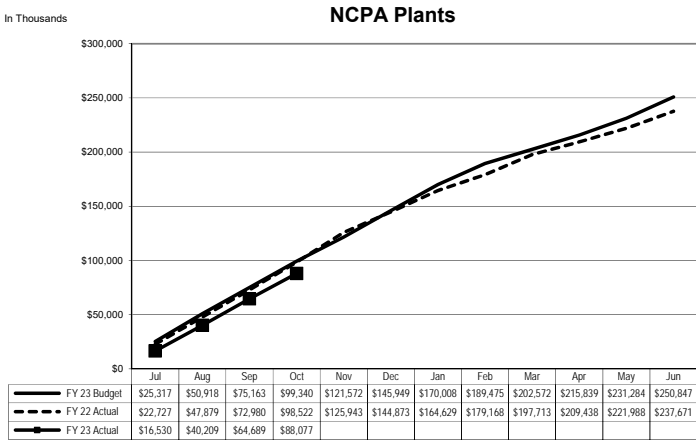


Annual Budget Budget vs. Actual By Major Area As of October 31, 2022



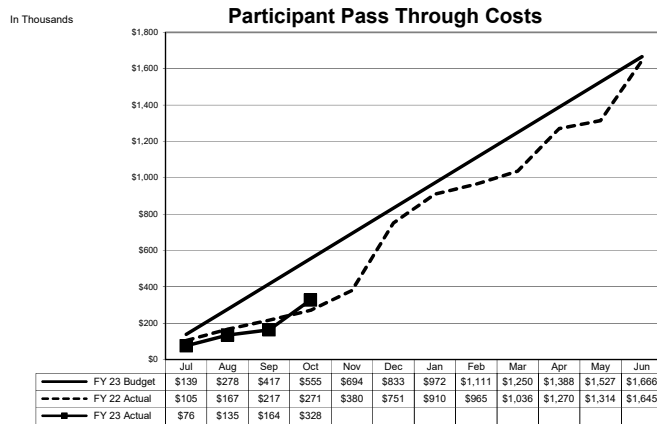
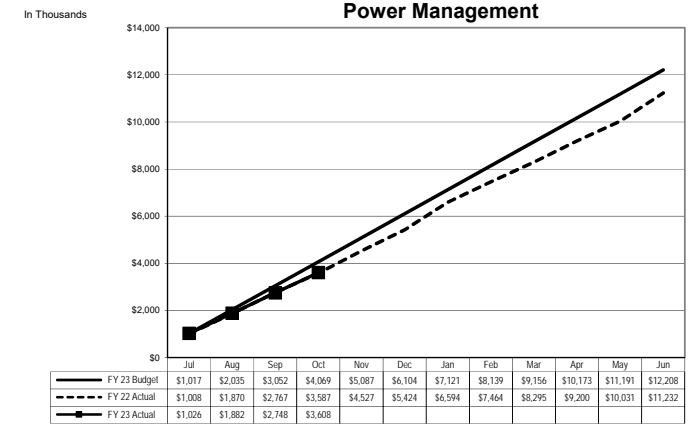
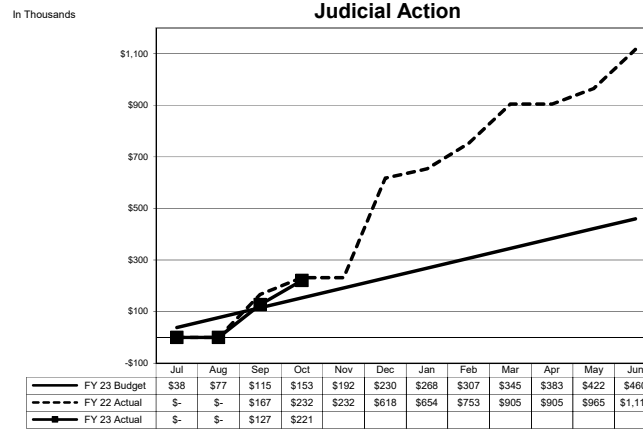
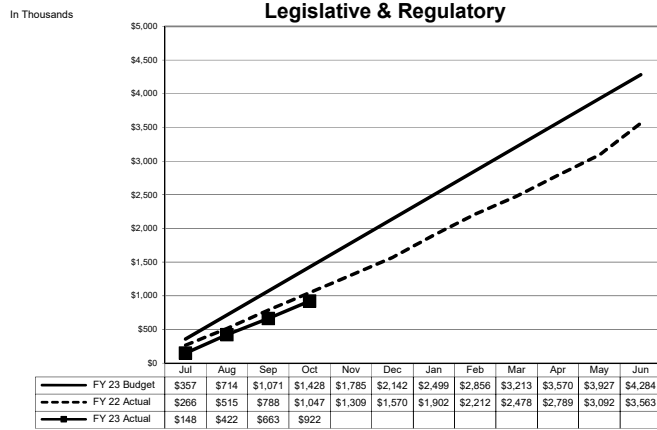
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

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

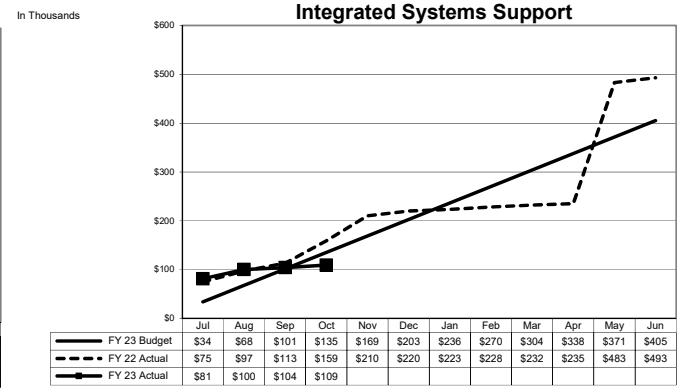
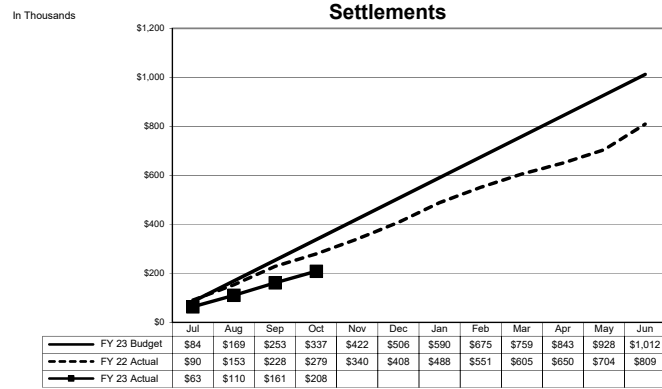
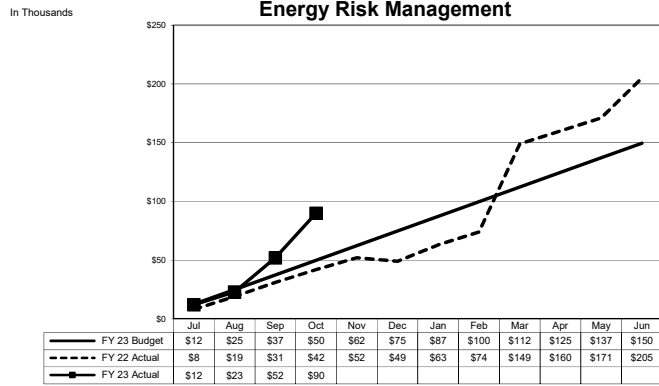


Footnote: Other Resources (Graeagle, BART PV, Gridley PV) are included in Market Power Purchases

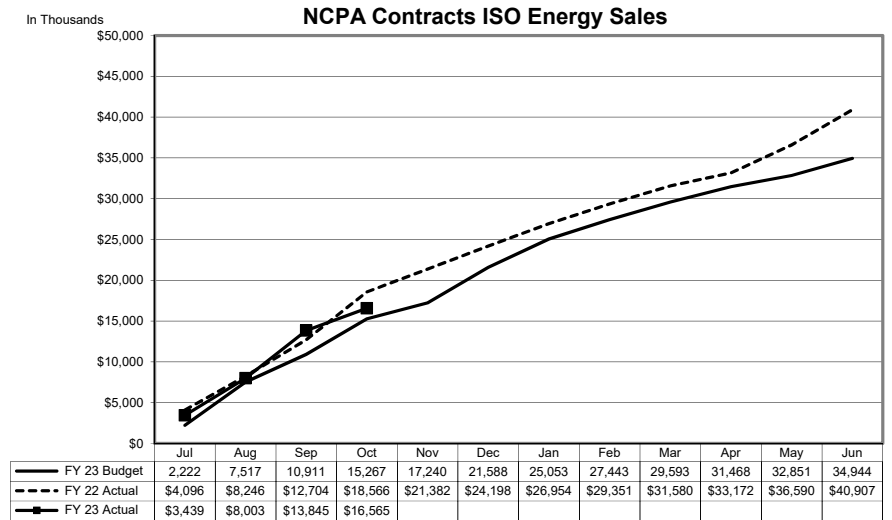
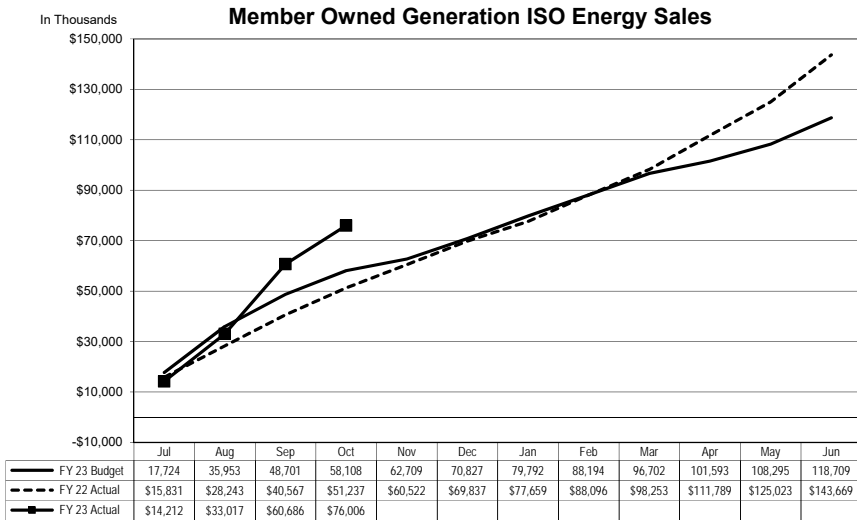
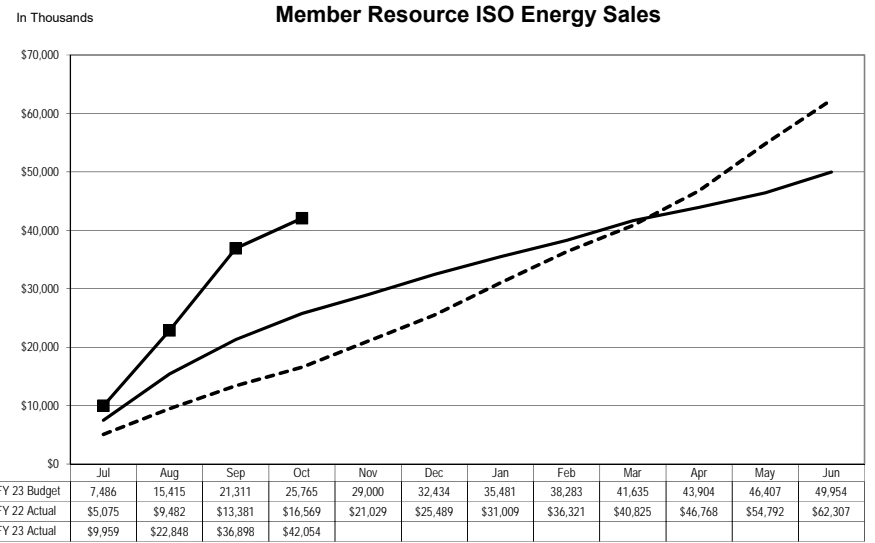
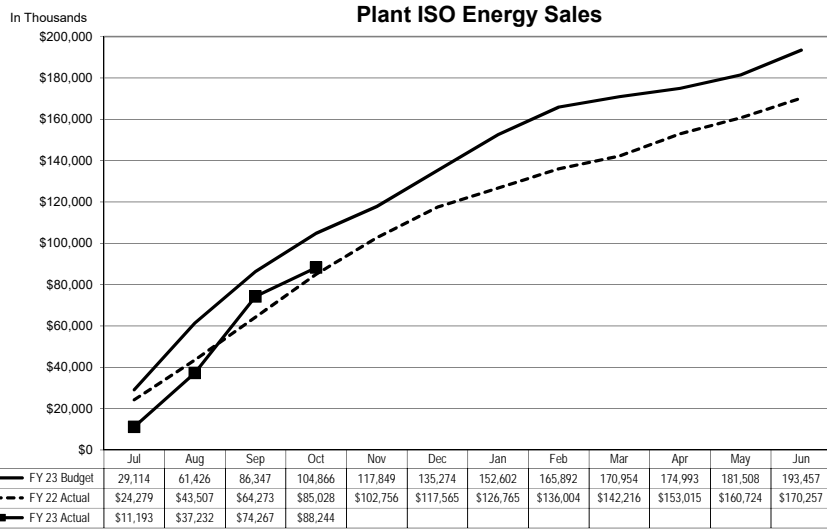
Annual Budget Cost Management Services Analysis By Source As of October 31, 2022



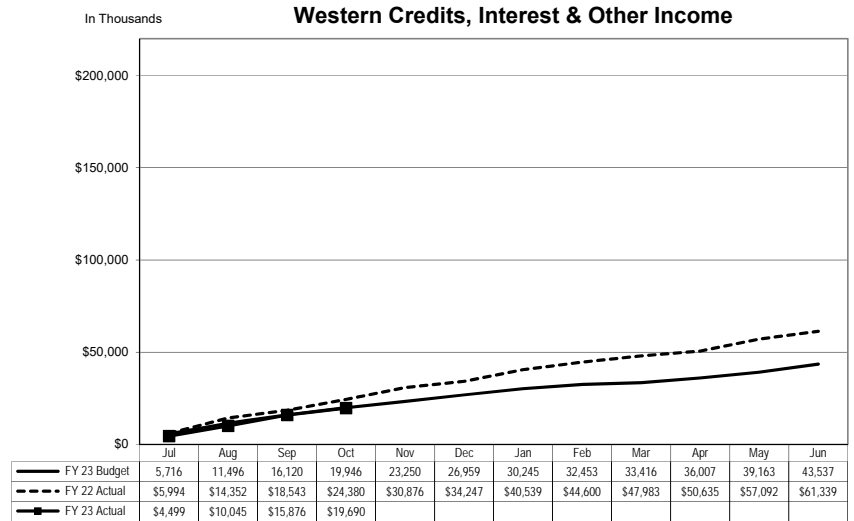
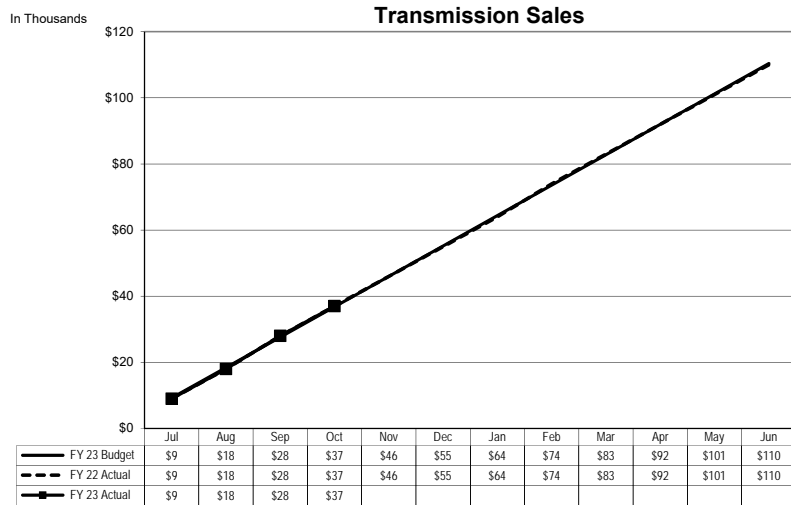
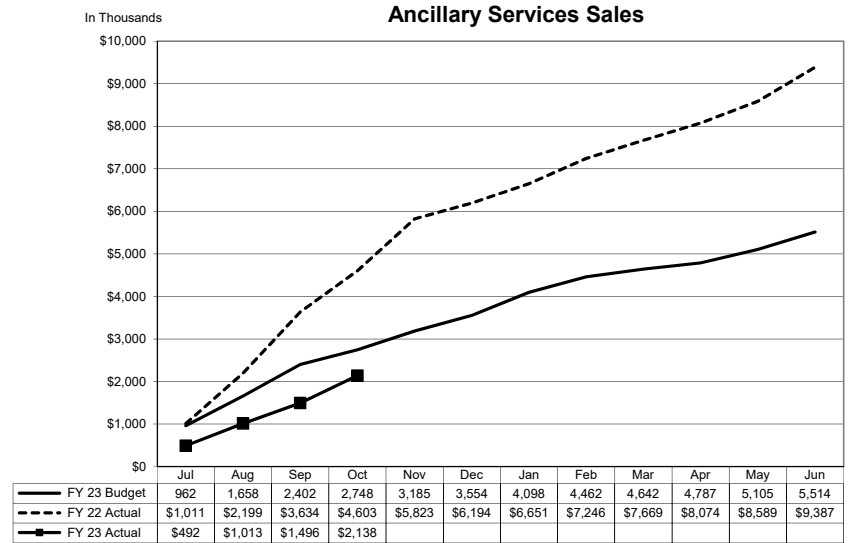
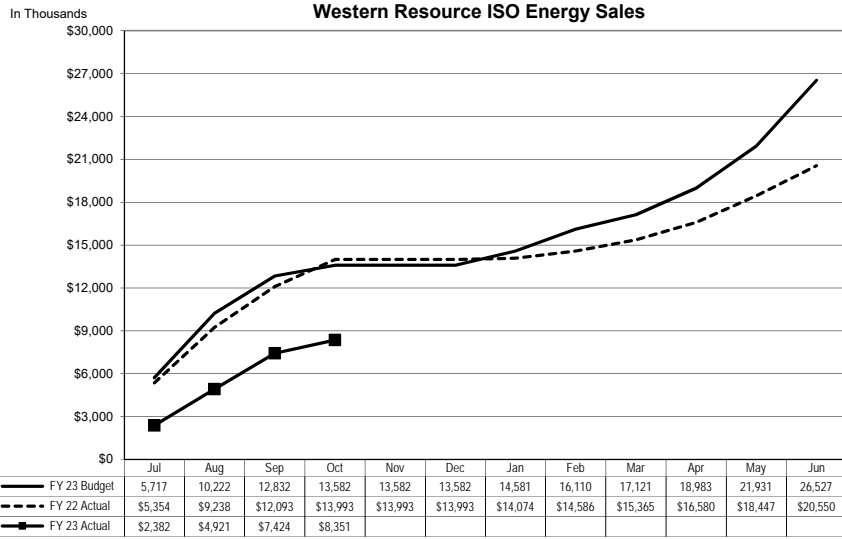
**Annual Budget Cost
Management Services Analysis By Source
As of October 31, 2022**



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



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



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

Generation Cost Analysis

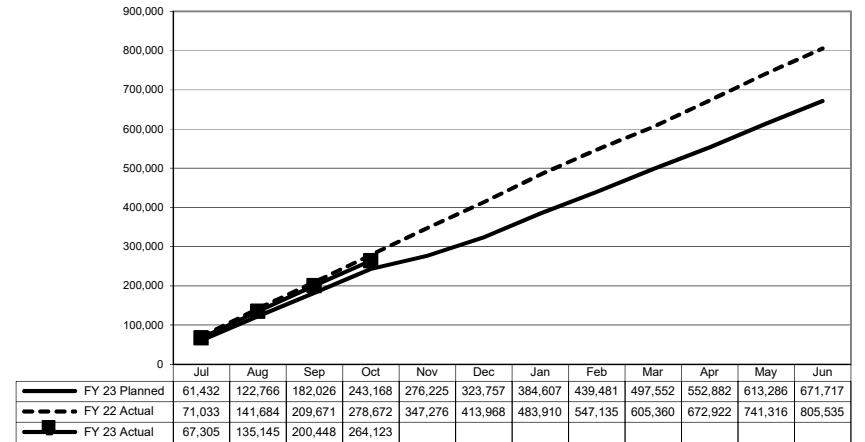
\$ in thousands

	Geothermal				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 17,798	\$ 5,970	\$ 22.60	\$ 11,827	66%
Capital Assets/Spare Parts Inventories	7,401	2,549	9.65	4,852	66%
Other Costs	12,357	4,647	17.59	7,710	62%
CA ISO Charges	604	522	1.98	82	14%
Debt Service	3,473	1,158	4.38	2,316	67%
Annual Budget	41,633	14,846	56.21	26,787	64%
Less: Third Party Revenue					
Interest Income	150	63	0.24	87	58%
ISO Energy Sales	42,271	24,319	92.07	17,952	42%
Ancillary Services Sales	-	-	-	-	0%
Effluent Revenues	750	87	0.33	663	88%
Misc	113	37	0.14	75	67%
	43,284	24,507	92.78	18,777	43%
Net Annual Budget Cost to Participants	\$ (1,651)	\$ (9,660)	\$ (36.57)	\$ 8,009	-485%
Net Generation--MWh @ Meter	671,717	264,123			
\$/MWh (A)	\$ (7.63)	\$ (40.96)			

MWhs Generated

In MWh

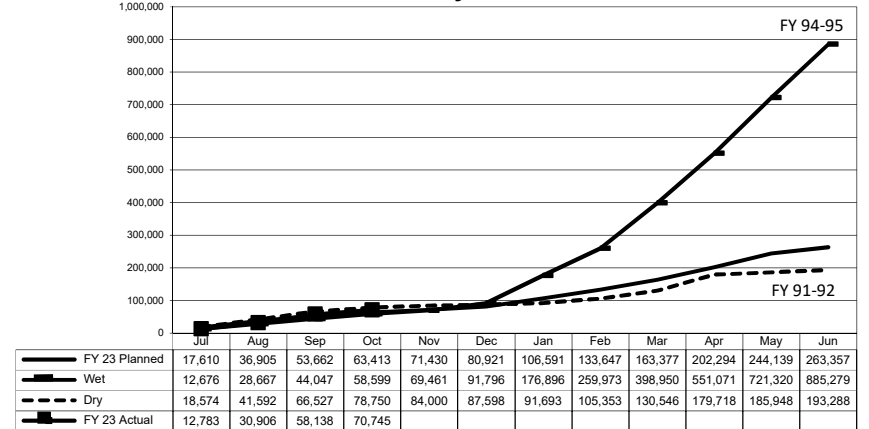
Geothermal



	Hydroelectric				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 10,203	\$ 2,432	\$ 34.37	\$ 7,771	76%
Capital Assets/Spare Parts Inventories	4,270	1,467	20.74	2,803	66%
Other Costs	3,993	1,452	20.52	2,541	64%
CA ISO Charges	1,237	2,252	31.83	(1,015)	-82%
Debt Service	35,811	11,937	168.73	23,874	67%
Annual Budget	55,514	19,539	276.19	35,975	65%
Less: Third Party Revenue					
Interest Income	150	42	0.60	108	72%
ISO Energy Sales	22,182	15,135	213.94	7,047	32%
Ancillary Services Sales	1,224	1,895	26.78	(671)	-55%
Misc	-	-	-	-	0%
	23,556	17,072	241.32	6,484	28%
Net Annual Budget Cost to Participants	\$ 31,958	\$ 2,467	\$ 34.88	\$ 29,491	
Net Generation--MWh @ Meter	263,357	70,745			
\$/MWh (A)	\$ (14.63)	\$ (133.86)			

In MWh

Hydro



Footnotes:

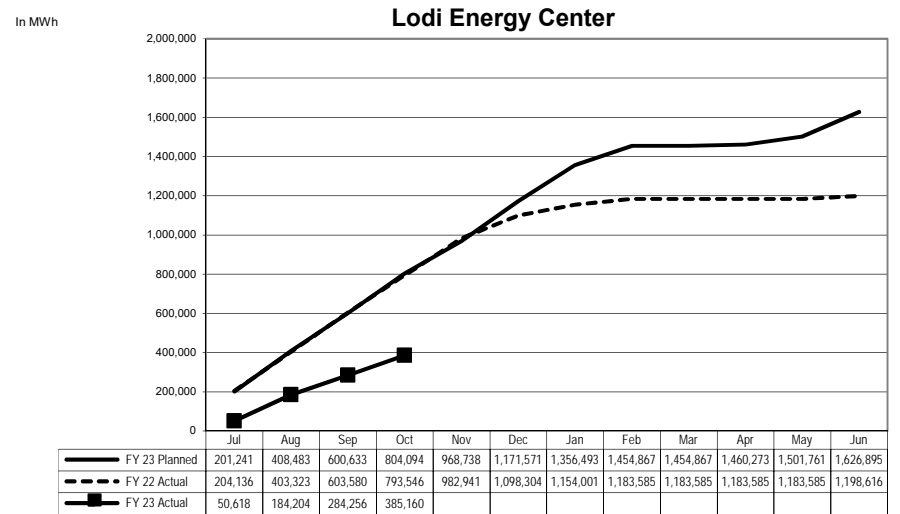
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

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

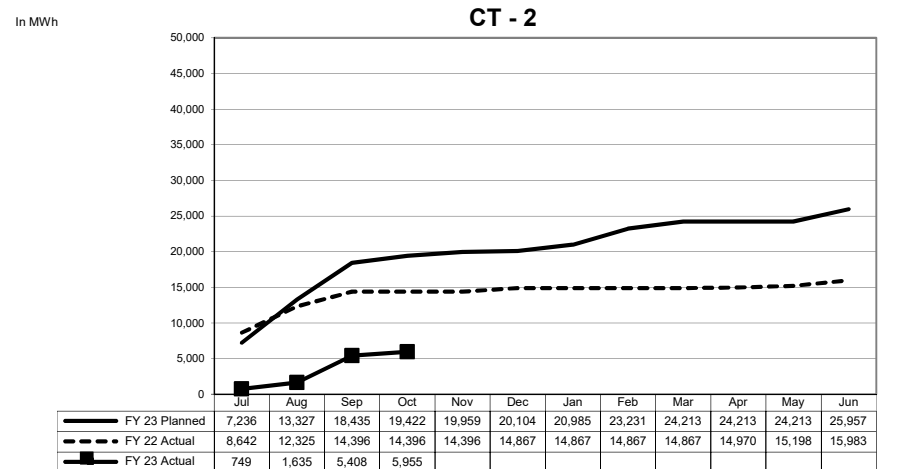
Generation Cost Analysis

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 9,826	\$ 3,400	\$ 8.83	\$ 6,425	65%
Fuel	64,819	26,786	69.55	38,033	59%
GHG Allowance Costs	20,250	1,495	3.88	18,755	93%
CA ISO Charges and Energy Purchases	2,970	3,306	8.58	(336)	-11%
Capital Assets/Spare Parts Inventories	3,631	1,030	2.67	2,601	72%
Other Costs	10,244	3,136	8.14	7,108	69%
Debt Service	25,996	8,665	22.50	17,331	67%
Annual Budget	137,737	47,819	124.15	89,918	65%
Less: Third Party Revenue					
Interest Income	250	211	0.55	39	16%
ISO Energy Sales	121,620	43,545	113.06	78,074	64%
Ancillary Services Sales	2,318	99	0.26	2,218	96%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	19,710	1,495	3.88	18,215	92%
Misc	-	9	0.02	(9)	0%
	143,897	45,359	117.77	98,537	68%
Net Annual Budget Cost to Participants	\$ (6,160)	\$ 2,460	\$ 6.39	\$ (8,619)	140%
Net Generation--MWh @ Meter	1,626,895	385,160			
\$/MWh (A)	\$ (19.77)	\$ (16.11)			

MWhs Generated



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,616	\$ 492	\$ 82.66	\$ 1,124	70%
Fuel and Pipeline Transport Charges	2,227	758	127.22	1,469	66%
GHG Allowance Costs	424	-	-	424	100%
Capital Assets/Spare Parts Inventories	220	9	1.51	211	96%
Other Costs	643	307	51.61	336	52%
CA ISO Charges	148	-	-	148	100%
Debt Service	5,084	1,695	284.58	3,389	67%
Annual Budget	10,361	3,261	547.58	7,100	69%
Less: Third Party Revenue					
Interest Income	42	19	3.27	23	54%
ISO Energy Sales	4,331	1,819	305.54	2,512	58%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,775	1,441	242.06	333	19%
GHG Allowance Credits	424	-	-	424	100%
Misc	-	-	-	-	0%
	6,572	3,280	550.87	3,292	50%
Net Annual Budget Cost to Participants	\$ 3,789	\$ (20)	\$ (3.28)	\$ 3,809	101%
Net Generation--MWh @ Meter	25,957	5,955			
\$/MWh (A)	\$ (49.88)	\$ (287.86)			



Footnotes:

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

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

Generation Cost Analysis

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,530	\$ 715	\$ 130.66	\$ 1,815	72%
Fuel and Pipeline Transport Charges	1,214	999	182.51	214	18%
Capital Assets/Spare Parts Inventories	800	214	39.14	586	73%
Other Costs	882	282	51.51	600	68%
CA ISO Charges	176	400	73.11	(225)	-128%
Debt Service	-	-	-	-	-
Annual Budget	5,602	2,611	476.93	2,990	53%
Less: Third Party Revenue					
Interest Income	55	19		36	66%
ISO Energy Sales	3,053	3,426	625.61	(372)	-12%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	-	-	-	0%
	3,108	3,444	625.61	(336)	-11%
Net Annual Budget Cost to Participants	\$ 2,493	\$ (833)	\$ (152.06)	\$ 3,326	133%
Net Generation--MWh @ Meter	11,514	5,476			
\$/MWh (A)	\$ 216.54	\$ (152.06)			

Footnotes:

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

MWhs Generated

In MWh

CT - 1

