



651 Commerce Drive  
Roseville, California 95678  
(916) 781-3636  
[www.ncpa.com](http://www.ncpa.com)

A photograph of an industrial power plant. Large, silver, metallic pipes curve through the scene. In the background, there are green steel transmission towers and power lines against a cloudy sky. The sun is visible, creating a lens flare effect. A large, light green arrow graphic points from the left side of the page towards the right, partially overlapping the photograph.

# BUSINESS PROGRESS REPORT

**September 2021**

---

---

# Table of Contents

---

---

Generation Costs & Reliability .....	1
Environmental, Health & Safety Projects .....	4
Power Management/NCPA Market Results.....	5
Debt & Financial Management .....	14
Schedule Coordination Goals.....	14
NCPA Bills & Settlements.....	15
Political Arena State/Federal/Western Programs .....	16
Human Resources.....	16
Annual Budget FY to Date.....	17
Budget vs. Actual by Major Area .....	18
Generation Resources Analysis by Source .....	19
Management Services Analysis by Source .....	20
Third Party Revenue Analysis by Source .....	22
Generation Detail Analysis by Plant .....	24

# Generation Costs & Reliability

## Combustion Turbine Project

### Unit Operation for August 2021

Unit	Availability		Production			Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	414.0	MWh	CAISO / CAISO
	100.0%	93.4%	Unit 2	300.5	MWh	
Curtailements, Outages, and Comments:						
Unit 1: Normal Operation.						
Unit 2: 8/14 @ 09:43 - 8/16 @ 11:04; Battery Charger Trouble, OMS 10578194						
Unit	Availability		Production			Reason for Run
CT1 Lodi	98.8%		322.7 MWh			CAISO
Curtailements, Outages, and Comments:						
8/02 @ 18:45 - 19:00; Micronet Trouble, OMS 10521227						
8/04 @ 03:41 - 12:00; Hydraulic Ratchet Pump Trouble, OMS 10528572						
Unit	Availability		Production			Reason for Run
CT2 STIG	98.7%		3,545.6 MWh			CAISO
Curtailements, Outages, and Comments:						
8/11 @ 17:15 - 21:30; Generator Exciter End Drain Temp; OMS 10565131						
8/12 @ 13:58 - 17:53 & @ 18:45 - 20:11; Failed Ignition; OMS 10569971 & 10571367						
Unit	Availability		Production			Reason for Run
LEC	97.9%		199,547 MWh			CAISO
Curtailements, Outages, and Comments:						
8/2 @ 00:36 - 08:19; T3000 Control Trouble, OMS 10517292						
8/8 @ 06:19 - 15:44; T3000 Processor Replacement, OMS 10537606						

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

## Geothermal Facilities

### Availability/Production for August 2021

Unit	Availability	Net Electricity Generated/Water Delivered	Out-of-Service/Descriptors
<b>Unit 1</b>	100 %	20,811 MWh	U1 had no outages for the month
<b>Unit 2</b>	100 %	*19,738 MWh	U2 had no outages for the month
<b>Unit 3</b>	N/A %	N/A	Unit 3 remains out of service.
<b>Unit 4</b>	93.35 %	27,880 MWh	U4 was offline 8/22/21 0400 until 0000 8/24/21 due to PG&E line outage. U4 was offline 8/28/21 0600 until 1120 due to PG&E switching for Calpine U16
<b>Southeast Geysers Effluent Pipeline</b>	0 %	20.3 mgallons	Average flow rate: .403 gpm
<b>Southeast Solar Plant</b>	N/A	118,862 KWh	Year-to-date KWh: 4,043,969
<b>Bear Canyon Pump Station Zero Solar</b>	N/A	128,281 KWh	Year-to-date KWh: 6,014,119

\* Accounts for an additional 185 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

## Hydroelectric Project

### Availability/Production for August 2021

Units	Availability	Net Electricity Generated	Out-of-Service
<b>Collierville Unit 1</b>	98.7%	4282 MWh	CV Unit 1 – Out of service on 8/17/21 from 0754 to 1733 for CB1412 Air compressor repair
<b>Collierville Unit 2</b>	100%	6662 MWh	CV Unit 2 – No Outages
<b>Spicer Unit 1</b>	88.49%	1 MWh	NSM1- Out of service on 8/2/21 to 8/5/21 from 0617 to 1956 for PG&E Line Outage.
<b>Spicer Unit 2</b>	88.44%	1068 MWh	NSM2- Out of service on 8/2/21 to 8/5/21 from 0558 to 1959 for PG&E Line Outage.
<b>Spicer Unit 3</b>	86.73%	164 MWh	NSM3- Out of service on 8/2/21 to 8/6/21 from 0617 to 0859 for PG&E Line Outage.

### Operations & Maintenance Activities:

- CMMS work orders
- Alpine Main Dam – Downstream Face Maintenance
- SWRCB Water Rights Curtailment, filing of non-consumptive use exemptions.
- 230KV Helicopter Inspection, Infrared, & Corona Scans
- Prepared design for Union Valve pedestal repairs and Union seepage monitoring weir extension for bidding
- Released modified diving RFP for CV tunnel intake cleaning for 3 days including suction removal
- Conducted annual engineering inspection of the Adit 4 Tunnel Spoils Facility
- Completed migration of hydrography software to Aquarius NG
- Received FERC Security Assessment of Project 11563 and 2409

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

- There were no vehicle, Cal OSHA Recordable, or Lost Time 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 28, 2021.
- 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 2021 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	321	1,131	2,336	3,320
Work Hours Since Last Recordable	26,287	235,792	351,268	2,717,165
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	5,070	2,199	10,240	6,333
Work Hours without LTA	458,857	152,767	761,812	2,339,183
Vehicle Incident (month)	0	0	0	0
Vehicle Incident (calendar year)	0	1	0	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 28, 2021.

# 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 2021 Data**

	<b>August 2021</b>		<b>Calendar Year 2021</b>	
	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 2020 Data\***

	<b>August 2020</b>		<b>Calendar Year 2020</b>	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	467.45 8/14 @ 1700	217,000	467.45 8/14 @ 1700	1,512,884
SVP	586.3 8/14 @ 1700	346,423	586.3 8/14 @ 1700	2,531,984
MSSA	1053.75 8/14 @ 1700	563,423	1053.75 8/14 @ 1700	4,044,868

\* Last year's data added for comparison purposes only

### **System Peak Data**

	<b>All Time Peak Demand</b>	<b>2021 Peak Demand</b>
NCPA Pool	517.83 MW on 7/24/06 @ 1500	440.56 6/17 @ 1700
SVP	591.96 MW on 8/27/21 @ 1500	591.96 8/27 @ 1500
MSSA	1070.79 MW on 9/1/17 @ 1700	1025.46 6/17 @ 1700

- NCPA MSSA has a Deviation Band with the CAISO, which is used as a performance measure by the CAISO. The ability to stay within this Deviation Band is a measure of NCPA Dispatch's ability to balance the MSSA Loads and Resources on a 5-minute basis. The following NCPA Deviation Band Performance table includes all deviations, including deviations from unit forced outages, metering and load outages, COTP, Western, and WECC curtailments.

<b>NCPA Deviation Band Performance</b>		
	<b>August 2021</b>	<b>Calendar Year 2021</b>
MSSA % Within the Band	98.71%	98.06%

- CAISO issued a Restricted Maintenance Operations notification for the following dates:
  - 8/11/21: 1200-2200 hours
  - 8/12/21: 1200-2200 hours
  - 8/13/21: 1200-2200 hours
  - 8/16/21: 1200-2200 hours
- There was a PG&E Public Safety Power Shutoff (PSPS) event the evening of 8/17/21 through the evening of 8/18/21.

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

- NCPA Pool load during June 2021 was 206,257 MWh versus the budget forecast of 211,889 MWh, resulting in a forecast error of -2.67%. The forecast error was due to lower than average temperatures during the month of August, especially in the Bay-Area. The current weather outlook for September 2021 is for near normal temperatures for the Bay Area and slightly above normal temperatures for the California inland Valley. The pool load forecast at 188,233 MWh compared with extrapolated actuals of 174,903 MWh as of August 19, 2021.
- Lodi Energy Center (LEC) ran 730 hours out of a possible 744, producing 200,391 MWh. Natural gas and power prices are significantly higher than a year ago due to the low reservoir levels throughout the state. Fall gas-fired generation will likely continued to be strong due to lack of hydro generation.
- During August 2021, essentially no rain was recorded at the Big Trees gauge. Average August Big Trees precipitation is also near zero.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has remained at \$300/MWh. But for the most part releases from NSMR are just enough to maintain the summer minimum Big Trees flow of 150 CFS.
- NSMR storage as of August 31, 2021 was at 69,770-acre feet. The historical average NSMR storage at the end of August is 117,646 acre feet. As of September 20, 2021 NSMR storage was 64,406 acre feet.
- Combined Calaveras Project generation for the Pool in August 2021 totaled 6.67 GWh, up from 6.59 GWh in July 2021. The Pool's 6.59 GWh in August 2021 was very close to its revised forecast of 6.02 GWh created on June 15, 2021.
- Western Base Resource (BR) deliveries for the Pool during August 2021 were 54,669 MWh. Displacement program energy totaled 214 MWh. The Pool's share of expected total delivery from the Western Base Resource for September 2021 is 34,614 MWh. Of which 24,233 MWh has already been delivered.
- The PG&E Citygate gas index averaged \$5.35/MMBtu during the month of August as compared to an average of \$5.08 for July. September's current average price is \$6.52. Both NYMEX gas and basis prices have been rising due to flat production, growing exports of natural gas and increased demand for electrical generation and refill of storage. Prices will remain high for the fall of 2021. The October 2021 PG&E Citygate forward price is \$7.10/MMBtu.



- Day-Ahead PG&E DLAP electricity prices for July averaged \$67.90/MWh On-Peak and \$55.50 Off-Peak, with a high of \$220. For the dates of September 1<sup>st</sup> through 16<sup>th</sup>, 2021 prices have averaged \$77.87 On-Peak and \$63.04 Off-Peak. The forward prices for October are \$82.80 On-Peak and \$66.25 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 2021:
  - Monthly System Resource Adequacy Demonstration (filed September 17, 2021)
  - Monthly Supply Plan (filed September 17, 2021)

### **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 (ESE)**

- CAISO held a working group meeting on July 26, 2021. Eight stakeholders presented material on various energy storage topics such as ITC, new products, state of charge levels, modifications of bid cost recovery, etc.
- A draft straw proposal is scheduled to be published in September or October.
- As CAISO integrates GWs of battery capacity into its grid, CAISO and battery operators are encountering challenges with developing bidding strategies that optimize the resources in Day Ahead and Real Time Markets and maintain availability in critical net peak hours. As part of the Market Enhancements for Summer 2021 Needs, CAISO imposed a contentious Minimum State of Charge requirement for Resource Adequacy (RA) batteries that CAISO will enforce during periods of “Residual Unit Commitment (RUC) under-generation feasibility” for two years. The primary goal of ESE is to develop a permanent replacement for the MSOC requirement once it expires. CAISO explains that the main challenge is CAISO developed its current markets around gas-fired resources that are available 24X7 and the Real Time Market Multiple Interval Optimization (MIO) can only look out 65 minutes, which results in exhausting the batteries prior to the high value net peak hours. CAISO explained that expanding the MIO is technologically infeasible and the only current large-scale battery operator expressed concerns that, even if it was feasible, that it would be too inaccurate and could exacerbate the problem. CAISO and battery operators are proposing new products and other financial incentives to address these issues such as:
  - Scarcity pricing
  - Apply prices to existing MSOC tool
  - Energy shift product
  - Biddable state of charge product
  - Variable charging rates
  - Exceptional dispatch enhancements including payment for maintaining MSOC
- NCPA has concerns that these solutions could be unnecessary costs for ratepayers and unfair advantages to the storage fleet and drafted comments accordingly.

- Batteries are not the only use limited resources negatively impacted by the fact the CAISO market was designed around natural gas fired generation with 24x7 availability. CAISO must revisit use-limited eligibility and associated opportunity costs for other resources such as certain hydro and near end-of-life thermal units. Special storage rules could violate CAISO's guiding principle for its markets to be technology agnostic.
- NCPA believes current CAISO markets including Resource Adequacy Incentives and bilateral RA payments are sufficient tools to ensure availability during Availability Assessment Hours.
- Storage does not have enough experience in the market to conclude that new, storage specific, products are necessary and CAISO should suspend this initiative at least until after GWs of storage have achieved deliverability and have time to optimize bidding strategies.

### Extended Day-Ahead Market

- This initiative has been put on hold pending Day Ahead Market Enhancements initiative development.
- Bundle 1 consists of Resource Sufficiency Evaluations (RSE), Congestion and Transfer revenue allocation, and Transmission cost allocation.
- RSE is relatively uncontroversial and is similar in concept to ISO/CPUC RA program in that it is intended to ensure that EDAM participants have sufficient capacity, transmission, flexibility, and reserves to serve own loads and prevent leaning on other participants. RSE is currently active in EIM. Congestion and Transfer revenue allocations relatively uncontroversial as well. Congestion is intra-BAA and allocated to load that pays for transmission. Transfers occur inter-BAA and will be allocated to transmission owners. The controversial topic is transmission cost allocation. CAISO proposes to declare most transmission costs as sunk and only apply usage fee to incremental exports and EIM wheeling transfers. NCPA and others are concerned that those paying for transmission will not be fairly compensated.
- This initiative will develop an approach to extend participation in the Day-Ahead market to the Western Energy Imbalance Market (EIM) entities in a framework similar to the existing EIM approach for the real-time market, rather than requiring full integration into the CAISO 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.

### Resource Adequacy Enhancements

- Phase 1 implementation began in June 2021 with planned outage enhancements including substitution requirements for all RA outages and removal of substitution exemption for planned transmission induced generator outages effective July 1, 2021.
- Phase 2A draft final proposal and Phase 2B seventh revised straw proposal publication is TBD.
- Phase 1 will include planned outage process enhancements, RA Import requirements, operationalizing storage, and backstop capacity procurement focused on CPM for local energy sufficiency. The planned outage process enhancements are scheduled to become effective June 2021 while the others are slated to go live in time for the 2022 RA year (Jan. 2022). The primary outage process enhancement is requiring generators to submit substitution up front for all planned RA outages shortly after month ahead submittals. CAISO rejected NCPA's response to keep status quo whereby substitution is only required after a study produces an

assignment. RA Import enhancements focus on determining the source of an RA import. Western is sufficiently covered under the new definition of resource specific since it includes a “system of resources” such as CVP.

- Phase 2 includes unforced capacity evaluations, determining system RA requirements, system RA showings and sufficiency testing, individual assessments, must offer obligations and bid insertion modifications, UCAP for local studies, backstop capacity procurement, and further planned outage process enhancements including implementation of a substitute capacity pool. Issues with this phase include counting rules being taken from the LRA and handed to the CPUC or other LRAs. However, CAISO is maintaining MSS exemptions to bid insertion and must offer obligations.

### Day-Ahead Market Enhancements

- CAISO released the Second Revised Straw Proposal on July 21, 2021 with a number of modifications as well as confirming Load Following Metered Subsystem Residual Unit Commitment exemption and Imbalance Reserve Product settlements netting.
  - CAISO determined it necessary to implement a fixed reliability capacity requirement which necessitates a return to the sequential IFM-RUC approach because the reliability capacity requirement cannot be known until after the integrated forward market has run.
  - Proposed RUC enhancements:
    - Procure reliability capacity down
    - Establish the binding configuration for multi-stage generating resources
    - Include market power mitigation to address potential market power in providing reliability capacity.
  - Procure 100 percent of the imbalance reserve requirement as opposed to scaling with demand curve
  - Introduces a deviation settlement for ramping procured as either forecasted movement or imbalance reserves in the integrated forward market with forecasted movement and flexible ramping product procured in the real-time market.
  - Variable energy resources will be eligible to provide reliability capacity down and imbalance reserve down whether or not their bids are consistent with the CAISO’s variable energy resource forecast.
  - Make resources ineligible for reliability capacity up/imbalance reserve up awards on any capacity segment with an associated energy bid that exceeds the calculated P97.5 net load price.
  - Removed “corrective capacity”.
- This initiative will explore new Day-Ahead products that will address ramping needs between intervals and uncertainty that can occur between the Day-Ahead and real-time markets.
- CAISO reviewed the need for new products along with data supporting uncertainty concerns:
  - Uncertainty between Day-Ahead and real-time market has increased from 2017 to 2019 and CAISO operators are addressing this development with out of market actions which disrupts market efficiency
  - Historically, generators had higher certainty to know if they would be scheduled in real-time

- Due to uncertainty and changing resource fleet, commitment decisions are no longer necessarily known
- Gas, hydro, storage, and imports need to cover costs to be available for dispatch in real-time – this will be accomplished with imbalance reserves
- New products:
  - Imbalance Reserve Product (IRP) will be designed to address granularity and uncertainty between Day-Ahead and real-time markets:
    - Hourly product; 15-minute dispatchable; Biddable; Covers granularity difference and uncertainty between DAM and FMM; All awards are co-optimized and settled simultaneously; DAM has no energy price formation issue because the market solves all hours in a single optimization; Stepped relaxation parameters (proposed)
    - NCPA has requested CAISO to allocate LF-MSS costs similar Flexible Ramping Product cost allocations.
  - Addition of Up and Down Reliability Capacity in RUC process used to address gaps between bid in demand and forecast demand. NCPA is advocating to retain right to opt out of RUC.
- Implementation date is to be determined.

#### Transmission Access Charge Structure Enhancements

- CAISO has pushed the initiative back to Q4 2022 in the latest Policy Roadmap and Annual Plan.
- Initiative is currently on hold pending developments from EDAM initiative.
- This initiative considers changes to the CAISO's current volumetric Transmission Access Charge (TAC) structure for recovering participating transmission owners' costs of owning, operating and maintaining transmission facilities under CAISO operational control. The CAISO will consider stakeholder input on the initiative scope, which will include possible changes to reflect the benefits of distributed resources in reducing future transmission needs.
- CAISO's draft final proposal includes a hybrid billing determinant consisting of volumetric and peak demand functions at an approximately 50/50 split in order to address costs shifts as well as the full impact of high coincident peak demand, low load factor UCD areas that have relatively lower volumetric use compared to high load factor areas. It received general support from the market and will be presented to the CAISO Board in 2021 and will be implemented at a to be determined point thereafter. The CAISO is working to align the TAC Board consideration with the Extended Day-Ahead Market (EDAM) process so they are aligned to the extent possible. The TAC proposal may possibly need to be updated if the EDAM proposal aspects related to transmission issues drive changes to the TAC initiative.
- NCPA performed an impact analysis and determined that NCPA Members would mostly benefit or be indifferent to the new billing determinant so long as certain LFMSS benefits remain in place.

## Western

### Western Base Resource Tracking (NCPA Pool)

Western Base Resource Tracking - NCPA Pool							
	Actual			Costs & Rates			
	BR Forecast <sup>1</sup> (MWh)	BR Delivered (MWh)	Difference (MWh)	Base Resource & Restoration Fund (\$)	Monthly Cost of BR <sup>2</sup> (\$/MWh)	CAISO LMP Differential <sup>3</sup> (\$/MWh)	12-Mo Rolling Avg. Cost of BR <sup>4</sup> (\$/MWh)
Jul-21	90,622	64,857	(25,765)	\$1,943,287	\$ 29.96	\$ 0.50	\$ 48.51
Aug-21	67,967	54,903	(13,064)	\$1,943,287	\$ 35.39	\$ (0.06)	\$ 49.58
Sep-21	28,320	-		\$1,868,754	\$ 65.99	\$ -	\$ 51.68
Oct-21	22,710	-		\$810,370	\$ 35.68	\$ -	\$ 50.65
Nov-21	8,712	-		\$810,370	\$ 93.02	\$ -	\$ 51.07
Dec-21	7,036	-		\$810,370	\$ 115.17	\$ -	\$ 51.86
Jan-22	5,620	-		\$810,370	\$ 144.19	\$ -	\$ 51.80
Feb-22	14,806	-		\$810,370	\$ 54.73	\$ -	\$ 49.62
Mar-22	21,003	-		\$810,370	\$ 38.58	\$ -	\$ 48.67
Apr-22	55,270	-		\$1,847,070	\$ 33.42	\$ -	\$ 44.85
May-22	90,965	-		\$1,847,070	\$ 20.31	\$ -	\$ 38.71
Jun-22	86,068	-		\$1,847,070	\$ 21.46	\$ -	\$ 35.91
1/ As forecasted in NCPA 21/22 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 54,903 MWh of Base Resource (BR) energy in August 2021. This includes Base Resource energy of 214 MWh.
- Pool Members' total savings under Market Efficiency Enhancement Agreement (MEEA) was approximately \$(3,050) in August 2021. The cumulative MEEA savings for FY2022 is approximately \$29,380 so far.

## Interconnection Affairs

### PG&E Update

#### TO-18 Rate Case

- On October 15, 2020 FERC issued a ruling on the PG&E Transmission Owner Tariff 18 Filing.
- The ruling came over four years after the initial filing and over two years from an initial favorable decision back in 2018.
- The ruling is not the end of TO-18 as FERC has requested further testimony and briefs on ROE matters. The initial decision reduced ROE from 10.40% to 9.13%.
- Once ROE is decided, TO-18 rates will be effective for a 12-month period from March 1, 2017 – Feb 28, 2018.

- TO-19, which was settled at a TRR of 98.85% of TO-18 will be effective for a 14-month period from March 1, 2018 – April 30, 2019.
- FERC denied all PG&E request for rehearing on non-ROE issues and directed further briefing on ROE. PG&E has appealed and NCPA has intervened in that appeal. Paper hearing on ROE awaiting FERC order. Appeal of non-ROE issues pending in DC Circuit Court.
- NCPA has requested more information on legal fees PG&E has spent to date on rate cases. PG&E objected to answer legal fee questions. Meet and confer meeting with PG&E regarding its lack of response to data requests about legal fees is scheduled for the week of Sept 20<sup>th</sup>.

### Permanent Inter-Tie Switch Between Geo Plants 1 and 2

- The permanent no-load intertie switch has been approved by the CAISO. The switch can be used when either the Fulton or Lakeville line is out of service to combine the outputs of Geo Plant 1 and Plant 2.
- NCPA and PG&E operating procedure is complete.
- Use of the intertie switch is still pending CEC approval. Interim solution if necessary will be to use the temporary jumpers as in Jan of 2020. CEC application is currently under legal review and submittal is tentatively scheduled for week of Sept 27<sup>th</sup>.

### Cotenancy Agreement

- PG&E with support from NCPA and SVP filed an amendment that acknowledged CDWR's request for termination. The amendment rejected CDWR's request, pending resolution of the Cost of Removal dispute. All other matters have been delayed until this issue is resolved.
- On September 27, 2019 FERC rejected PG&E's amendment stating PG&E cannot unilaterally extend the term of the Agreement. FERC did not address the cost of removal aspect and the calculation methodology. NCPA has initiated discussions with Members as to how much capacity from CDWR's share should NCPA take.
- In Feb 2021, PG&E came across an opportunity to engage in mediation with CDWR to address the cost of removal issue. NCPA has agreed to join the mediation with PG&E tentatively scheduled for Oct 4, 2021.

### PG&E RY2022 Formula Rate Annual Update

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

- July 1 – Utility posts proposed cost for the next calendar year
- July 1 – Oct 15 – Customers examine new costs and issue discovery

- August 15 – Sept 1 – Technical Conference
- November 1 – Last changes to Annual Update
- December 1 – Utility submits to FERC
- January 1 – New revenue requirement becomes effective

Revenue requirement for RY2022 (Jan 1 – Dec 31, 2022) is as follows:

PG&E Wholesale Rates	Settled RY2021 (Current)	As Filed RY 2022	% Change
Revenue Requirement	\$2B	\$2.6B	30%
HV TAC (\$/MWH)	\$9.77	\$12.80	31%
LV TAC (\$/MWH)	\$13.34	\$17.76	33%

Major contributing factors to the increase are PG&E's:

- \$176M increase to A&G expenses
- \$143M increase to O&M expenses
- \$43M increase to Depreciation Expense
- \$30M increase to Income Taxes

Next Steps:

- TANC is now engaged in the 2022 TRR review process to negotiate with PG&E over amounts found to be excessive or unsupported
- A technical conference was held on August 16
- PG&E made significant changes to the rate model and work papers. As a result, the joint interveners have requested a second technical conference for the week of Sept 27<sup>th</sup>

### STAR Process

To date, NCPA has identified eleven (11) projects totaling \$56.1M in estimated completion cost that are related to non-ISO controlled lines. PG&E has acknowledged the project's cost recovery does not belong in the transmission rate base and should be part of the CPUC's General Rate Case. NCPA will monitor for the removal of projects and costs in future transmission rate cases.

## **Debt and Financial Management**

- At the annual Jackson Hole symposium on monetary policy, Federal Reserve (Fed) Chair Jerome Powell said the tapering of asset purchases could begin this year as the U.S. economy recovers from the pandemic, but the central bank will not be in a hurry to raise interest rates. He also reiterated the Fed's belief that the current spike in inflation is likely to be transitory.
- The economy added only 235,000 jobs in August, falling far short of economists' estimates of 735,000 jobs and the weakest posting since January. It appears that potential workers have pulled back from the labor force because of renewed COVID-19 concerns.
- Treasury yields generally rose during August, with those on maturities between five and 10 years jumping by six to nine basis points (bps). However, the 10-year Treasury note yield ended in August 44 bps below its spring peak, reflecting a more sanguine view about inflation, longer-term economic growth prospects, and a patient Fed.

## **Schedule Coordination Goals**

### **Software Development**

- Applications and Enhancements under development
  - New Chromium-based Deal Manager app was released in the test environment ready for end-user testing
  - Development of the Renewable Portfolio Standards application continues and data validation is being performed. Anticipated rollout in November 2021
  - IS team deploying apps in the test environment to test the Oracle 2019 database
- Customer and Resource Integration
  - EBCE's Henrietta D Battery Storage on-going integration and slated for operations on 01/01/2022

### **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,
  - Altamont Wind - successfully integrated and curtailment logic is in place and functioning.
  - Sky River Wind – staff is waiting on some additional parts from NextEra to be configured and installed before proceed with telemetry testing
  - Henrietta D –SCADA communications have been established to the site and point testing is successfully completed.
  - South Feather Water and Power – Staff has begun reviewing point lists and coordinating with their staff to test communications sometime in early October.
- Operations and Support has Received bids from a new Enterprise Phone solution and are currently reviewing the proposals. Expected to award the contract by end of September.
- Operations and Support completed another monthly dry run failover of our system to the Disaster Recovery Center. We are anticipating a full failover to occur October 15<sup>th</sup>- 17<sup>th</sup> of this year to coincide with electric work that will be performed at the Headquarters.
- Oracle 2019 is currently being tested with the anticipation of it replacing the currently Oracle 11 and 12 versions in production. Application testing has started and we are preparing for a full upgrade in early 2022.



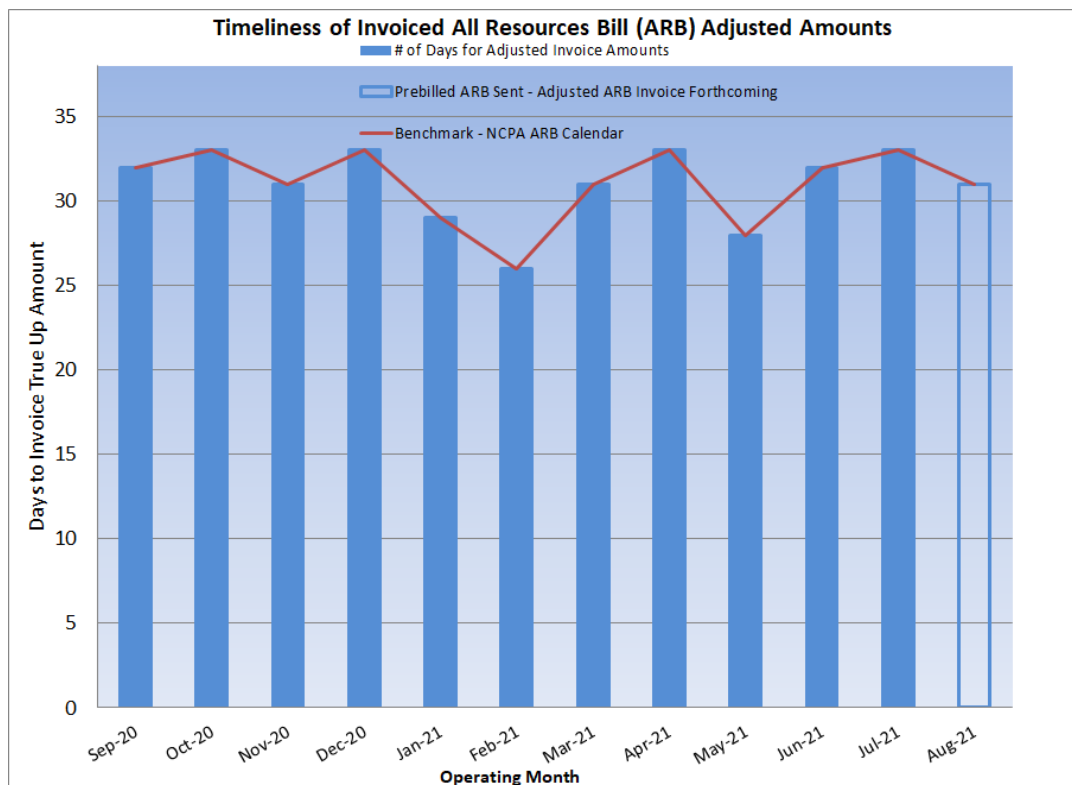
# NCPA Bills & Settlements

## Progress Against the Strategic Plan

Adjusted Power bills, which include CAISO transactions, invoiced to members the following month subsequent to the monthly pre-billed ARB month. Timely ARB settlements adjustments help improve members' cash flow and reconciliation of their budget performance.

The August 2021 NCPA All Resources Bill (ARB) monthly invoice sent to members on July 26, 2021 contains:

- August 2021 monthly pre-billed budget/forecast amounts;
- June 2021 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- May 2021 (2nd Adjustment) NCPA Project settlement true-up and T+12 business day recalculated CAISO settlement true-up allocations;
- March 2021 (3rd Adjustment) T+55 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- September 2020 (4th Adjustment) T+9 month recalculated CAISO settlement true-up allocations;
- November 2019 (5th Adjustment) T+18 month recalculated CAISO settlement true-up allocations;
- August 2018 (6th Adjustment) T+33 month recalculated CAISO settlement true-up;
- May 2018 (7th Adjustment) T+36 month CAISO settlement true-up;



## **Legislative & Regulatory**

### **State Update**

- NCPA's state legislative staff continued advocacy on bills of interest to NCPA and member utilities through the end of the legislative session, which concluded on September 10<sup>th</sup>. In the closing days of the legislative session, NCPA was advocating in support of bills related to Public Power Week, public utility rate reduction bonds, and power source disclosure reporting fixes. NCPA was also working with legislative offices to improve problematic tree trimming legislation which did not ultimately move forward this year. The Governor has until October 10<sup>th</sup> to sign or veto legislation.
- NCPA's Legislative and Regulatory Affairs team has continued its Speakers Series with two sessions in recent weeks. On August 24<sup>th</sup>, the L&R Committee heard from Sonja Anderson, WAPA Senior Vice President and Sierra Nevada Regional Manager; Russell Callejo, Deputy Regional Director, U.S. Bureau of Reclamation; and Kaylee Allen, Assistant Regional Director, U.S. Fish and Wildlife Service. The panel focused on challenges and opportunities regarding the ongoing Western U.S. drought and current regulatory, policy and budget initiatives impacting the Central Valley Project. On September 2<sup>nd</sup>, Laurel Rosenhall, award-winning political reporter and journalist for CalMatters, joined the Committee for a discussion regarding the political dynamics surrounding the Gubernatorial Recall Election of California Governor Newsom, which took place on September 14<sup>th</sup>.

## **Human Resources**

### **Hires:**

Amir Javanbakht joined the Agency's Headquarters' offices as an Energy Resource Analyst IV on September 7, 2021. Amir joins us from the California Independent System Operator (CAISO). There he was a Lead Load Forecast Model Analyst where he developed and implemented load forecast models to predict electricity consumption for all the forecast regions within the California ISO balancing area. Previously, Amir has worked for PG&E and NRG Energy. Amir holds a Bachelor's degree in Business/Economics from UC Santa Barbara and a Master's degree in Economics from San Diego State University

### **Intern Hires:**

none

### **Promotions:**

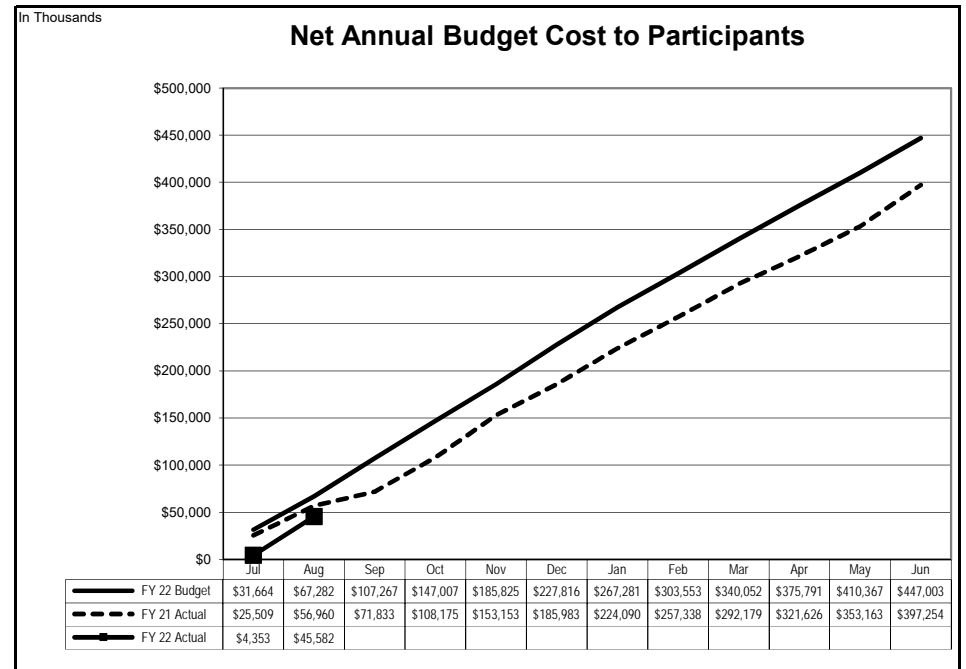
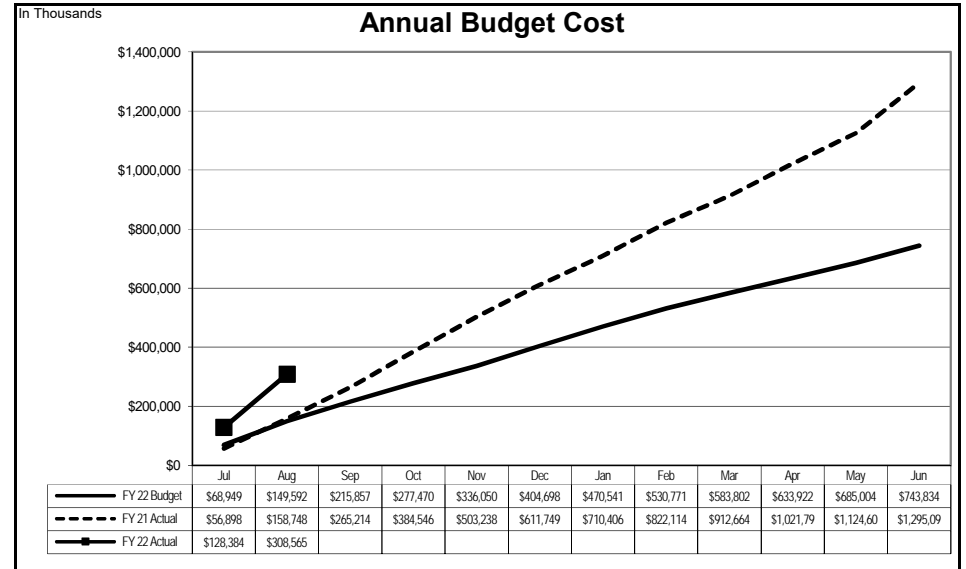
none

### **Separations:**

Joel Ledesma, Assistant General Manager II, Generation Services, resigned from our Headquarters offices on September 16, 2021 after two years of service with NCPA.

**Annual Budget  
2021-2022 Fiscal Year To Date  
As of August 31, 2021**

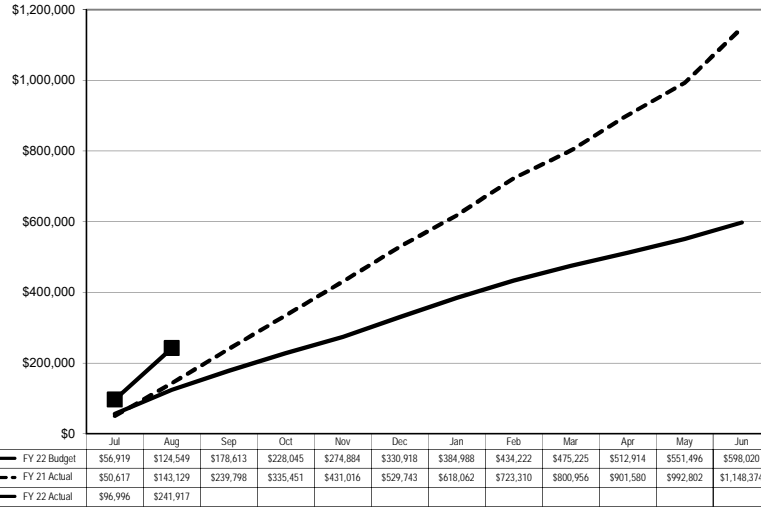
In Thousands	Program			
	Annual Budget	Actual	Under(Ovr) Budget	YTD % Remaining
<b>GENERATION RESOURCES</b>				
<b>NCPA Plants</b>				
Hydroelectric	54,081	9,112	\$ 44,970	83%
Geothermal Plant	40,662	7,451	33,212	82%
Combustion Turbine No. 1	7,055	1,654	5,401	77%
Combustion Turbine No. 2 (STIG)	8,962	2,029	6,934	77%
Lodi Energy Center	88,813	27,634	61,179	69%
	199,574	47,879	151,695	76%
<b>Member Resources - Energy</b>	67,417	15,248	52,168	77%
<b>Member Resources - Natural Gas</b>	2,981	1,296	1,685	57%
<b>Western Resource</b>	27,302	6,581	20,721	76%
<b>Market Power Purchases</b>	17,225	2,085	15,140	88%
<b>Load Aggregation Costs - ISO</b>	282,244	168,478	113,766	40%
<b>Net GHG Obligations</b>	1,277	350	927	
	598,020	241,917	356,103	60%
<b>TRANSMISSION</b>				
<b>Independent System Operator</b>	126,573	63,627	62,945	50%
<b>MANAGEMENT SERVICES</b>				
<b>Legislative &amp; Regulatory</b>				
Legislative Representation	2,101	256	1,846	88%
Regulatory Representation	634	102	532	84%
Western Representation	694	87	607	88%
Customer Programs	481	71	411	85%
	3,911	515	3,396	87%
<b>Judicial Action</b>	300		300	100%
<b>Power Management</b>				
System Control & Load Dispatch	7,427	1,170	6,257	84%
Forecasting & Prescheduling	2,811	439	2,372	84%
Industry Restructuring	423	70	354	84%
Contract Admin, Interconnection Svcs & Ext. Affairs	975	168	807	83%
Gas Purchase Program	81	10	71	88%
Market Purchase Project	116	14	102	88%
	11,833	1,870	9,963	84%
<b>Energy Risk Management</b>	198	19	180	91%
<b>Settlements</b>	975	153	822	84%
<b>Integrated System Support</b>	307	97	210	68%
<b>Participant Pass Through Costs</b>	1,718	167	1,551	90%
<b>Support Services</b>	-	200	(200)	
	19,242	3,021	16,221	84%
<b>TOTAL ANNUAL BUDGET COST</b>	743,834	308,565	435,269	59%
<b>LESS: THIRD PARTY REVENUE</b>				
<b>Plant ISO Energy Sales</b>	101,640	43,507	58,133	57%
<b>Member Resource ISO Energy Sales</b>	34,353	9,482	24,871	72%
<b>Member Owned Generation ISO Energy Sales</b>	83,030	28,243	54,788	66%
<b>Revenue from Customers</b>	-	72,450	(72,450)	
<b>NCPA Contracts ISO Energy Sales</b>	12,615	8,246	4,369	35%
<b>Western Resource ISO Energy Sales</b>	19,297	9,238	10,059	52%
<b>Load Aggregation Energy Sales</b>	-	75,248	(75,248)	
<b>Ancillary Services Sales</b>	4,317	2,199	2,118	49%
<b>Transmission Sales</b>	110	18	92	83%
<b>Western Credits, Interest &amp; Other Income</b>	41,469	14,352	27,117	65%
	296,831	262,983	33,848	11%
<b>NET ANNUAL BUDGET COST TO PARTICIPANTS</b>	447,003	45,582	\$ 401,421	90%



## Annual Budget Budget vs. Actual By Major Area As of August 31, 2021

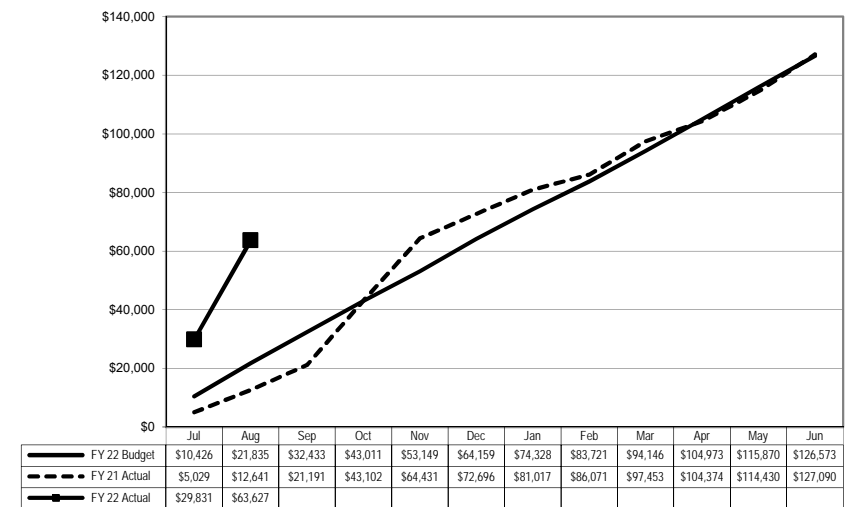
In Thousands

### Generation Resources



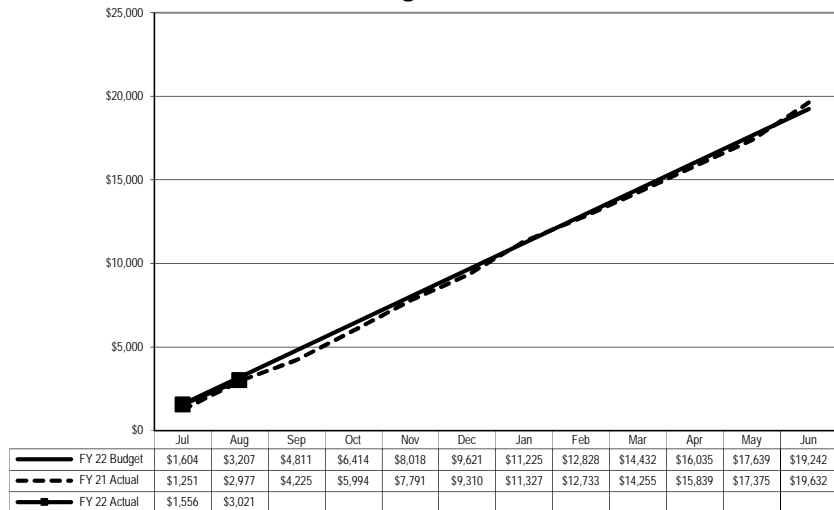
In Thousands

### Transmission-ISO



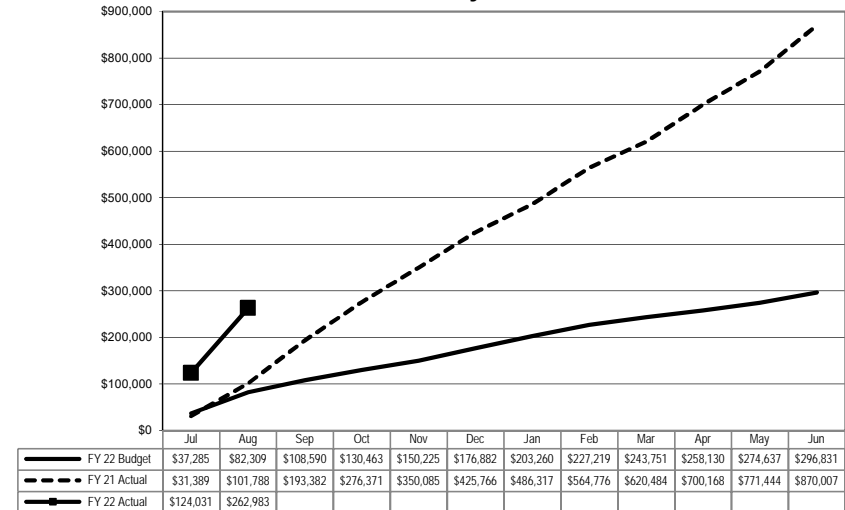
In Thousands

### Management Services



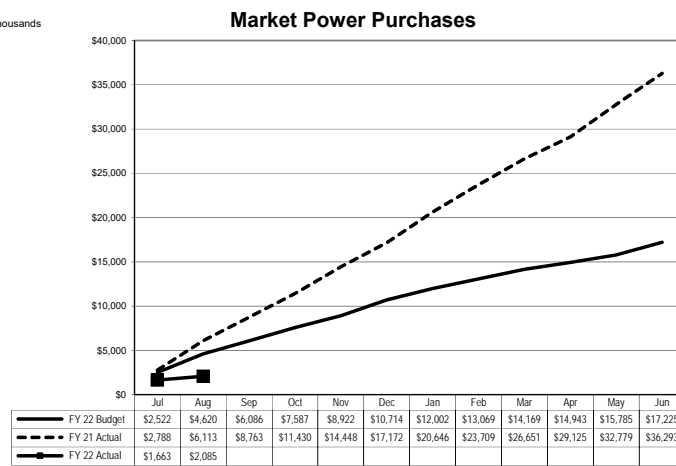
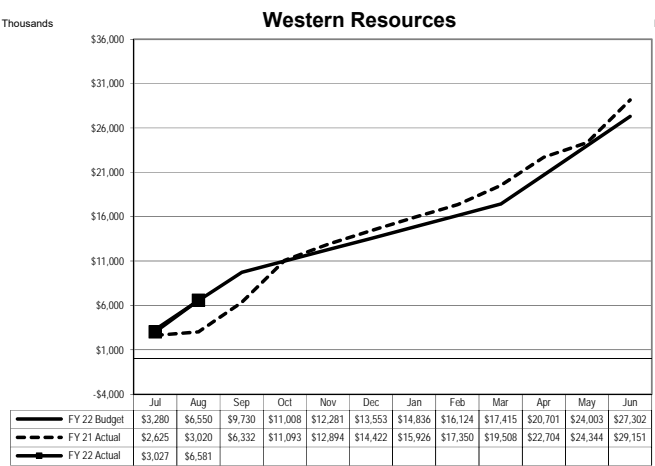
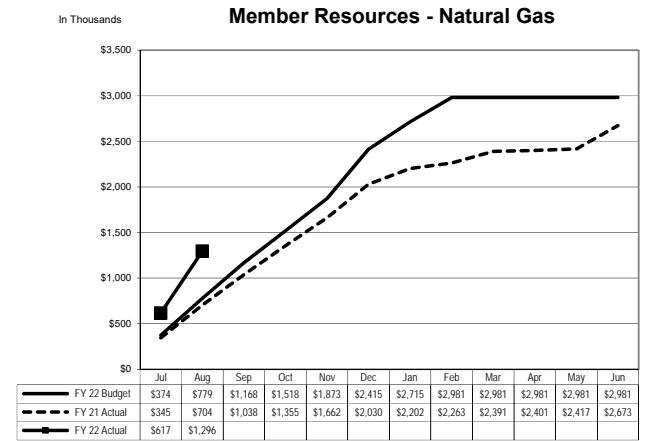
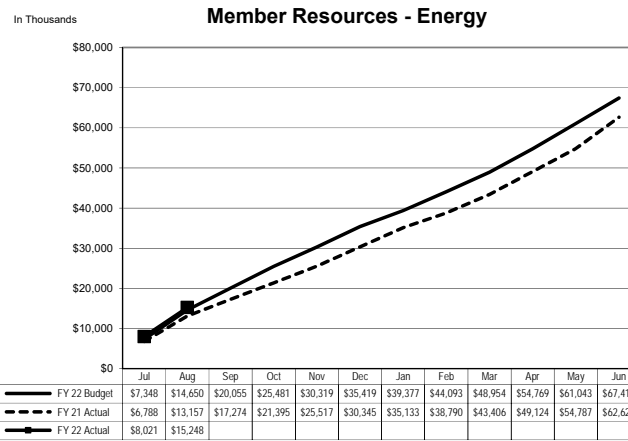
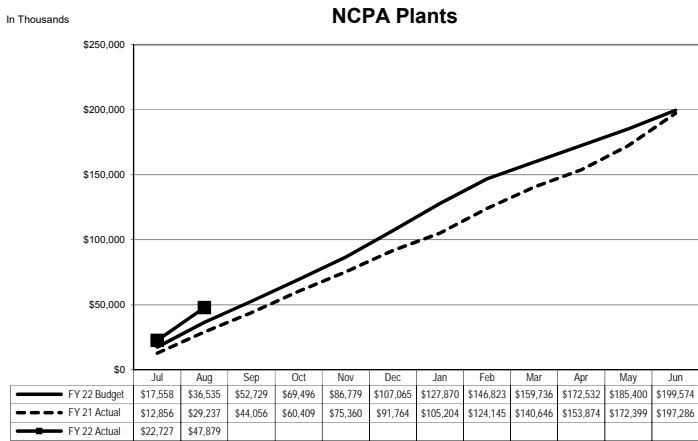
In Thousands

### Third Party Revenue



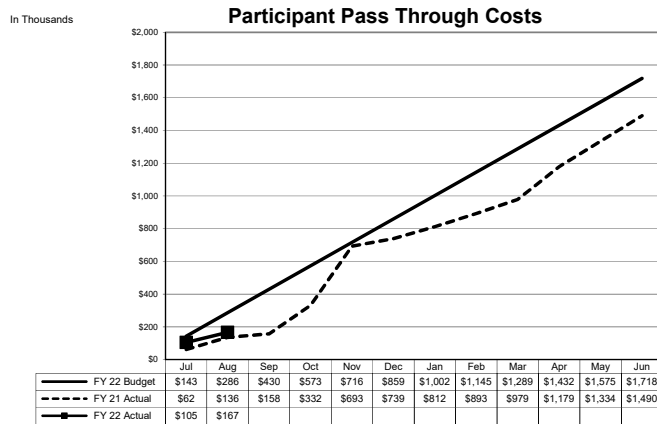
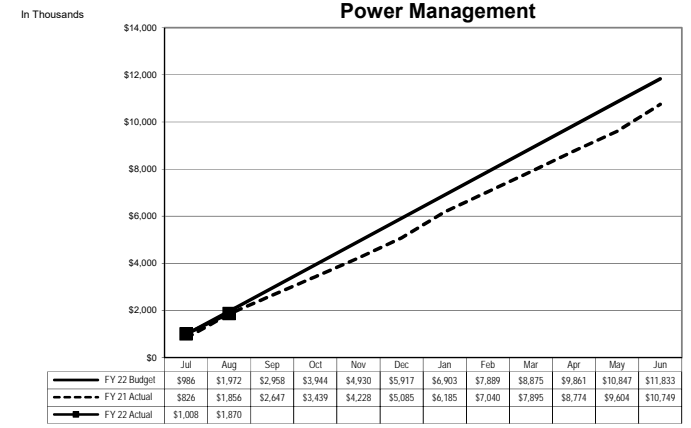
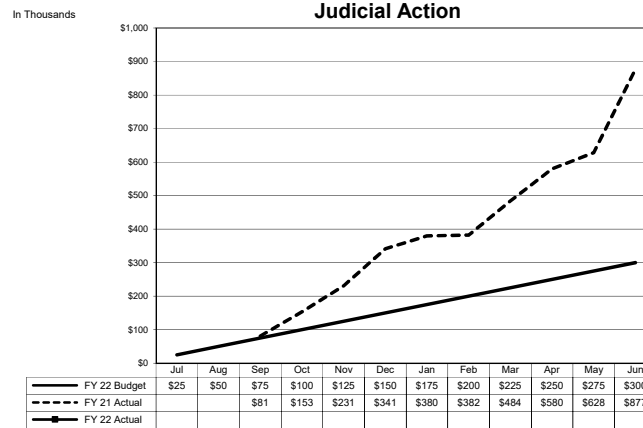
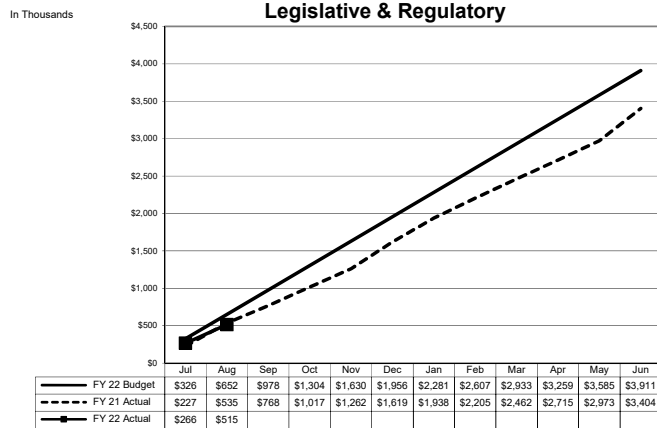
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

## Annual Budget Cost Generation Resources Analysis By Source As of August 31, 2021



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

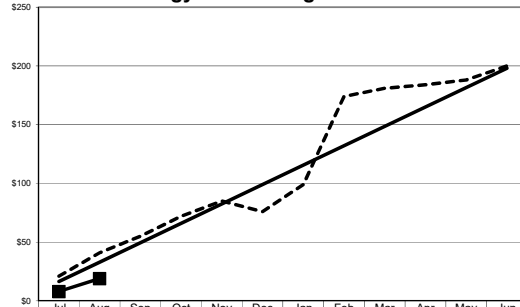
**Annual Budget Cost  
Management Services Analysis By Source  
As of August 31, 2021**



**Annual Budget Cost  
Management Services Analysis By Source  
As of August 31, 2021**

In Thousands

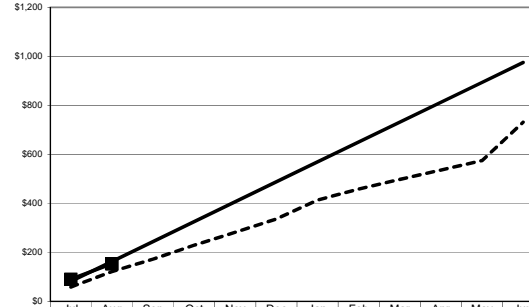
**Energy Risk Management**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 22 Budget	\$17	\$33	\$50	\$66	\$83	\$99	\$116	\$132	\$149	\$165	\$182	\$198
FY 21 Actual	\$21	\$41	\$55	\$72	\$85	\$76	\$99	\$174	\$181	\$184	\$188	\$200
FY 22 Actual	\$8	\$19										

In Thousands

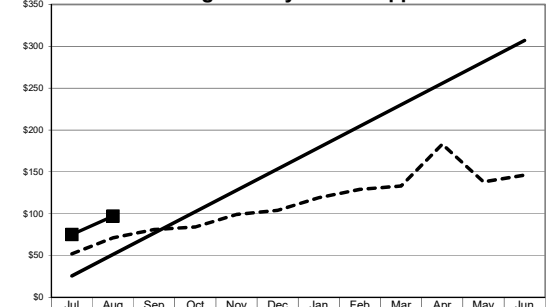
**Settlements**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 22 Budget	\$81	\$163	\$244	\$325	\$406	\$488	\$569	\$650	\$731	\$813	\$894	\$975
FY 21 Actual	\$58	\$121	\$172	\$229	\$282	\$336	\$413	\$458	\$497	\$536	\$574	\$731
FY 22 Actual	\$90	\$153										

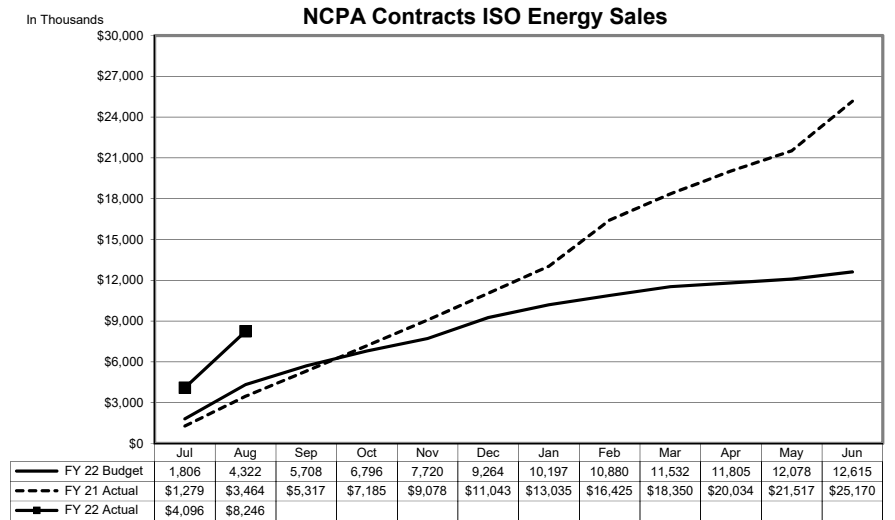
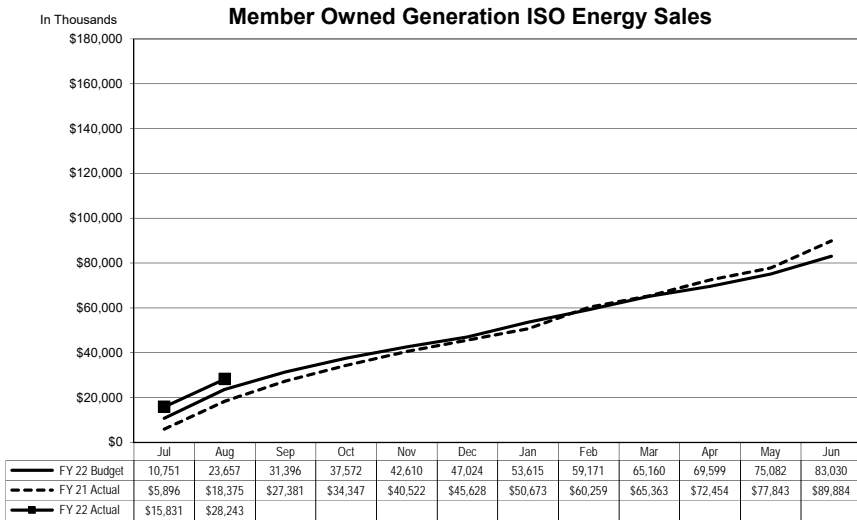
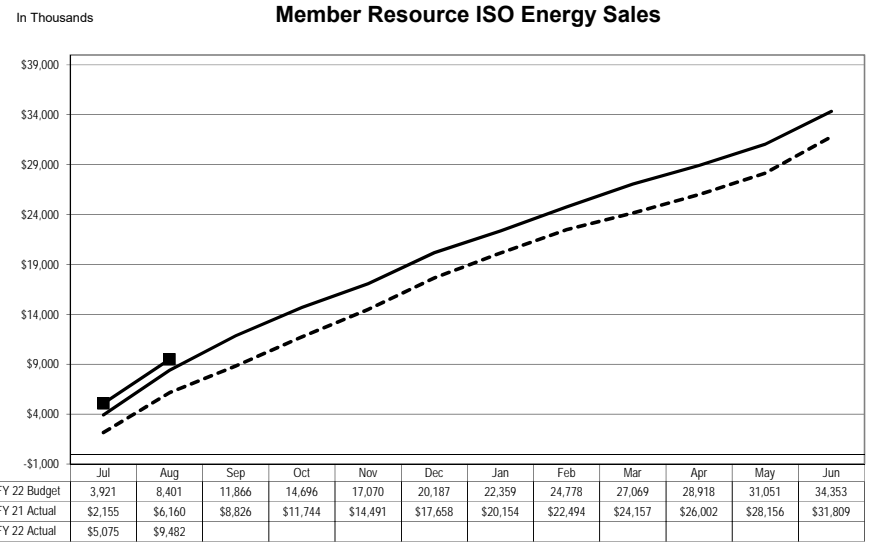
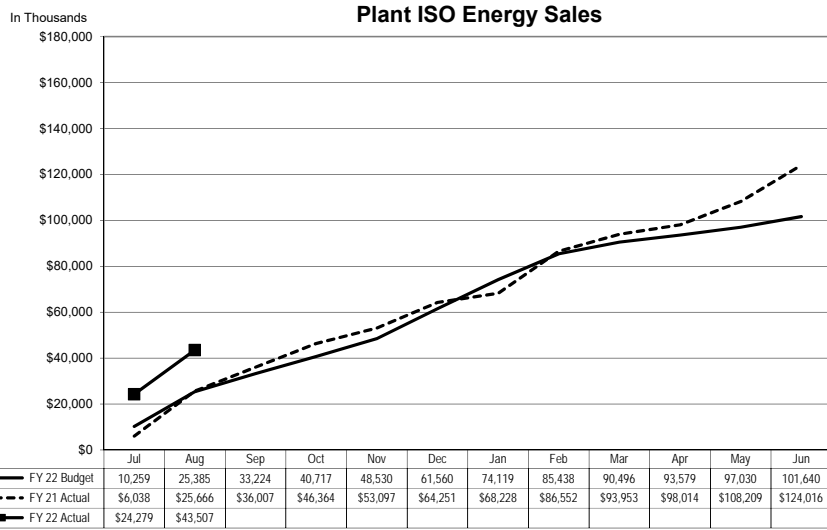
In Thousands

**Integrated Systems Support**



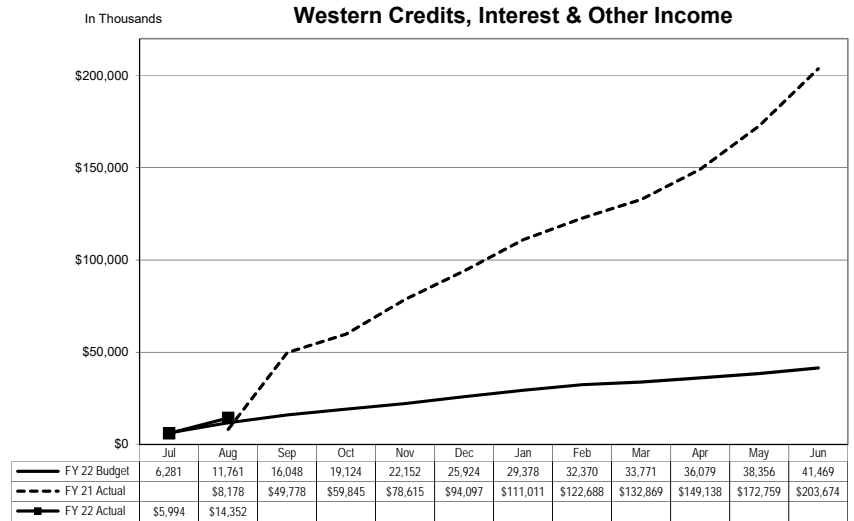
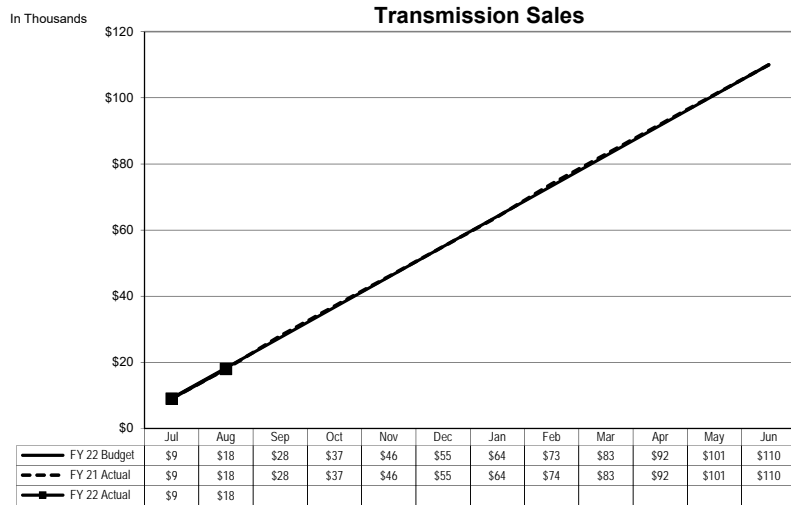
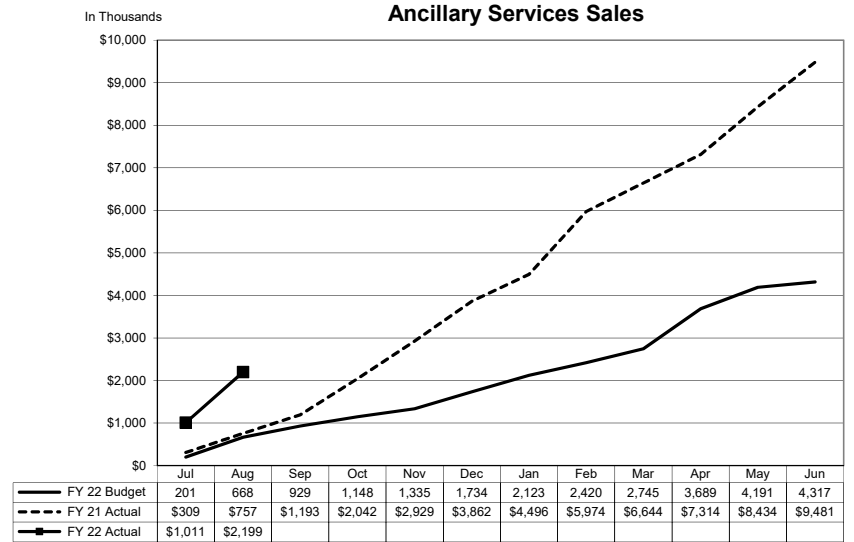
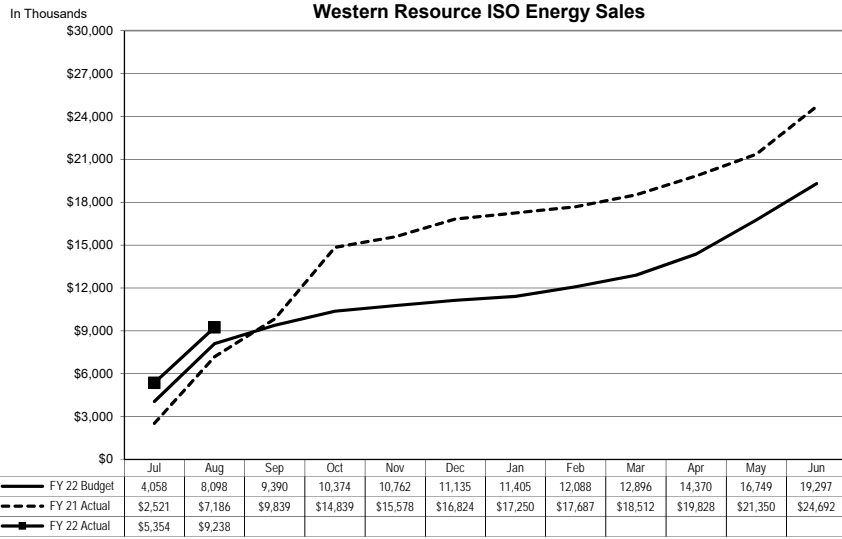
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 22 Budget	\$26	\$51	\$77	\$102	\$128	\$154	\$179	\$205	\$230	\$256	\$281	\$307
FY 21 Actual	\$52	\$71	\$81	\$84	\$99	\$104	\$119	\$129	\$133	\$183	\$138	\$146
FY 22 Actual	\$75	\$97										

**Annual Budget Cost  
Third Party Revenue Analysis By Source  
As of August 31, 2021**





**Annual Budget Cost  
Third Party Revenue Analysis By Source  
As of August 31, 2021**



**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of August 31, 2021**

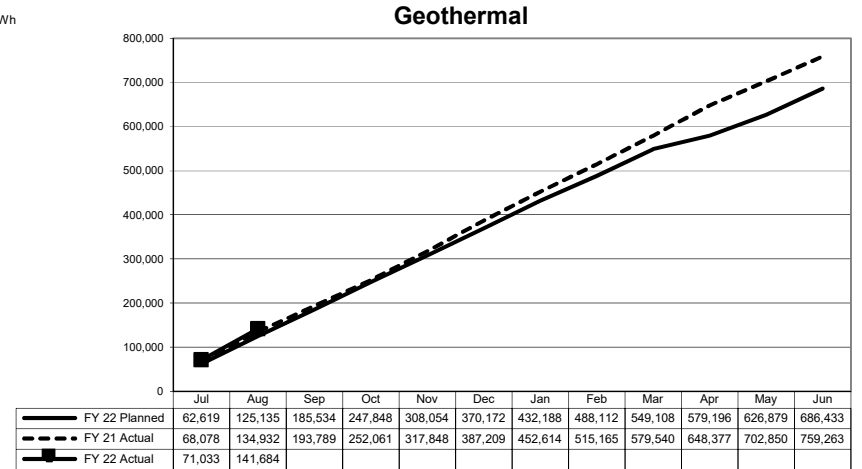
**Generation Cost Analysis**

\$ in thousands

	Geothermal				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 17,803	\$ 3,251	\$ 22.94	\$ 14,553	82%
Capital Assets/Spare Parts Inventories	6,205	1,174	8.29	5,031	81%
Other Costs	11,197	1,935	13.66	9,262	83%
CA ISO Charges	504	266	1.87	238	47%
Debt Service	4,953	826	5.83	4,128	83%
Annual Budget	40,662	7,451	52.59	33,212	82%
Less: Third Party Revenue					
Interest Income	382	7	0.05	375	98%
ISO Energy Sales	27,578	9,288	65.55	18,290	66%
Ancillary Services Sales	-	-	-	-	-
Effluent Revenues	750	(326)	(2.30)	1,076	143%
Misc	113	19	0.13	94	84%
	28,823	8,988	63.43	19,835	69%
Net Annual Budget Cost to Participants	\$ 11,839	\$ (1,537)	\$ (10.85)	\$ 13,376	113%
Net Generation--MWh @ Meter	686,433	141,684			
\$/MWh (A)	\$ 10.03	\$ (16.67)			

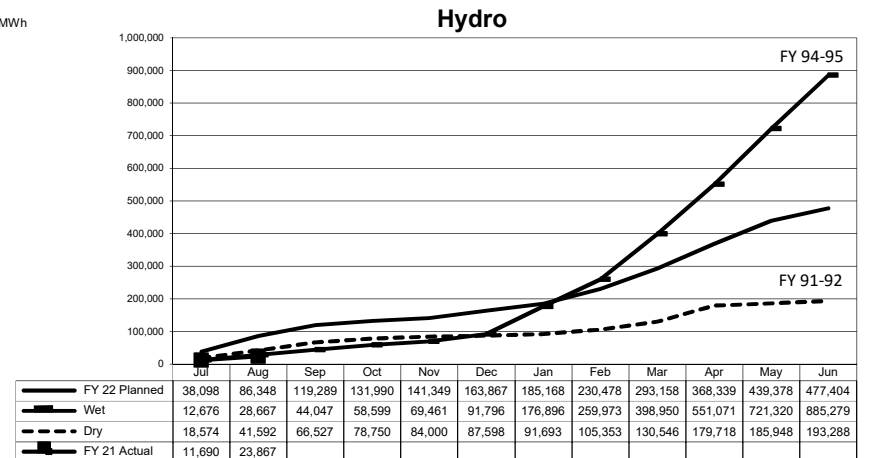
**MWhs Generated**

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 9,882	\$ 1,072	\$ 44.89	\$ 8,811	89%
Capital Assets/Spare Parts Inventories	3,465	496	20.76	2,970	86%
Other Costs	4,677	753	31.55	3,924	84%
CA ISO Charges	2,635	1,221	51.17	1,414	54%
Debt Service	33,422	5,570	233.38	27,851	83%
Annual Budget	54,081	9,112	381.76	44,970	83%
Less: Third Party Revenue					
Interest Income	670	17	0.73	653	97%
ISO Energy Sales	22,047	4,384	183.70	17,663	80%
Ancillary Services Sales	2,241	855	35.82	1,386	62%
Misc	-	-	-	-	-
	24,959	5,257	220.25	19,702	79%
Net Annual Budget Cost to Participants	\$ 29,123	\$ 3,855	\$ 161.50	\$ 25,268	
Net Generation--MWh @ Meter	477,404	23,867			
\$/MWh (A)	\$ (9.00)	\$ (71.88)			

In MWh



Footnotes:

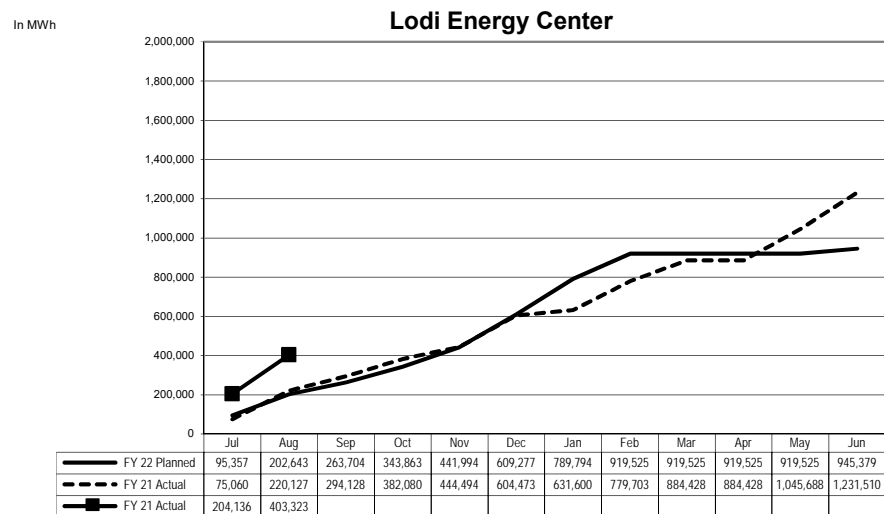
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of August 31, 2021**

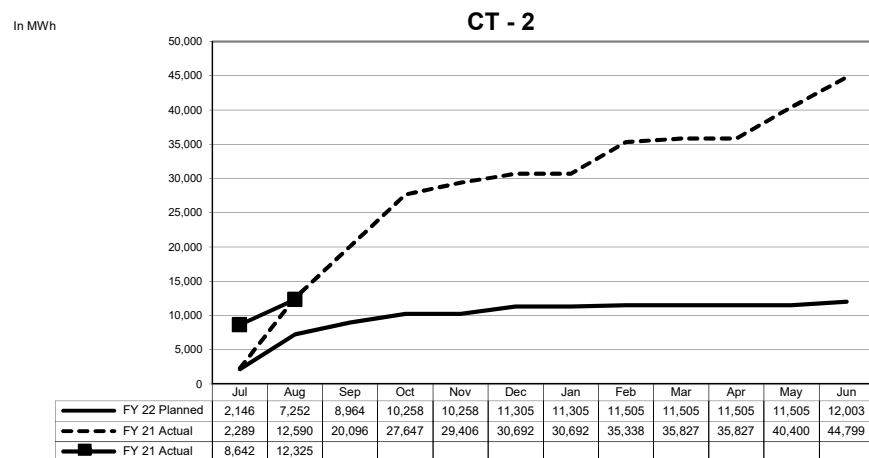
**Generation Cost Analysis**

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 9,558	\$ 2,098	\$ 5.20	\$ 7,460	78%
Fuel	31,029	15,191	37.67	15,838	51%
AB 32 GHG Offset	6,269	3,519	8.73	2,750	44%
CA ISO Charges and Energy Purchases	3,137	1,056	2.62	2,081	66%
Capital Assets/Spare Parts Inventories	5,007	370	0.92	4,637	93%
Other Costs	7,805	1,006	2.49	6,799	87%
Debt Service	26,008	4,394	10.89	21,614	83%
<b>Annual Budget</b>	<b>88,813</b>	<b>27,634</b>	<b>68.52</b>	<b>61,179</b>	<b>69%</b>
Less: Third Party Revenue					
Interest Income	386	31	0.08	355	92%
ISO Energy Sales	49,394	26,967	66.86	22,427	45%
Ancillary Services Sales	1,152	1,268	3.14	(116)	-10%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	6,102	3,403	8.44	2,699	44%
Misc	-	-	-	-	0%
	57,034	31,669	78.52	25,365	44%
<b>Net Annual Budget Cost to Participants</b>	<b>\$ 31,779</b>	<b>\$ (4,035)</b>	<b>\$ (10.00)</b>	<b>\$ 35,814</b>	<b>113%</b>
Net Generation--MWh @ Meter	945,379	403,323			
<b>\$/MWh (A)</b>	<b>\$ 6.10</b>	<b>\$ (20.90)</b>			

**MWhs Generated**



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,627	\$ 241	\$ 19.52	\$ 1,387	85%
Fuel and Pipeline Transport Charges	1,265	752	61.02	513	41%
Capital Assets/Spare Parts Inventories	46	-	-	46	100%
Other Costs	735	99	8.07	636	86%
CA ISO Charges	136	95	7.73	41	30%
Debt Service	5,048	841	68.26	4,207	83%
<b>Annual Budget</b>	<b>8,858</b>	<b>2,029</b>	<b>164.60</b>	<b>6,830</b>	<b>77%</b>
Less: Third Party Revenue					
Interest Income	109	2	0.15	107	98%
ISO Energy Sales	1,321	1,455	118.08	(135)	-10%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,788	298	24.19	1,490	83%
GHG Allowance Credits	104	-	-	104	100%
Misc	-	-	-	-	0%
	3,322	1,755	142.43	1,566	47%
<b>Net Annual Budget Cost to Participants</b>	<b>\$ 5,536</b>	<b>\$ 273</b>	<b>\$ 22.17</b>	<b>\$ 5,263</b>	<b>95%</b>
Net Generation--MWh @ Meter	12,003	12,325			
<b>\$/MWh (A)</b>	<b>\$ 40.69</b>	<b>\$ (46.09)</b>			



**Footnotes:**

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

**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of August 31, 2021**

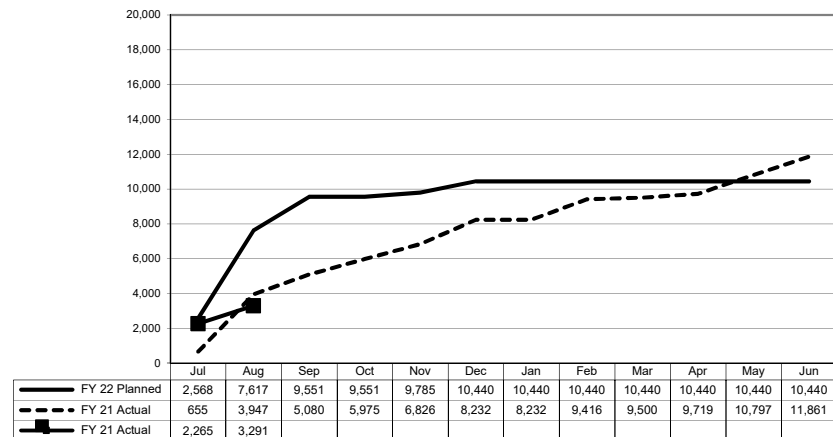
**Generation Cost Analysis**

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,497	\$ 659	\$ 200.19	\$ 1,838	74%
Fuel and Pipeline Transport Charges	792	320	97.36	471	60%
Capital Assets/Spare Parts Inventories	2,573	167	50.64	2,407	94%
Other Costs	1,104	176	53.36	928	84%
CA ISO Charges	90	332	101.03	(243)	-271%
Debt Service	-	-	-	-	-
Annual Budget	7,055	1,654	502.58	5,401	77%
Less: Third Party Revenue					
Interest Income	-	4		(4)	
ISO Energy Sales	1,300	1,412	429.16	(113)	-9%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	-	-	-	0%
	1,300	1,416	429.16	(116)	-9%
Net Annual Budget Cost to Participants	\$ 5,755	\$ 238	\$ 72.33	\$ 5,517	96%
Net Generation--MWh @ Meter	10,440	3,291			
\$/MWh (A)	\$ 551.26	\$ 72.33			

**MWhs Generated**

In MWh

**CT - 1**



Footnotes:

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