



Northern California Power Agency  
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# BUSINESS PROGRESS REPORT

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July 2021

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# Generation Costs & Reliability

## Combustion Turbine Project

### Unit Operation for June 2021

Unit	Availability		Production			Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	242.2	MWh	CAISO / CAISO
	99.3%	99.3%	Unit 2	167.0	MWh	
Curtailements, Outages, and Comments:						
Unit 1: 6/22 @ 08:00 - 13:00; Fuel gas supply piping modification, OMS 10318838						
Unit 2: 6/22 @ 08:00 - 13:00; Fuel gas supply piping modification, OMS 10318841						
Unit	Availability		Production			Reason for Run
CT1 Lodi	100.0%		670.3 MWh			CAISO
Curtailements, Outages, and Comments:						
Normal operation.						
Unit	Availability		Production			Reason for Run
CT2 STIG	95.8%		4,270.3 MWh			CAISO
Curtailements, Outages, and Comments:						
6/01 @ 14:36 - 16:20; Generator lube oil Issue; OMS 10227908						
6/14 @ 20:31 - 6/15 @ 08:47; Fuel gas temperature sensor; OMS 10287990						
6/27 @ 00:00 - 16:30; Diesel fire pump trouble; OMS 10323142						
Unit	Availability		Production			Reason for Run
LEC	100.0%		185,840 MWh			CAISO
Curtailements, Outages, and Comments:						
6/27 @ 00:00 - 16:30; Diesel fire pump trouble, OMS 10323402						
6/28 @ 01:35 - 02:38; Unit trip on startup, OMS 10351215						

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

## Geothermal Facilities

### Availability/Production for June 2021

Unit	Availability	Net Electricity Generated/Water Delivered	Out-of-Service/Descriptors
<b>Unit 1</b>	66.80 %	28,047 MWh	U1 was off line 6/6/21 from 0400 until 2117 for PG&E line outage
<b>Unit 2</b>	97.64 %	*28,354 MWh	U1 was off line 6/6/21 from 0400 until 2055 for PG&E line outage
<b>Unit 3</b>	N/A %	N/A	Unit 3 remains out of service.
<b>Unit 4</b>	.14 %	21 MWh	U4 was off line 6/1/21 until 6/30/21 2310 for H2 seal and Booster Oil Pump repair
<b>Southeast Geysers Effluent Pipeline</b>	95 %	79.1 mgallons	Average flow rate: 1,835 gpm
<b>Southeast Solar Plant</b>	N/A	135,940 KWh	Year-to-date KWh: 3,801,314
<b>Bear Canyon Pump Station Zero Solar</b>	N/A	274,766 KWh	Year-to-date KWh: 5,740,043

\* Accounts for an additional 687 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2..

## Hydroelectric Project

### Availability/Production for June 2021

Units	Availability	Net Electricity Generated	Out-of-Service
<b>Collierville Unit 1</b>	100%	2186 MWh	CV Unit 1 – No Outages
<b>Collierville Unit 2</b>	100%	10068 MWh	CV Unit 2 – No Outages
<b>Spicer Unit 1</b>	99.94%	1111 MWh	NSM1- out of service on 6/26/21 from 2106 to 2129 for transfer trip loss of guard signal
<b>Spicer Unit 2</b>	99.96%	0 MWh	NSM2- out of service on 6/26/21 from 2106 to 2125 for transfer trip loss of guard signal
<b>Spicer Unit 3</b>	95.08%	180 MWh	NSM3- out of service on 6/26/21 to 6/28/21 from 2106 to 1100 for transfer trip loss of guard signal

### Operations & Maintenance Activities:

- CMMS work orders
- Yearly Vegetation Management with Cal Fire Crew
- Cooling Water pump base in place machining pump #1
- Murphy's office HVAC and energy efficiency improvements
- CAISO Revenue Meter Calibration & Certification
- Annual Water Rights filings with SWRCB
- McKays DSSMR report filed with FERC and DSOD. USGS semi annual hydrography checks.

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

- There were no vehicle, Cal OSHA Recordable, or Lost Time accidents in the month of June.
- 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 June 19, 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.

### **June 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	251	1,061	2,266	3,250
Work Hours Since Last Recordable	20,467	221,512	340,812	2,689,085
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	5,000	2,129	10,170	6,263
Work Hours without LTA	453,037	138,487	751,356	2,311,103
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 June 19, 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>June 2021</b>		<b>Calendar Year 2021</b>	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	440.56 6/17 @ 1700	197,131	440.56 6/17 @ 1700	1,092,369
SVP	590.64 6/17 @ 1600	341,770	590.64 6/17 @ 1600	1,960,729
MSSA	1025.46 6/17 @ 1700	538,901	1025.46 6/17 @ 1700	3,053,098

### **Last Year 2020 Data\***

	<b>June 2020</b>		<b>Calendar Year 2020</b>	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	415.68 6/3 @ 1800	191,529	467.45 8/14 @ 1700	1,092,275
SVP	560.35 6/3 @ 1600	319,355	586.3 8/14 @ 1700	1,855,063
MSSA	971.45 6/3 @ 1700	510,884	1053.75 8/14 @ 1700	2,947,338

\* 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	590.64 MW on 6/17/21 @ 1600	590.64 6/17 @ 1600
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>May 2021</b>	<b>Calendar Year 2021</b>
MSSA % Within the Band	96.85%	98.24%

- NCPA continues to operate in split operation with the SC's working out of the backup control center and the system dispatchers working out of the primary control center due to COVID-19.
- CAISO issued a Restricted Maintenance Operations notification for June 15-18, 2021 for 1200-2200 hours each day.
- CAISO issued a Flex Alert for June 17, 2021, 1700-2200 hours, and June 18, 2021, 1800-2100 hours.
- CAISO issued a Grid Warning notice for 6/17/21, 1900-2100 hours.
- There were no Public Safety Power Shutoff (PSPS) warnings issued by PG&E

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

- NCPA Pool load during June 2021 was 197,132 MWh versus the budget forecast of 189,336 MWh resulting in a forecast error of -3.95%. The forecast error was due to higher than average temperatures during the month of June. The current weather outlook for July 2021 is for above-normal temperatures, with the pool load forecast at 208,116 MWh compared with extrapolated actuals of 206,849 MWh as of July 19, 2021.
- Lodi Energy Center (LEC) ran 694 hours out of a possible 720, producing 185,843 MWh. Natural gas and power prices are significantly higher than a year ago, due to the lack of water behind the dams this year, meaning that summer gas-fired generation will likely be high.
- During June 2021, essentially no rain was recorded at the Big Trees gauge. Average July Big Trees precipitation is also near zero.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has remained at \$250/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 June 30, 2021 was at 88,563-acre feet. The historical average NSMR storage at the end of June is 148,202 acre feet. As of July 20, 2021 NSMR storage is 82,867 acre feet.
- Combined Calaveras Project generation for the Pool in June 2021 totaled 7.4 GWh, down from 8.5 GWh in May 2021. The Pool's 7.4 GWh in June 2021 was very close to its revised forecast of 7.3 GWh created on April 15, 2021.
- Western Base Resource (BR) deliveries for the Pool during June 2021 were 53,244 MWh. Displacement program energy totaled 151 MWh. Western's latest forecast for the Pool's share of August 2021 generation is 60,372 MWh.
- The PG&E Citygate gas index averaged \$4.367/MMBtu during the month of June as compared to an average of \$3.87 for May and July's current average of \$4.86. Both NYMEX gas and basis prices have been rising due to flat production, growing exports of natural gas and increased demand. Prices will remain high for the remainder of the summer. The August 2021 PG&E Citygate forward price is \$5.27/MMBtu.



- Day-Ahead PG&E DLAP electricity prices for June averaged \$58.30/MWh On-Peak and \$43.74 Off-Peak. with a high of \$534.09. As of July 1<sup>st</sup> through 20<sup>th</sup>, 2021 prices have average \$73.91 On-Peak and \$55.57 Off-Peak. The forward prices for August are \$128.64 On-Peak and \$64.14 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 September 2021:
  - Monthly System Resource Adequacy Demonstration (filed July 18, 2021)
  - Monthly Supply Plan (filed July 18, 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)**

- 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

- This initiative has been delayed due to the Summer 2021 Readiness Initiative taking priority.
- CAISO delayed publication of next straw proposal and announced that it will propose enhancements to RUC. NCPA seeking clarity for if new Reliability Capacity product remains.
- CAISO responded to NCPA's proposed redlines regarding Load Following Metered Sub-system treatment but we will need to see how they fit in with the next proposal.
  - Rejected language exempting LFMSS from reliability cost allocations
  - Accepted IRP Tier 1 proposal to base cost on LFMSS net portfolio deviations
  - Rejected IRP Tier 2 proposal to base cost on LFMSS net portfolio deviations and countered by proposing to base cost on net metered demand
  - Rejected NCPA tariff redlines.
- 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-20	83,801	81,392	(2,409)	\$1,825,459	\$ 22.43	\$ 0.13	\$ 27.37
Aug-20	61,985	59,998	(1,987)	\$1,826,020	\$ 30.43	\$ (0.23)	\$ 27.68
Sep-20	41,023	41,391	368	\$1,811,655	\$ 43.77	\$ 0.60	\$ 27.62
Oct-20	30,317	22,596	(7,721)	\$909,162	\$ 40.24	\$ 11.76	\$ 29.62
Nov-20	14,598	13,280	(1,318)	\$909,162	\$ 68.46	\$ 0.10	\$ 30.44
Dec-20	13,128	14,102	974	\$909,162	\$ 64.47	\$ 0.79	\$ 31.48
Jan-21	6,278	7,174	896	\$909,162	\$ 126.73	\$ 1.02	\$ 32.15
Feb-21	16,372	2,262	(14,110)	\$909,162	\$ 401.93	\$ (0.00)	\$ 33.53
Mar-21	26,497	16,106	(10,391)	\$909,162	\$ 56.45	\$ 0.33	\$ 34.70
Apr-21	41,629	27,179	(14,450)	\$1,953,132	\$ 71.86	\$ 0.04	\$ 37.32
May-21	74,036	32,716	(41,320)	\$1,953,132	\$ 59.70	\$ 0.30	\$ 41.86
Jun-21	93,177	53,395	(39,782)	\$1,953,132	\$ 36.58	\$ 0.22	\$ 46.05

1/ As forecasted in NCPA 20/21 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 53,395 MWh Base Resource (BR) energy in June 2021. This includes 151 MWh of Displacement Energy for an estimated savings of \$882 or about \$8.44/MWh.
- Pool Members' cumulative net MEEA savings for NCPA FY 2021 is about \$275,735 and Displacement savings at approximately \$738,190, for July 2020 through June 2021.

### Integrated Resource Plan (IRP)

- Pursuant to the Western Base Resource Contract, NCPA, on behalf of the assignment members, is required to file a structured Integrated Resource Plan with Western every five (5) calendar years, and is subsequently required to file an update to the IRP each year. NCPA filed the 2021 Annual Progress report to WAPA on June 8, 2021 for the July 1, 2021 deadline. WAPA accepted and approved the report on June 23, 2021.

## **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.
- Recent Developments: FERC denied all PG&E request for rehearing and directed further briefing on ROE. PG&E had appealed and NCPA has intervened in that appeal.

#### **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 CPUC approval. Interim solution if necessary will be to use the temporary jumpers as in Jan of 2020.

#### **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.

### 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
- TANC will consider engagement in SCE’s TO rate case in areas/topics where there is no coverage by the Southern (Six Cities, LADWP, CPUC) Joint Interveners. SCE’s annual update shows a 27% increase to the HV TAC.
- NCPA in collaboration with CPUC and BAMX will continue reviewing transmission investments in PG&E’s STAR Process. CPUC will continue reviewing transmission investments SCE’s Stakeholder Review Process (SRP) Process.

## STAR Process Update

PG&E submitted capital project data on June 1, 2021. The dataset consists of:

- 1506 Transmission Projects costing \$1M or more. PG&E introduced 129 new projects from the Dec 1, 2020 data submission.
- 273 new/revised Advanced Authorizations and Business Case Documents

PG&E's forecasted capital cost are as follows:

<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
\$1.58B	\$1.51B	\$1.55B	\$1.59B	\$1.62B	\$1.62B

Stakeholders filed comments on July 1, 2021. NCPA focused on non-ISO controlled lines and substations, which are part of the rate base and the work at the request of others category. The CPUC's questions focused on infrastructure replacements and enhancements, accrued funds used during construction, and work at the request of others.

Next Steps:

- August 1 - PG&E will host stakeholder meeting to reply to July 1 stakeholder comments and questions
- September 15 – Last date for stakeholder comments and questions on specific projects
- October 1 – PG&E provides official response to July 1 stakeholder comments and questions



## **Schedule Coordination Goals**

### **Software Development**

- New applications and enhancements under development
  - ABISS (Accounting, Budget, Information and Settlements System) is under development. It will play a major piece to the new Accounting Reporting and Budgeting solution currently under evaluation. ABISS will combine most, if not all, relevant data sources coming from internal databases as well as from the new Budgeting data source.
  - Renewable Portfolio Standard Reporting app to be added as an enhancement to the Risk Management app. The report will provide members an automated RPS Balance Sheet of their RECs in a Compliance Period. Currently being tested.
  - The Deal Manager app is currently being updated for compatibility with the latest Chromium-based browsers.

### **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. This includes Altamont Wind, Sky River Wind, Slate 1 Solar and South Feather Water and Power.
- IS has purchased Tenable SC software services that will assist in vulnerability assessments that are required for CIP-010 standards. Expected to have the software setup and working by end of August. Further, NCPA is evaluating software to assist with configuration management needed to comply with other CIP-010 standards. Anticipating a purchase by August.
- Operations and Support did not receive as many responses to VOIP RFP that was sent in May. Staff have reached out to other potential vendors to expand the opportunities to evaluate a larger pool of candidates. Planning to send a rebid in late July early August with anticipated response by end of August.

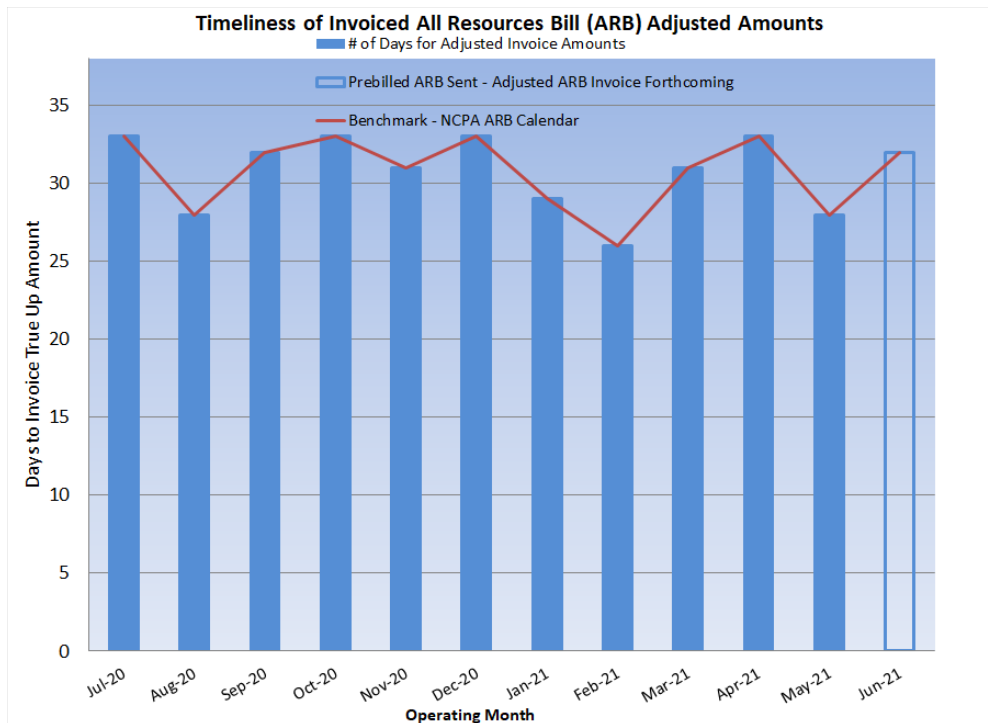
## **NCPA Bills & Settlements**

### **Progress Against the Strategic Plan**

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

The June 2021 NCPA All Resources Bill (ARB) monthly invoice sent to members on May 25, 2021 contains:

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



## **Legislative & Regulatory**

### **State Update**

- NCPA, in close partnership with our public power partners at CMUA and SCPPA, successfully advocated in State Budget discussions to secure \$298.5 million to support publicly owned electric utility and electric cooperative arrearages associated with COVID-19 through the California Arrearage Payment Program (CAPP). NCPA continues to coordinate with the Department of Community Services and Development on implementation of the CAPP.
- The State Legislature stands in summer recess for the next month, and will reconvene on August 16 for the final weeks of the 2021 session, which concludes on September 10.
- NCPA has been using its social media accounts to promote energy conservation during Flex Alert events when electricity supply is limited. In line with this effort, NCPA circulated a series of graphic designs focused on energy conservation that members can use as a resource in customer communications.

### **Federal Legislative Update**

- Last month, a group of NCPA members and staff joined over 800 attendees from across the country in participating in the APPA National Conference to hear from leaders in public power and keep up-to-date on the latest policy discussions affecting our industry. The conference also presents a valuable opportunity to meet with key coalition partners who NCPA works closely with to advance public power policy priorities at the federal level. An important highlight of the conference was the annual APPA awards ceremony where three NCPA members received national recognition for their leadership and accomplishments. NCPA Commission Chair David Hagele, Councilmember for the City of Healdsburg, received the Spence

Vanderlinden Public Official Award; Michelle Bertolino, Utility Director for the City of Roseville received the James D. Donovan Individual Achievement Award, and; Vidhi Chawla, former Assistant General Manager of Energy Resources Planning for Alameda Municipal Power, was selected for the Robert E. Roundtree Rising Star Award.

## **Human Resources**

### **Hires:**

Randall Kramer joined the Agency's Headquarters' offices as an Energy Resource Analyst II (Risk Management Analyst), on July 6, 2021. Randall joins us from Novozymes where he was an Associate Scientist working with data science and bioinformatics. There he provided research support, designed and implemented support systems for the visualization, aggregation and analysis of complex data, and presented results through reports and presentations. Randall holds a BS in Biochemistry and Molecular Biology from UC Davis and a MS in Information Systems from Drexel University.

Stephen Gleason joined NCPA's Geothermal Maintenance team as a Technician Operator IV on July 19, 2021. Stephen joins us from Calpine where he has been an ICE Technician since 2007. While Stephen was at Calpine, he was responsible for maintaining all instrumentation, controls, electrical and protection relays at multiple power plants. Stephen brings over 17 years of electrical and power plant reliability and maintenance experience.

### **Intern Hires:**

The Agency welcomed Eric Oliver, Student Assistant III, on June 7, 2021. Eric will spend the summer interning with the City of Redding.

The Agency welcomed Jeremy Heinz, Student Assistant III, on June 7, 2021. Jeremy will spend the summer interning with the City of Redding.

The Agency welcomed Kyle Matthys, Student Assistant III, on June 14, 2021. Kyle will spend the summer interning with the City of Palo Alto.

### **Promotions:**

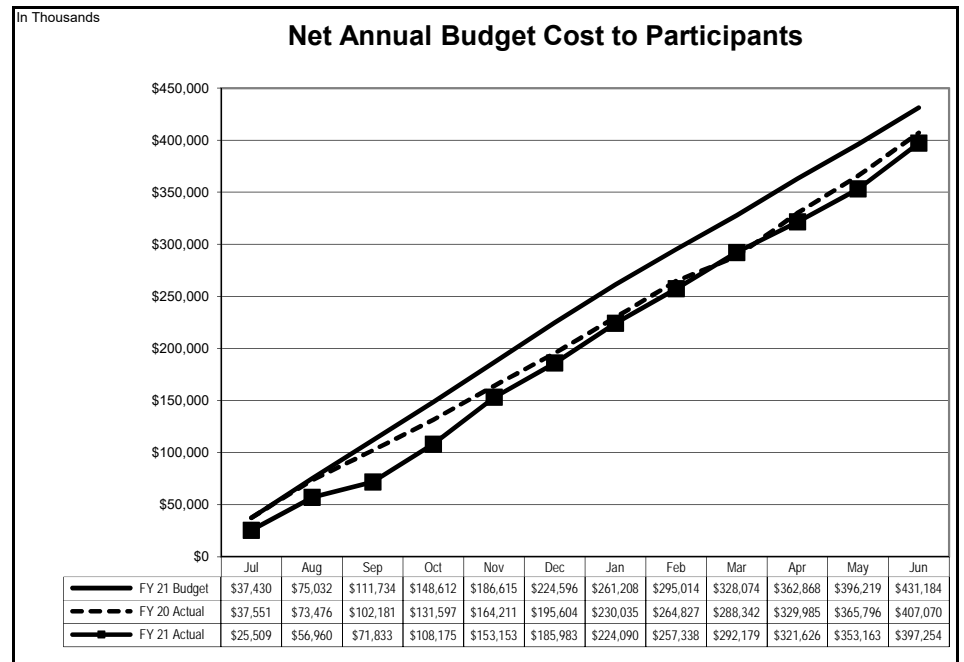
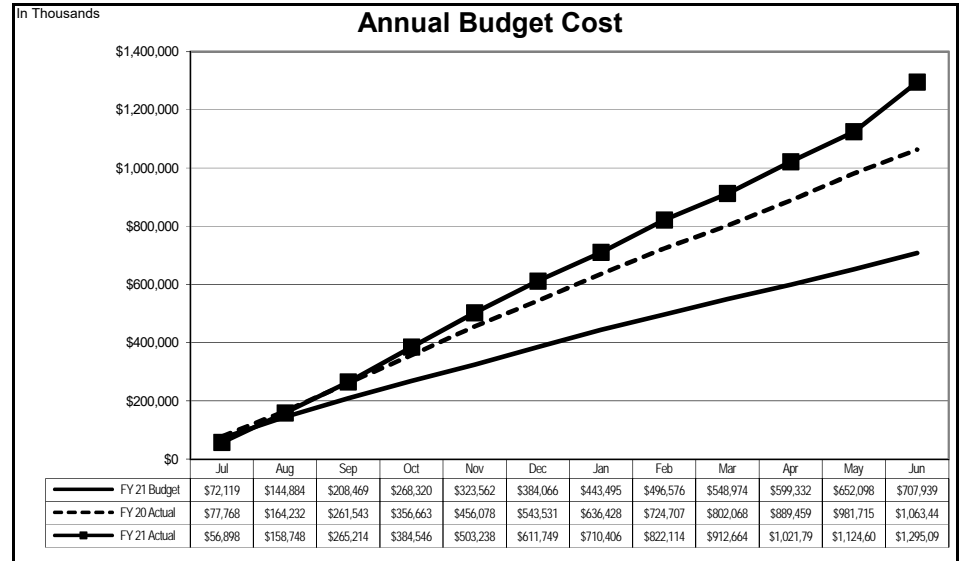
Darryl Ramirez was promoted to Operator Technician - Lead Person (Relief) at the Geothermal Facility on June 20, 2021. Darryl started at NCPA in 2019 as an Operator Technician III. Previously, Darryl spent nine years as a control room Operator Lead and three years as a Plant Maintenance Mechanic for Coso Operating Company. During his time at Coso he gained extensive knowledge in geothermal field operations and transitioned seamlessly to an Operator Technician here at NCPA.

### **Separations:**

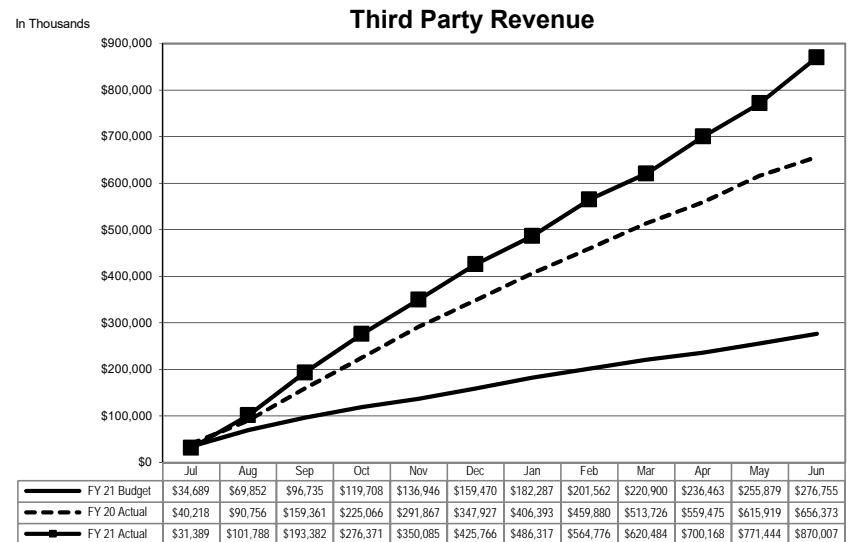
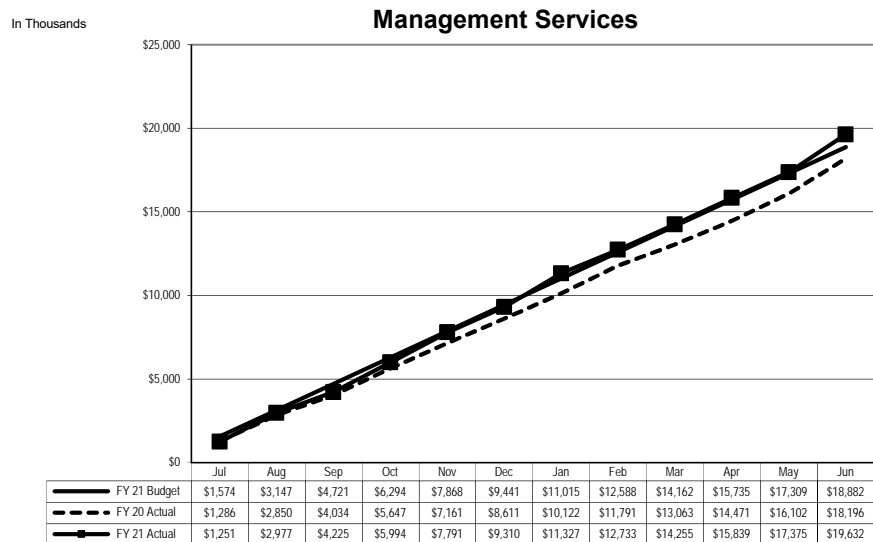
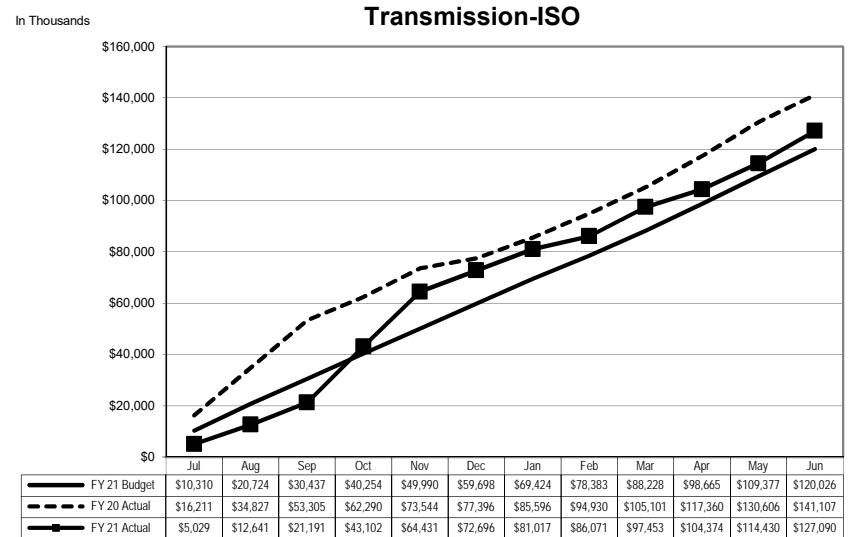
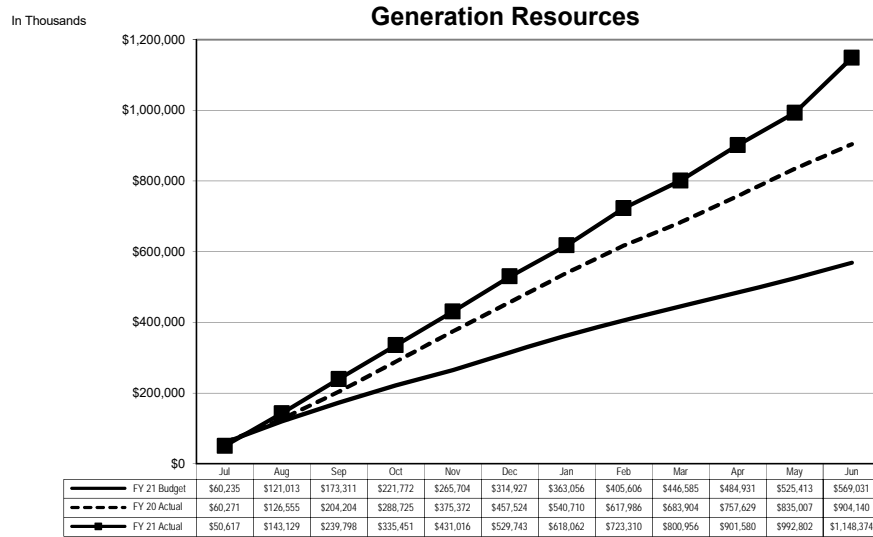
Devin Hoberg retired from his position as a Mechanic Operator – Lead with the Geothermal Maintenance department on July 15, 2021. The Agency thanks Devin for over 32 years of service with NCPA and wishes him all the best in retirement!

**Annual Budget  
2020-2021 Fiscal Year To Date  
As of June 30, 2021**

In Thousands	Program			
	Annual Budget	Actual	Under(Ovr) Budget	YTD % Remaining
<b>GENERATION RESOURCES</b>				
<b>NCPA Plants</b>				
Hydroelectric	54,260	53,779	\$ 481	1%
Geothermal Plant	35,561	38,553	(2,991)	-8%
Combustion Turbine No. 1	7,884	6,244	1,640	21%
Combustion Turbine No. 2 (STIG)	7,989	9,978	(1,989)	-25%
Lodi Energy Center	92,551	88,732	3,819	4%
	198,246	197,286	960	0%
<b>Member Resources - Energy</b>	60,056	62,620	(2,565)	-4%
<b>Member Resources - Natural Gas</b>	2,442	2,673	(231)	-9%
<b>Western Resource</b>	29,870	29,151	719	2%
<b>Market Power Purchases</b>	27,423	36,293	(8,870)	-32%
<b>Load Aggregation Costs - ISO</b>	250,995	819,142	(568,147)	-226%
<b>Net GHG Obligations</b>	-	1,210	(1,210)	
	569,031	1,148,374	(579,343)	-102%
<b>TRANSMISSION</b>				
Independent System Operator	120,026	127,090	(7,063)	-6%
<b>MANAGEMENT SERVICES</b>				
<b>Legislative &amp; Regulatory</b>				
Legislative Representation	2,180	1,628	552	25%
Regulatory Representation	715	733	(17)	-2%
Western Representation	716	640	76	11%
Customer Programs	477	404	73	15%
	4,088	3,404	684	17%
<b>Judicial Action</b>	460	877	(417)	-91%
<b>Power Management</b>				
System Control & Load Dispatch	6,766	6,370	395	6%
Forecasting & Prescheduling	2,934	2,857	78	3%
Industry Restructuring	425	408	17	4%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,000	952	48	5%
Gas Purchase Program	82	66	16	19%
Market Purchase Project	117	96	21	18%
	11,324	10,749	575	5%
<b>Energy Risk Management</b>	230	200	30	13%
<b>Settlements</b>	924	731	193	21%
<b>Integrated System Support</b>	266	146	120	45%
<b>Participant Pass Through Costs</b>	1,591	1,490	101	6%
<b>Support Services</b>	-	2,034	(2,034)	
	18,882	19,632	(750)	-4%
<b>TOTAL ANNUAL BUDGET COST</b>	707,939	1,295,096	(587,156)	-83%
<b>LESS: THIRD PARTY REVENUE</b>				
Plant ISO Energy Sales	105,258	124,016	(18,758)	-18%
Member Resource ISO Energy Sales	26,422	31,809	(5,387)	-20%
Member Owned Generation ISO Energy Sales	69,679	89,884	(20,205)	-29%
Customer Owned Generation ISO Energy Sales	-	98	(98)	
NCPA Contracts ISO Energy Sales	18,915	25,170	(6,255)	-33%
Western Resource ISO Energy Sales	17,481	24,692	(7,212)	-41%
Load Aggregation Energy Sales	-	388,907	(388,907)	
Ancillary Services Sales	3,988	9,481	(5,493)	-138%
Transmission Sales	110	110	-	0%
Western Credits, Interest & Other Income	34,902	203,674	(168,772)	-484%
	276,755	897,842	(621,087)	-224%
<b>NET ANNUAL BUDGET COST TO PARTICIPANTS</b>	431,185	397,254	\$ 33,930	8%

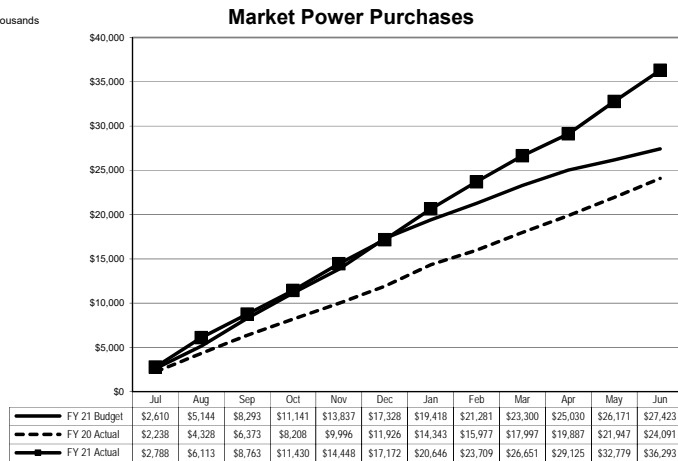
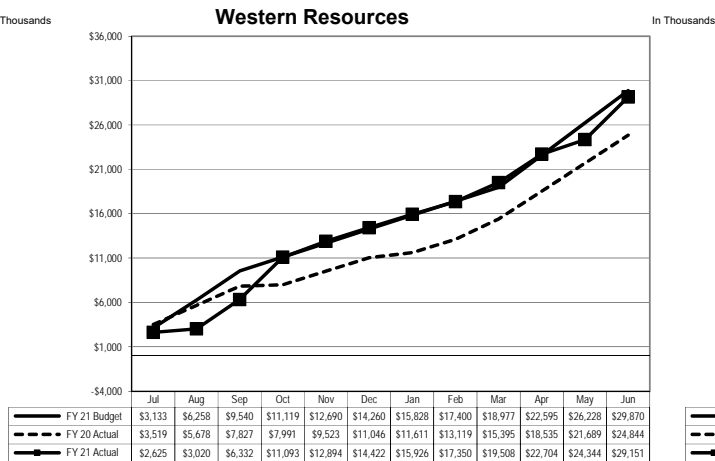
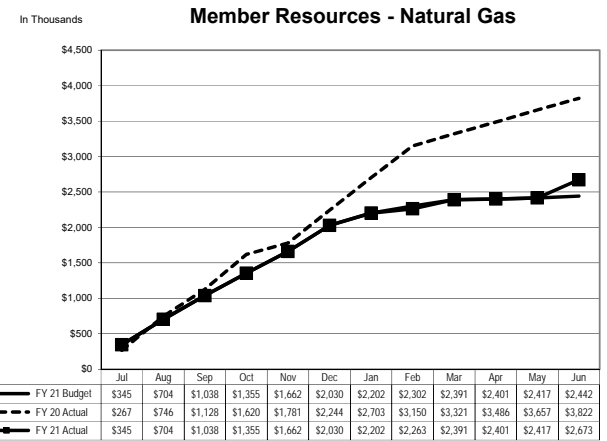
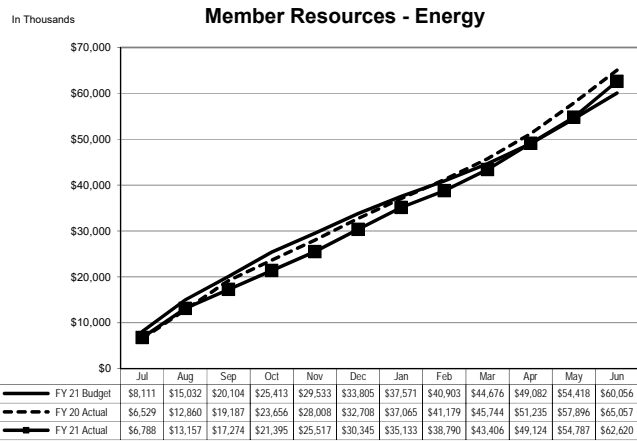
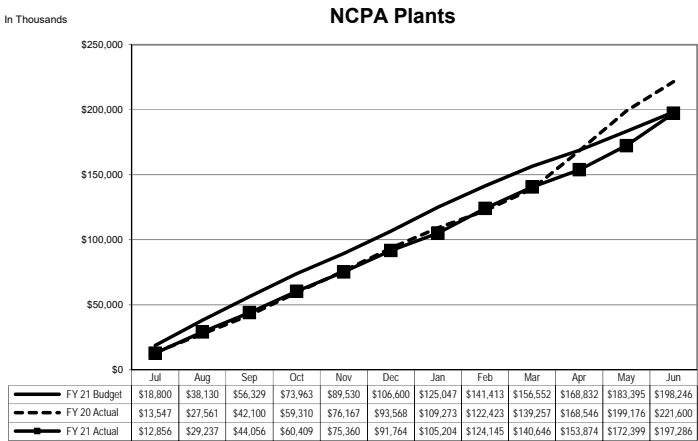


## Annual Budget Budget vs. Actual By Major Area As of June 30, 2021



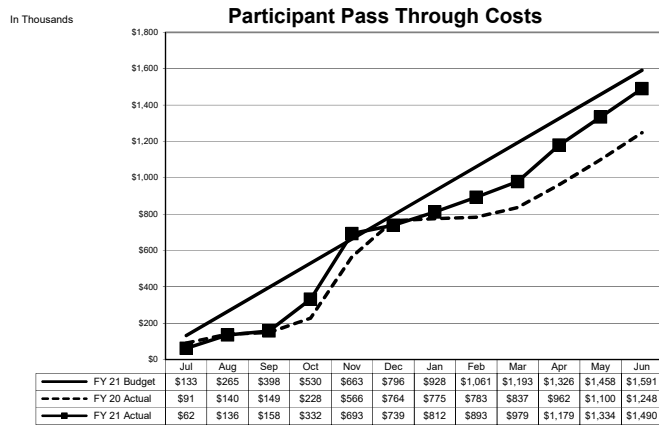
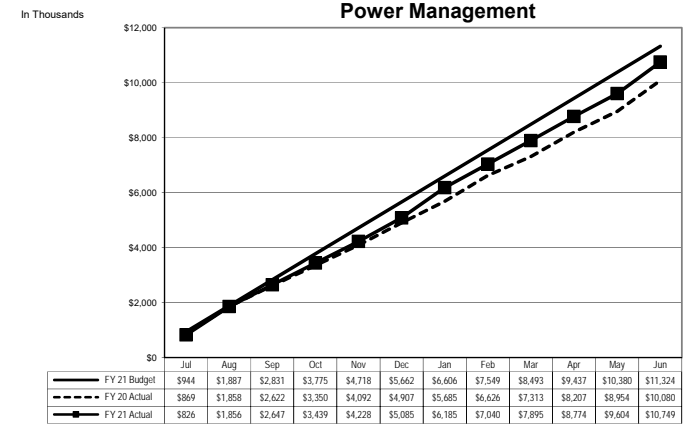
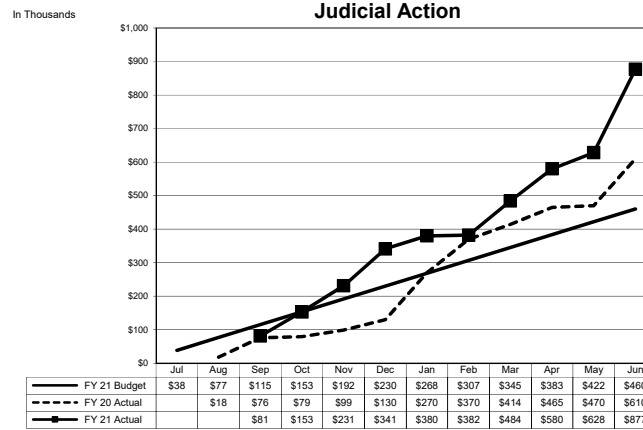
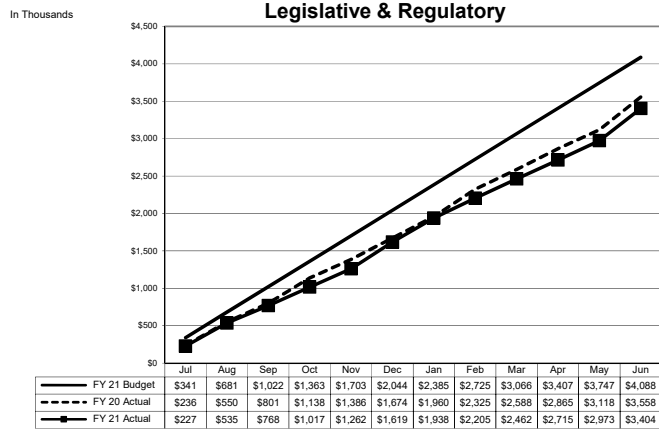
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

## Annual Budget Cost Generation Resources Analysis By Source As of June 30, 2021



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

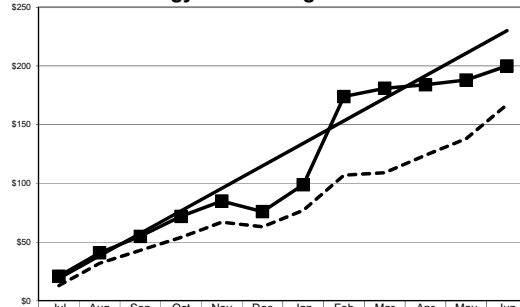
## Annual Budget Cost Management Services Analysis By Source As of June 30, 2021



**Annual Budget Cost  
Management Services Analysis By Source  
As of June 30, 2021**

In Thousands

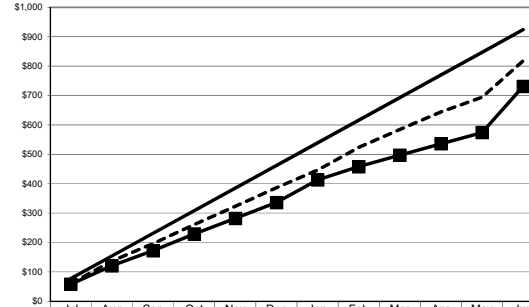
**Energy Risk Management**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 21 Budget	\$19	\$38	\$58	\$77	\$96	\$115	\$134	\$153	\$173	\$192	\$211	\$230
FY 20 Actual	\$13	\$32	\$43	\$54	\$67	\$63	\$77	\$107	\$109	\$124	\$138	\$167
FY 21 Actual	\$21	\$41	\$55	\$72	\$85	\$76	\$99	\$174	\$181	\$184	\$188	\$200

In Thousands

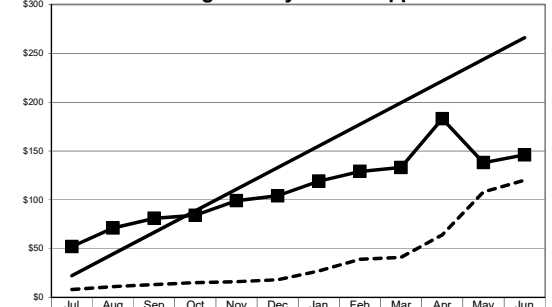
**Settlements**



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 21 Budget	\$77	\$154	\$231	\$308	\$385	\$462	\$539	\$616	\$693	\$770	\$847	\$924
FY 20 Actual	\$60	\$137	\$196	\$261	\$323	\$386	\$446	\$523	\$584	\$644	\$694	\$818
FY 21 Actual	\$58	\$121	\$172	\$229	\$282	\$336	\$413	\$458	\$497	\$536	\$574	\$731

In Thousands

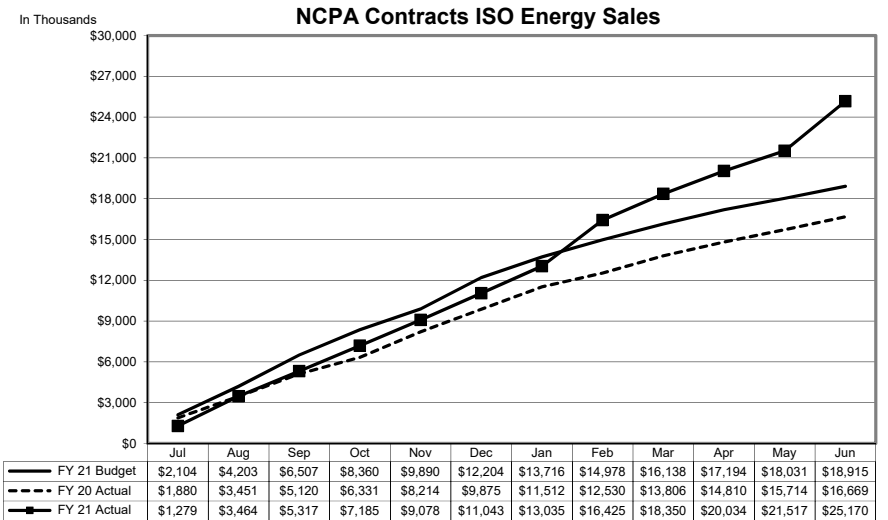
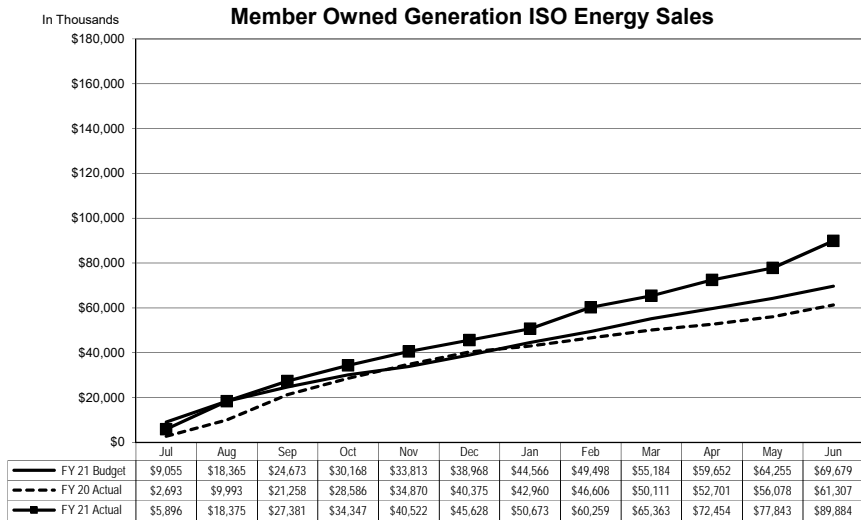
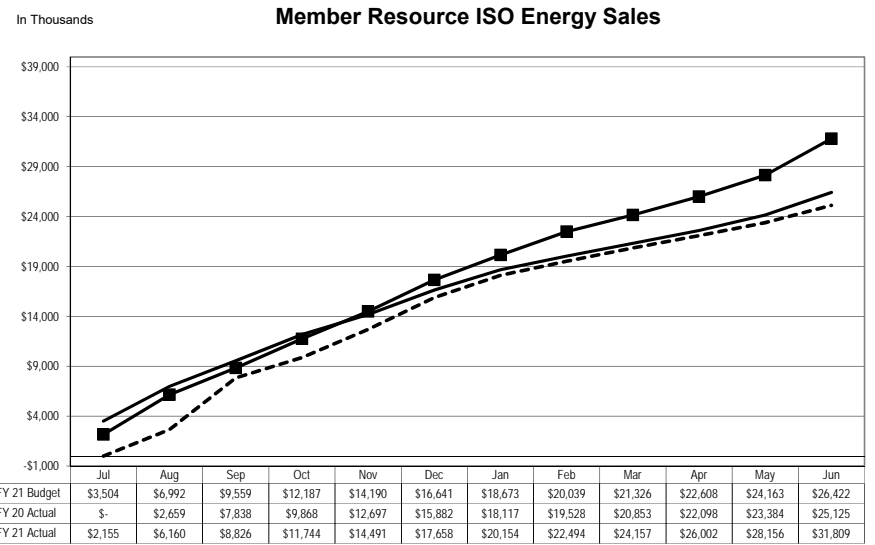
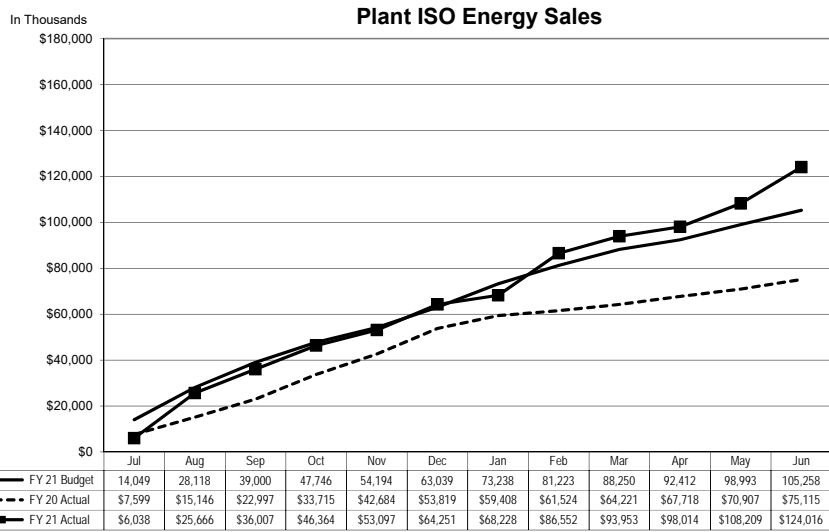
**Integrated Systems Support**



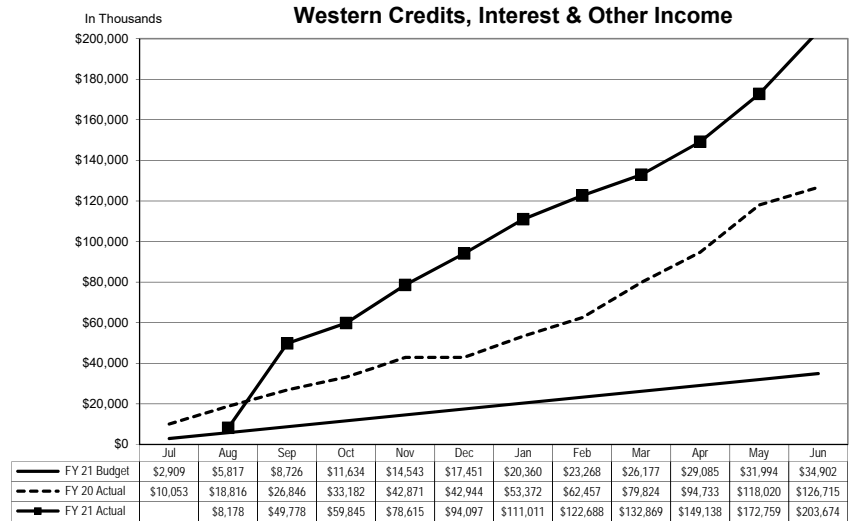
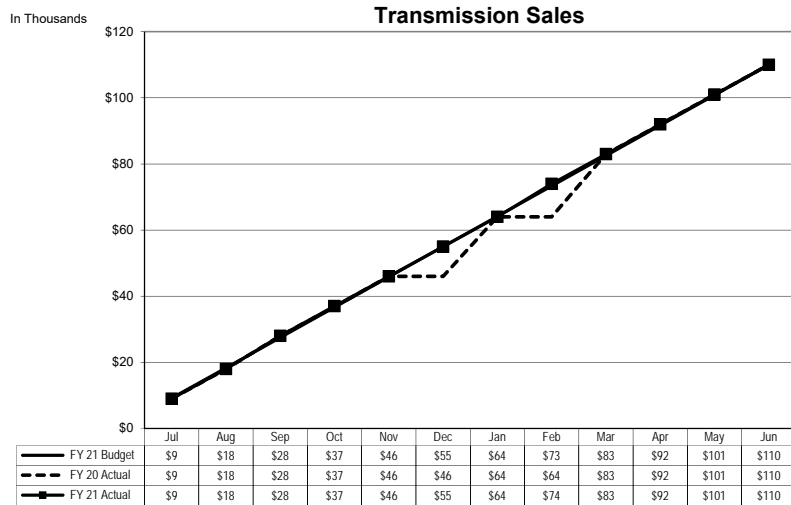
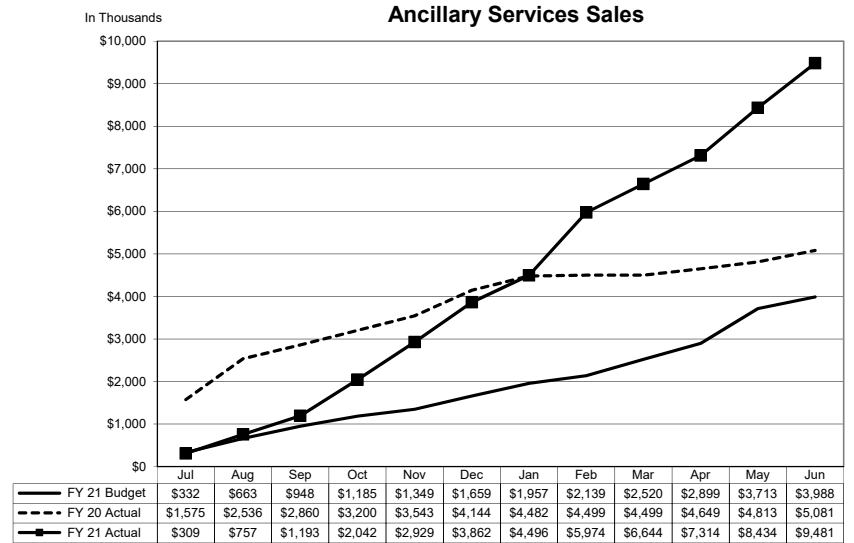
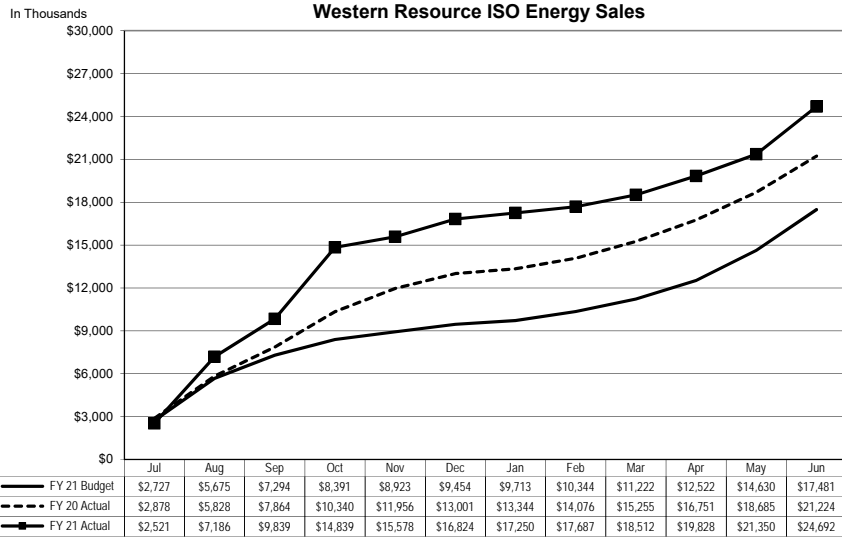
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 21 Budget	\$22	\$44	\$67	\$89	\$111	\$133	\$155	\$177	\$200	\$222	\$244	\$266
FY 20 Actual	\$8	\$11	\$13	\$15	\$16	\$18	\$27	\$39	\$41	\$64	\$108	\$120
FY 21 Actual	\$52	\$71	\$81	\$84	\$99	\$104	\$119	\$129	\$133	\$183	\$138	\$146



**Annual Budget Cost  
Third Party Revenue Analysis By Source  
As of June 30, 2021**



**Annual Budget Cost  
Third Party Revenue Analysis By Source  
As of June 30, 2021**



**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of June 30, 2021**

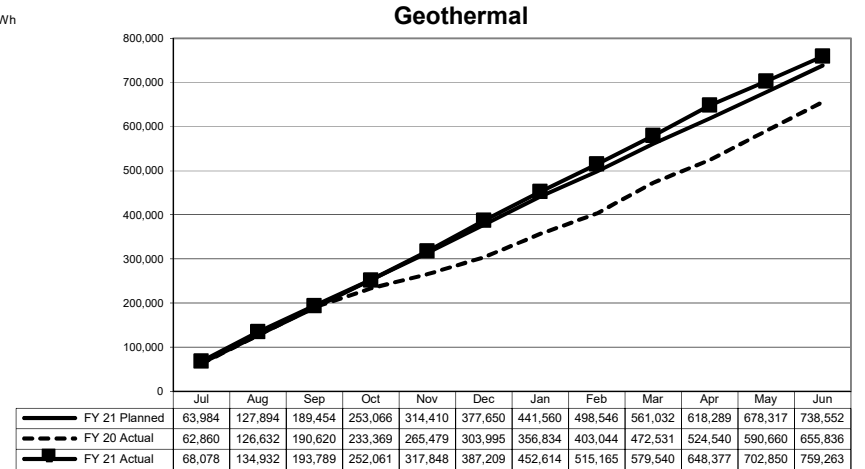
**Generation Cost Analysis**

\$ in thousands

	Geothermal				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
	Routine O & M	\$ 19,252	\$ 19,197	\$ 25.28	\$ 55
Capital Assets/Spare Parts Inventories	2,585	5,014	6.60	(2,429)	-94%
Other Costs	8,239	8,034	10.58	205	2%
CA ISO Charges	534	1,357	1.79	(823)	-154%
Debt Service	4,950	4,950	6.52	-	0%
Annual Budget	35,561	38,553	50.78	(2,991)	-8%
Less: Third Party Revenue					
Interest Income	382	145	0.19	237	62%
ISO Energy Sales	25,811	32,168	42.37	(6,358)	-25%
Ancillary Services Sales	-	-	-	-	-
Effluent Revenues	750	2,174	2.86	(1,424)	-190%
Misc	113	1,226	1.61	(1,113)	-986%
	27,056	35,714	47.04	(8,658)	-32%
Net Annual Budget Cost to Participants	\$ 8,506	\$ 2,839	\$ 3.74	\$ 5,667	67%
Net Generation--MWh @ Meter	738,552	759,263			
\$/MWh (A)	\$ 4.81	\$ (2.78)			

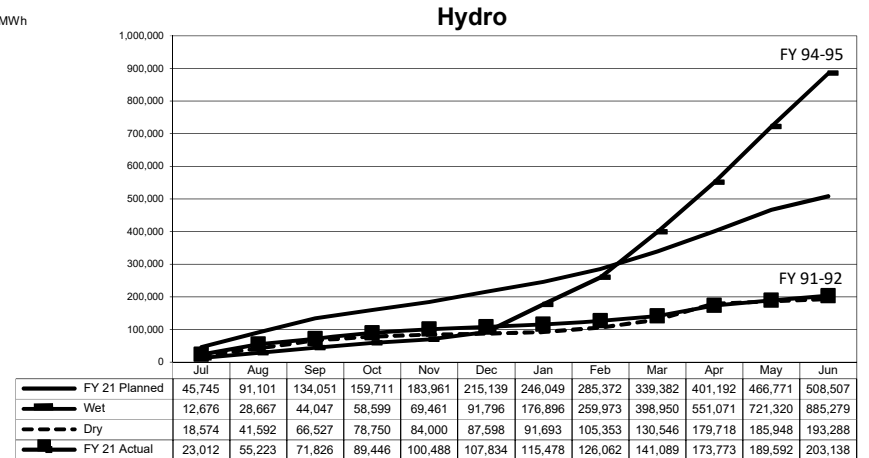
**MWhs Generated**

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
	Routine O & M	\$ 9,570	\$ 8,652	\$ 42.59	\$ 918
Capital Assets/Spare Parts Inventories	365	4,632	22.80	(4,267)	-1170%
Other Costs	8,323	3,921	19.30	4,402	53%
CA ISO Charges	2,615	3,187	15.69	(571)	-22%
Debt Service	33,388	33,388	164.36	-	0%
Annual Budget	54,260	53,779	264.74	481	1%
Less: Third Party Revenue					
Interest Income	670	182	0.90	488	73%
ISO Energy Sales	22,147	18,316	90.17	3,831	17%
Ancillary Services Sales	2,276	4,609	22.69	(2,333)	-102%
Misc	-	-	-	-	-
	25,094	23,107	113.75	1,986	8%
Net Annual Budget Cost to Participants	\$ 29,167	\$ 30,672	\$ 150.99	\$ (1,505)	
Net Generation--MWh @ Meter	508,507	203,138			
\$/MWh (A)	\$ (8.30)	\$ (13.37)			

In MWh



Footnotes:

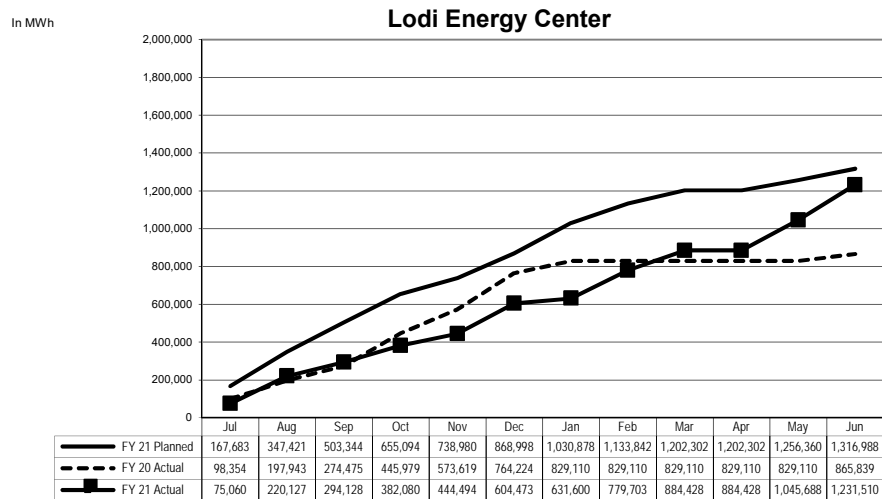
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of June 30, 2021**

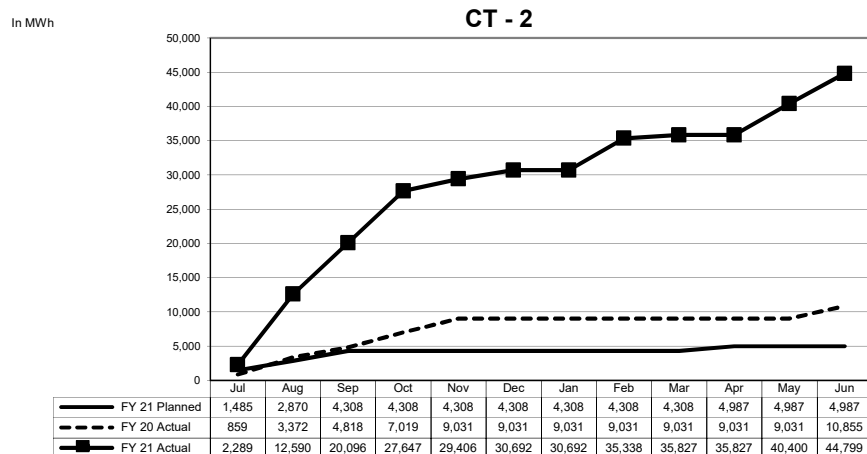
**Generation Cost Analysis**

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 14,463	\$ 10,331	\$ 8.39	\$ 4,132	29%
Fuel	32,956	36,516	29.65	(3,560)	-11%
CA ISO Charges and Energy Purchases	3,831	3,031	2.46	800	21%
Capital Assets/Spare Parts Inventories	2,906	4,103	3.33	(1,197)	-41%
Other Costs	12,372	8,728	7.09	3,644	29%
Debt Service	26,024	26,024	21.13	-	0%
Annual Budget	92,551	88,732	72.05	3,819	4%
Less: Third Party Revenue					
Interest Income	386	254	0.21	131	34%
ISO Energy Sales	55,590	65,013	52.79	(9,422)	-17%
Ancillary Services Sales	1,712	4,009	3.26	(2,297)	-134%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	8,463	-	-	8,463	100%
Misc	-	1,198	0.97	(1,198)	0%
	66,151	70,474	57.23	(4,323)	-7%
Net Annual Budget Cost to Participants	\$ 26,400	\$ 18,258	\$ 14.83	\$ 8,142	31%
Net Generation--MWh @ Meter	1,316,988	1,231,510			
\$/MWh (A)	\$ 0.29	\$ (6.31)			

**MWhs Generated**



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,584	\$ 1,875	\$ 41.86	\$ (292)	-18%
Fuel and Pipeline Transport Charges	910	2,246	50.14	(1,336)	-147%
Capital Assets/Spare Parts Inventories	37	4	0.08	33	90%
Other Costs	593	607	13.55	(15)	-2%
CA ISO Charges	40	419	9.36	(379)	-939%
Debt Service	4,826	4,826	107.73	-	0%
Annual Budget	7,989	9,978	222.72	(1,989)	-25%
Less: Third Party Revenue					
Interest Income	109	41	0.92	68	62%
ISO Energy Sales	399	4,474	99.86	(4,075)	-1022%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,821	1,241	27.70	580	32%
GHG Allowance Credits	43	-	-	43	100%
Misc	-	-	-	-	0%
	2,371	5,756	128.48	(3,385)	-143%
Net Annual Budget Cost to Participants	\$ 5,618	\$ 4,222	\$ 94.24	\$ 1,396	25%
Net Generation--MWh @ Meter	4,987	44,799			
\$/MWh (A)	\$ 158.75	\$ (13.48)			



**Footnotes:**

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

**Annual Budget  
NCPA Generation Detail Analysis By Plant  
As of June 30, 2021**

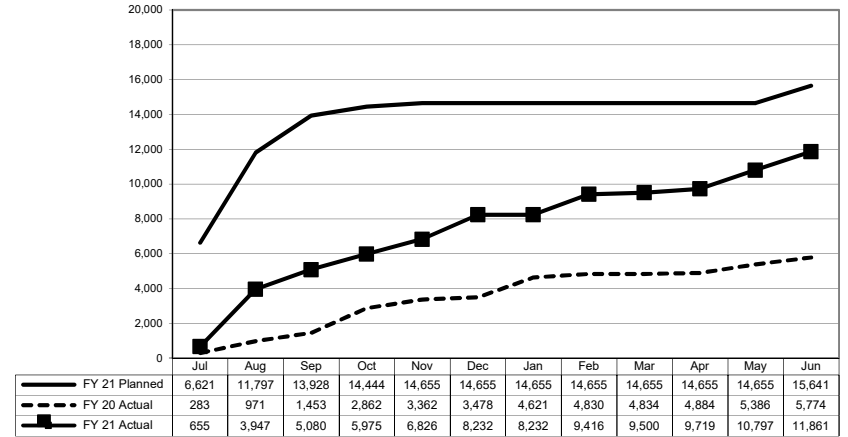
**Generation Cost Analysis**

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,320	\$ 2,304	\$ 194.26	\$ 16	1%
Fuel and Pipeline Transport Charges	937	1,029	86.75	(92)	-10%
Capital Assets/Spare Parts Inventories	3,667	1,404	118.35	2,263	62%
Other Costs	866	809	68.23	56	7%
CA ISO Charges	94	698	58.82	(604)	-642%
Debt Service	-	-	-	-	-
Annual Budget	7,884	6,244	526.40	1,640	21%
Less: Third Party Revenue					
Interest Income	-	53		(53)	
ISO Energy Sales	1,311	4,045	341.05	(2,734)	-208%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	16	1.36	(16)	0%
	1,311	4,115	342.41	(2,803)	-214%
Net Annual Budget Cost to Participants	\$ 6,572	\$ 2,129	\$ 179.49	\$ 4,443	68%
Net Generation--MWh @ Meter	15,641	11,861			
\$/MWh (A)	\$ 420.19	\$ 179.49			

**MWhs Generated**

In MWh

**CT - 1**



Footnotes:

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