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BUSINESS PROGRESS REPORT

2021
January

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Generation Costs & Reliability

Combustion Turbine Project

Unit Operation for December 2020

Unit	Availability		Production			Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	499.4	MWh	CAISO / CAISO
	100.0 %	100.0 %	Unit 2	428.8	MWh	
Curtailments, Outages, and Comments:						
Unit 1:		Normal operation.				
Unit 2:		Normal operation.				
Unit	Availability		Production			Reason for Run
CT1 Lodi	100.0%		495.8 MWh			CAISO
Curtailments, Outages, and Comments:						
Normal operation.						
Unit	Availability		Production			Reason for Run
CT2 STIG	99.4%		1,253.4 MWh			CAISO
Curtailments, Outages, and Comments:						
12/16 @ 1:15 - 6:00: Fuel Insufficiency						
Unit	Availability		Production			Reason for Run
LEC	100.0%		159,971 MWh			CAISO
Curtailments, Outages, and Comments:						
Normal Operations.						

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for December 2020

Unit	Availability	Net Electricity Generated/Water Delivered	Out-of-Service/Descriptors
Unit 1	100 %	20,002 MWh	U1 had no outages for the month
Unit 2	100 %	*21,047 MWh	U2 had no outages for the month
Unit 3	N/A %	N/A	Unit 3 remains out of service.
Unit 4	100 %	30,049 MWh	U4 had no outages for the month
Southeast Geysers Effluent Pipeline	48 %	91.7 mgallons	Average flow rate: 2,099 gpm
Southeast Solar Plant	N/A	10,299 KWh	Year-to-date KWh: 3,184,659
Bear Canyon Pump Station Zero Solar	N/A	51,243 KWh	Year-to-date KWh: 4,598,696

* Accounts for an additional 857 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for December 2020

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	100%	5342 MWh	CV Unit 1 – No Outages
Collierville Unit 2	96.34%	1160 MWh	CV Unit 2 was out of service on 12/06/20 to 12/7/20 from 1051 to 1403 for 230 kV Breaker Trouble.
Spicer Unit 1	100%	.72 MWh	NSM1- No Outages
Spicer Unit 2	100%	716 MWh	NSM2- No Outages
Spicer Unit 3	98.9%	127 MWh	NSM3 was out of service on 12/08/20 from 0756 to 1605 for Generator Inboard Bearing noise investigation.

Operations & Maintenance Activities:

- CMMS work orders
- Held Annual EAP Coordination Meeting
- Conducted EAP phone drill
- Submitted all required documents to FERC for EAP
- Project 11563 Security Plan Exercise
- Submitted Project 11563 DSSMR's to FERC and DSOD
- Submitted Security Plan/Assessment certification to FERC
- Issued RFP for Project Assessment Project for 2409/11563
- Awarded Part 12 IC contract for Project 11563
- Reviewed McKays Sediment Removal BODR for finalization

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

- There were no Cal OSHA Recordable, Lost Time, or vehicle accidents in the month of December.
- 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 December 19, 2020.
- 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.

December 2020 Generation Services Safety Report

	Hydro	GEO	CT Group *	NCPA HQ **
Cal OSHA Recordable (this month)	0	0	0	0
Cal OSHA Recordable (calendar year)	1	0	0	0
Days since Recordable	69	879	2,084	3,068
Work Hours Since Last Recordable	6,260	183,246	312,005	2,618,709
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	4,818	1,947	9,988	6,081
Work Hours without LTA	438,831	400,221	722,549	2,240,727
Vehicle Incident (month)	0	0	0	0
Vehicle Incident (calendar year)	1	0	1	0

* CT Group: Combines CT-1, CT-2 and LEC Operations

** NCPA HQ: Roseville employees at the Main Office

Data originates from OSHA logs, HR records and payroll information.
Days and Hours are calculated through pay period ended December 19, 2020.

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 2020 Data

	December 2020		Calendar Year 2020	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	318.8 12/16 @ 1800	194,264	467.45 8/14 @ 1700	2,275,007
SVP	481.07 12/1 @ 1800	328,537	586.3 8/14 @ 1700	3,850,854
MSSA	795.83 12/1 @ 1800	522,801	1053.75 8/14 @ 1700	6,125,861

Last Year 2019 Data*

	December 2019		Calendar Year 2019	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	335.63 12/16 @ 1900	197,077	478.77 8/15 @ 1700	2,332,414
SVP	477.61 12/12 @ 1400	313,542	587.78 6/11 @ 1600	3,729,335
MSSA	798.65 12/16 @ 1800	510,619	1057.99 8/15 @ 1700	6,061,749

* Last year's data added for comparison purposes only

System Peak Data

	All Time Peak Demand	2020 Peak Demand
NCPA Pool	517.83 MW on 7/24/06 @ 1500	467.45 8/14 @ 1700
SVP	587.78 MW on 6/11/19 @ 1600	586.3 8/14 @ 1700
MSSA	1070.79 MW on 9/1/17 @ 1700	1053.75 8/14 @ 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.

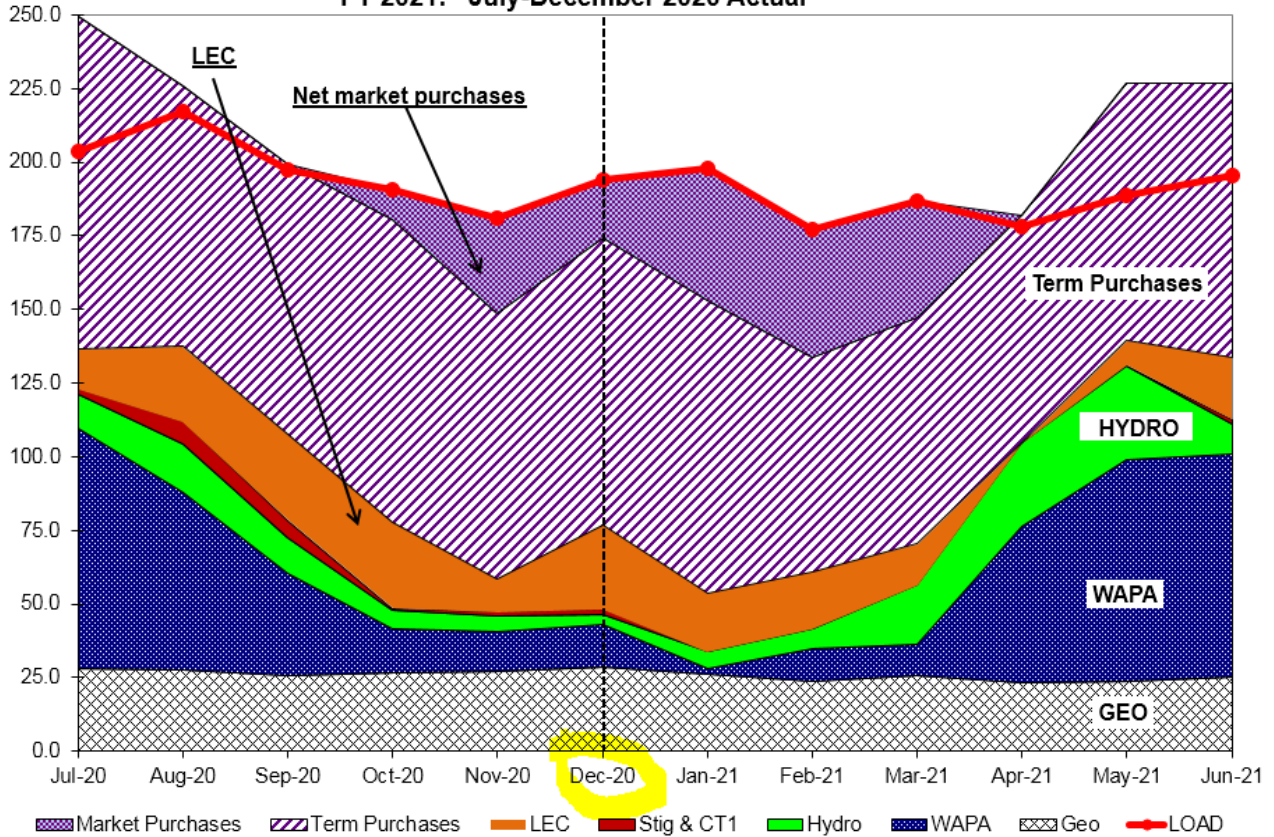
NCPA Deviation Band Performance		
	December 2020	Calendar Year 2020
MSSA % Within the Band	99.16%	98.06%

- NCPA continues to operate in a 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 an Operating Instruction for all VER resources to not exceed their market DOT until further notice at 0800, 12/13/2020.
- CAISO terminates the previous Operating Instruction for all VER resources not to exceed their market DOT at 1604, 12/13/2020.
- CAISO issued a Transmission Emergency notification (202002509) at 0751, 12/13/2020 due to open loop conditions in ZP26.
- CAISO cancels the Transmission Emergency notification (202002511) at 1420, 12/13/2020.
- NCPA issued an Everbridge PG&E Public Safety Power Shutoff (PSPS) notification on the following dates:
 - 12/4/2020, zones 3-6, 8
 - 12/6/2020, zone 8

Pooling, Portfolio Planning & Forecasting

- NCPA Pool load during December 2020 was 194,203 MWh, or 98.4% of forecast despite temperature variations in addition to uneven demand resulting from Covid mandates and restrictions. Pool load during January 2021 may continue slightly below normal compared to the same period a year ago, as weather-related heating demand was light during the first half of the month.
- Lodi Energy Center (LEC) produced 28,768 MWh for the pool during December, committed 31 of the 31 days. Despite the current volatile market pricing structure, LEC was projected to generate 20,128 MWh for the pool during January 2021, though rising gas prices may serve to reduce economic generation from this earlier forecast by shortening daily run times.
- During December 2020, 4.56" of rain was recorded at the Big Trees gauge. Average December Big Trees precipitation is 9.58".
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been increased from \$90/MWh to \$150/MWh.
- NSMR storage as of December 31, 2020 was at 70,977 acre feet. The historical average NSMR storage at the end of December is 80,489 acre feet. As of January 13, 2021 NSMR storage is 68,945 acre feet. The current NCPA Pool share of NSMR storage is 35,385 acre feet.
- Combined Calaveras Project generation for the Pool in December 2020 totaled 3.8 GWh, down from 5.3 GWh in November 2020. The Pool's 3.8 GWh in December 2020 was less than the pre-month forecast of 5.6 GWh.
- Western Base Resource (BR) deliveries for the Pool during December 2020 were 14,102 MWh, with Displacement program energy on pause. Energy received was substantially higher than the pre-month forecast, with hydro resources once again critical during the month's weather events. Western's forecast for the pool's share of January 2021 generation drops to 1,888 MWh.
- The PG&E Citygate gas index averaged \$3.565/MMBtu for delivery on January 12, 2021, just below the average PG&E gas price during December of \$3.606/MMBtu. Gas prices have generally increased this year as production lags until associated gas from oil drilling returns. At the same time, power burn and LNG feed gas demand has increased. The January 2021 PG&E Citygate Bidweek price is \$3.675/MMBtu, down 3 cents from the December Bidweek price and far different from March's \$2.335 as the era of gas oversupply appears to be over.
- Day-Ahead NP15 electricity prices averaged \$42.78/MWh (HLH) and \$36.62 (LLH) during December 2020, with evening ramp hour prices reaching only as high as \$81.86 on one occasion at TH_NP15.

**NCPA POOL RESOURCES
FY 2021: July-December 2020 Actual**



NCPA Pool Loads & Resources Value Summary									
	Peak and Energy Summary Dec-20				Estimated Production Costs		Cost of Serving Demand		
	Coincident Peak (MW)	Total MWh	Pre-Month Forecast Values	Avg. MW	NCPA Pool Cost/Revenue (Estimate)	Variable Cost (\$/MWh)	Totals	Avg (\$/MWh)	
Demand	318.8	194,203	197,431	261.0	N/A	N/A			
WAPA	-	14,102	1,887	19.0	\$ 909,162	\$ 64.47	\$ 8,167,767	\$ 42.06	
Geothermal	-	28,713	26,347	38.6	545,538	19.00			
Hydro	-	3,800	5,858	5.1	22,800	6.00			
Stig & CTs	-	1,573	700	2.1	94,300	59.95			
LEC	-	28,768	25,644	38.7	931,494	32.38			
Contracts	-	97,186	88,996	130.6	5,185,420	53.36	\$ 8,574,497	\$ 44.15	
Market - Net	318.8	20,062	47,999	27.0	828,355	41.29			
(Net Sales = Negative)									
Net Total	318.8	194,203	197,431	261.0	\$ 8,517,069	\$ 44.15			

Monthly Market Summary						
	Pool Energy (MWh)	HLH Avg MCP (\$/MWh)	Avg Variable Cost of Pool Generation (\$/MWh)	Forward Prices (EOX NP15 HLH Ask Prices)		
				NP15 12/1/2020 (\$/MWh)	1/12/2021 (\$/MWh)	
Jan-20	191,771	\$ 32.76	\$ 39.71	Jan-21	\$ 45.60	\$ 39.48
Feb-20	177,169	\$ 27.58	\$ 46.65	Feb-21	41.90	41.48
Mar-20	181,339	\$ 27.90	\$ 40.59	Mar-21	37.54	34.93
Apr-20	165,033	\$ 22.78	\$ 35.05	Q2 2021	\$ 31.25	\$ 33.27
May-20	178,601	\$ 20.85	\$ 37.53	Q3 2021	53.21	62.46
Jun-20	191,530	\$ 26.29	\$ 36.98	Q4 2021	46.32	47.19
Jul-20	203,610	\$ 27.80	\$ 37.25	CY2021	\$ 43.11	\$ 45.39
Aug-20	216,986	\$ 59.74	\$ 41.08	CY2022	41.63	43.11
Sep-20	195,756	\$ 46.66	\$ 45.40	CY2023	38.60	39.34
Oct-20	216,986	\$ 59.74	\$ 45.47	CY2024	37.25	36.93
Nov-20	181,145	\$ 40.43	\$ 44.27	CY2025	36.68	35.98
Dec-20	194,203	\$ 42.06	\$ 44.15	CY2026	36.56	35.71

NOTES TO SUMMARY TABLE:

- Peak and Energy Summary:** Monthly generation summary of Coincidental Peak (hour in which pool demand peaked), total MWh for the month, and pre-month forecasted values for report period.
- Generation totals are for POOL SHARE of the projects.
- Hydro totals include Collierville and Spicer generation.
- Estimated Production Costs:** Fixed project costs not included except for WAPA, where total month's project costs are used to calculate the average unit cost.
- STIG and CT costs include forward natural gas and basis hedge transactions.
- STIG & CT costs reflect \$2.60 and \$1.62/MWH variable O&M costs per 6-12-06 GSCA.
- Cost of Serving Demand:** Compares price of meeting total monthly demand with (1) Hourly pool market clearing price; (2) Variable cost of pool gen. Pool Gen is sum of estimated costs divided by sum of generation.

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 March 2021:
 - Monthly System Resource Adequacy Demonstration (filed January 15, 2021)
 - Monthly Supply Plan (filed January 15, 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:

Market Enhancements for Summer 2021 Needs Initiative

- CAISO kicked off the Summer 2021 Needs Initiative as a result of summer 2020 heat wave events. CAISO and stakeholders will review export and load scheduling priorities, dispatch of reliability demand response resources and other out of market tools, requirements for storage resources during tight system conditions, cost recovery provisions for hourly block imports during tight system conditions, short-term scarcity price enhancements, and EIM coordination. CAISO propose to make any changes effective June 2021.
- In comments, NCPA agreed that CAISO should look at RDRR and distributed generation dispatch and how it affected real time pricing and impacted NCPA members that responded to calls to turn on back up supply that is not registered with CAISO. NCPA also supported the concept that internal gen should be prioritized above exports not backed with non-RA internal supply. NCPA cautioned that CAISO should avoid a hasty roll out of multiple tweaks to its market since one of the main drivers of the August event was an undetected defect in a Residual Unit Commitment release that has since been rectified but is a clear example of the perils of market updates. NCPA's suggest that CAISO focus its limited time on a review of the results of out of market actions and update procedures to address any lessons learned.

Extended Day-Ahead Market

- This initiative has been put on hold pending Day Ahead Market Enhancements initiative development.
- CAISO published Bundle 1 Straw Proposal and held stakeholder meeting. Bundle 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

- Draft final proposal and 6th revised proposal published December 21, 2020.
- CAISO held four stakeholder meetings in early January to cover the content.
 - The initiative has been split into two phases. Phase 1 will include planned outage process enhancements, RA Import requirements, operationalizing storage, and backstop capacity procurement focused on CPM for local energy sufficiency. All changes planned outage process enhancement 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 outages submitted after T-45 day RA filings. NCPA will object to that change and begrudgingly support status quo. 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. We are still reviewing the operationalizing storage and CPM proposals.
 - Phase 2 includes unforced capacity evaluations, determining system RA requirements, system RA showing and sufficiency testing individual assessments, must offer obligations and bid insertion modifications, UCAP for local studies, backstop capacity procurement, more planned outage process enhancements, system RA showings and sufficiency testing portfolio assessment. 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 which is due for publication on Dec. 7, 2020.
 - 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
- Two 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)
 - Reliability Capacity: replaces RUC process used to address gaps between bid in demand and forecast demand.
- Implementation is set to fall 2022.

Transmission Access Charge Structure Enhancements

- CAISO has pushed the initiative back to Q4 2022 in the latest Policy Roadmap and Annual Plan. NCPA is drafting comments to request that it be brought back into 2021.
- 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 ¹ (MWh)	BR Delivered (MWh)	Difference (MWh)	Base Resource & Restoration Fund (\$)	Monthly Cost of BR ² (\$/MWh)	CAISO LMP Differential ³ (\$/MWh)	12-Mo Rolling Avg. Cost of BR ⁴ (\$/MWh)
Jul-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	-	(6,278)	\$909,162	\$ 144.83	\$ -	\$ 32.21
Feb-21	16,372	-	(16,372)	\$909,162	\$ 55.53	\$ -	\$ 32.70
Mar-21	26,497	-	(26,497)	\$909,162	\$ 34.31	\$ -	\$ 33.16
Apr-21	41,629	-	(41,629)	\$1,982,665	\$ 47.63	\$ -	\$ 34.65
May-21	74,036	-	(74,036)	\$1,982,665	\$ 26.78	\$ -	\$ 35.43
Jun-21	93,177	-	(93,177)	\$1,982,665	\$ 21.28	\$ -	\$ 35.50
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 14,102 MWh Base Resource (BR) energy in December 2020 for an estimated savings of \$11,205. There was zero MWh of Displacement Energy as the program is temporary suspended due to limited base resource availability forecast.
- Pool Members' total savings under Market Efficiency Enhancement Agreement (MEEA) for Pool Members was approximately \$11,205 in December 2020. The cumulative net MEEA savings for FY 2021 (July 2020 through December 2020) is about \$241,100.

2025 Base Resource Contract

- The contract service period begins January 1, 2025 and shall remain in effect through December 31, 2054, subject to prior termination. WAPA sent out the BR Contract electronically on September 15, 2020. Each entity will have six months to execute and return to WAPA by March 16, 2021.

CVPIA Restoration Fund

- On December 10, 2020 WAPA provided the Fiscal Year 2020 Restoration Fund Actuals Letter, which includes FY 2020 Mitigation and Restoration Actual Receipts. This is used to calculate power customer's Restoration Fund Obligations for FY 2022 (October 2021 through September 2022). Using Reclamation's draft CVPIA guidelines, NCPA estimated FY 2022's RF assessment for power customers to be around \$18.5 Million. WAPA will publish the initial Restoration Fund Letter to Power in September 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.
- TANC estimates (without ROE adjustment) a decrease in the HV TAC of \$0.3494/MWh and a decrease in PG&E's LV access charge of \$1.167/MWh for the period March 1, 2017 through February 28, 2018.
- Next Step: Reply briefs on ROE by Joint Intervenors is due by Feb 12.

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.

TO-20 Rate Case

- Interim rates will go into effect January 1, 2021.

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. Pending the outcome of the capacity discussion, NCPA and SVP will look at next steps. More updates will be provided to members as they become available.

Transmission Planning BPM Updated Modeling Data Submittal

- CAISO is requiring Generators to submit updated modeling data to ensure CAISO has current and accurate system information.
- NCPA has submitted updated data and power flow models for Hydro, all Geo, and all CT units. With the exception of New Spicer Meadows, all NCPA units are deemed compliant by the ISO. New Spicer modeling data is due the first quarter of 2022.

Stakeholder Transmission Asset Review (STAR) Process

- NCPA's objective in PG&E's Stakeholder Transmission Asset Review process is to participate and influence lower cost alternatives where possible, identify projects which may benefit members, and introduce Member Specific Projects.
- On December 1, 2020, PG&E submitted a 10-year capital plan to all stakeholders. The list included 1,596 total projects (equal to or greater than \$1M) and over 500 supporting documents (Project Authorizations/Business Cases).
- NCPA drafted stakeholder comments with more emphasis on projects which are in planning (i.e. not in construction phase), projects which fall under the "work requested by others" category, projects which are on hold due to CAISO or CPUC action, and projects which might be related to non-CAISO controlled facilities.
- Next step is for PG&E to reply to stakeholder comments and hold a stakeholder meeting by March 1, 2021.

Debt and Financial Management

- 2020 was an important yet tragic year. The coronavirus pandemic ravaged the global economy while governments implemented lockdown measures and injected unprecedented monetary and fiscal stimulus to try to immunize their pandemic-plagued economies. Fueled by monetary and fiscal support, financial markets demonstrated impressive resilience. Though the pandemic has ruptured the fabric of normalcy, optimism in the new year hinges on the success of a global vaccination program.
- The Federal Reserve ended the year by affirming its zero-rate monetary policy and its commitment that monetary policy will continue to support the economy. That support will continue until the recovery is complete and the economy achieves maximum employment and inflation consistent with the Fed's new 2% average over time. Market indicators are for short-term interest rates to stay near zero for the foreseeable future.
- The U.S. Treasury yield curve steepened modestly in December as rates on 10- and 30-year maturities rose by seven to eight basis points (bps) while shorter-term rates remained anchored near zero. As a reference, Hydroelectric's weekly reset rates on the variable rate bonds have ranged between 0.05 - 0.08% for December and January.
- The economic outlook remains uncertain as the pace and effectiveness of the global vaccine battles a major resurgence of virus cases headlining 2021 unknowns. While political turmoil adds to the unpredictability, remarkably the markets have largely discounted the downside. Underlying the recent low market volatility is confidence in the Fed will continue supporting economic stability and expansion.

Schedule Coordination Goals

Software Development

- New releases/completed projects
 - Sonoma Clean Power successfully integrated into the core NCPA applications for its January 1st, 2021 operating date
 - PCWA's transition into NCPA Deal Manager and Risk Manager System. Systems fully configured for PCWA
- New applications and enhancements under development
 - ABISS (Accounting, Budget, Information and Settlements System) is under development. It is a new Business Intelligence Reporting tool to provide financial information to both NCPA and members.
 - 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. RPS Reporting app Phase 1 is currently in user-acceptance testing.
 - LEC MSG development in MIDS and Pre-scheduler projected completion by Q2, 2021.
 - Wind Resource for East Bay Community Energy integration
 - Santa Clara's Central 40 Solar Resource integration

- IS is working with Accounting and its software consultant to enhance the financial reporting. Stakeholder sessions completed, awaiting preliminary assessment report from consultant.

Network

- Progress continues to be made upgrading staff to Windows 10 with over 98% of the Agency on the new Operating System. IS staff are working with individual departments to upgrade the few remaining Windows 7 machines and anticipate to be completed in the coming weeks.
- IS SCADA team has performed preliminary point testing in anticipation of bringing Central 40 Solar online in the first part of 2021.
- Operations and Support staff are working to migrate from the HQ Cisco core switch to a new Aruba stack for better performance and support. Majority of the core server infrastructure has been switched over to the new core and the systems team is wrapping up the final changes to reroute all communications.
- IS continues working with EBCE and technical contractors to further integration efforts with Altamont Wind. Due to technical delays at the site CAISO and NCPA point testing has been postponed until February 16th.
- Network upgrades for the business infrastructure has been completed at Geo. This was an effort to replace aging equipment that was no longer supported.

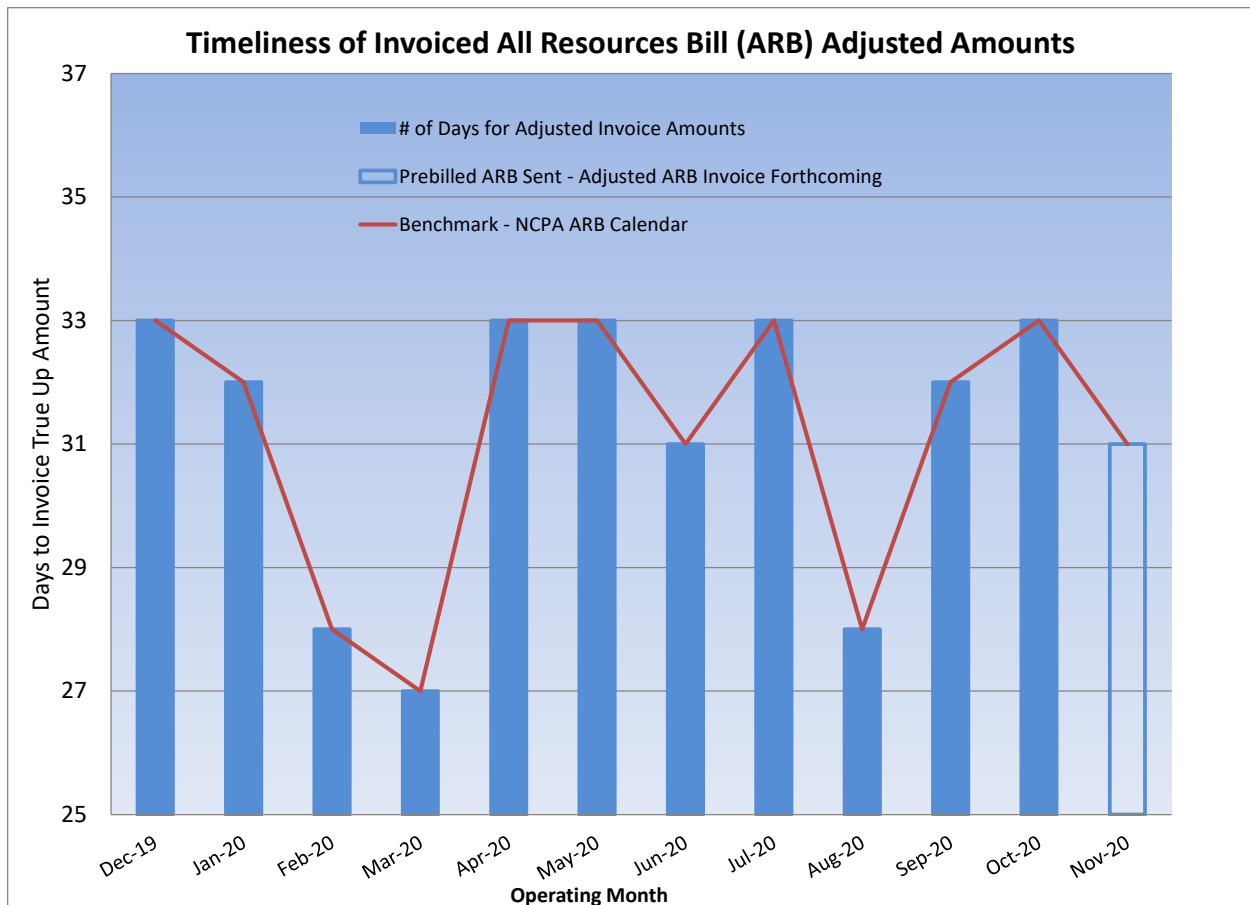
NCPA Bills & Settlements

Progress Against the Strategic Plan

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

The November 2020 NCPA All Resources Bill (ARB) monthly invoice sent to members on October 26, 2020 contains:

- November 2020 monthly pre-billed budget/forecast amounts;
- September 2020 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- August 2020 (2nd Adjustment) NCPA Project settlement true-up and T+12 business day recalculated CAISO settlement true-up allocations;
- June 2020 (3rd Adjustment) T+55 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- December 2019 (4th Adjustment) T+9 month recalculated CAISO settlement true-up allocations;
- February 2019 (5th Adjustment) T+18 month recalculated CAISO settlement true-up allocations;
- November 2017 (6th Adjustment) T+33 month recalculated CAISO settlement true-up;
- August 2017 (7th Adjustment) T+36 month CAISO settlement true-up;



Legislative & Regulatory

Political Arena State/Federal/Western Programs

Customer Programs Update

- NCPA Legislative and Regulatory Affairs released an RFP on December 15, 2020, to solicit proposals for Utility Physical Security Plan Evaluation Services. The RFP was issued in response to the CPUC's regulatory requirement for POUs to develop and independently evaluate a physical security plan by July 2021. Responses were due on January 15, 2021, and review of the eight proposals received is now underway. The expectation is for contracts to be in place, and ready for Members' use, in March 2021.

State Legislative Update

- The State Legislature returned to Sacramento on January 11 to commence the 2021-22 legislative session. COVID-19 protocols continue to be implemented, with most legislative staff working from home and in-person meetings prohibited at this time. The Legislature has until February 19 to introduce bills; NCPA is reviewing and analyzing newly introduced bills for potential impacts on NCPA and members and will engage with legislative offices accordingly.

- NCPA will be hosting virtual visits with its members and state legislative delegation, as part of a modified Capitol Day program. Topics covered will include energy affordability, reliability and resiliency, decarbonization, and wildfires.

Human Resources

Hires:

Stephen Lee joined the NCPA team on December 21, 2020, as our new Generation Services Engineer I. Stephen has spent the last three years as a Utilities Engineer at the California Public Utilities Commission (CPUC) in the Electric Safety and Reliability Branch. Prior to CPUC, Stephen served as an intern at NCPA's own Lodi Energy Center (LEC) Power Plant. Stephen holds a Bachelor of Science degree in Mechanical Engineering from University of California, Irvine. Additionally, Stephen is a licensed California State Professional Engineering (PE) in Mechanical Engineering.

Intern Hires:

None

Promotions/Position Changes:

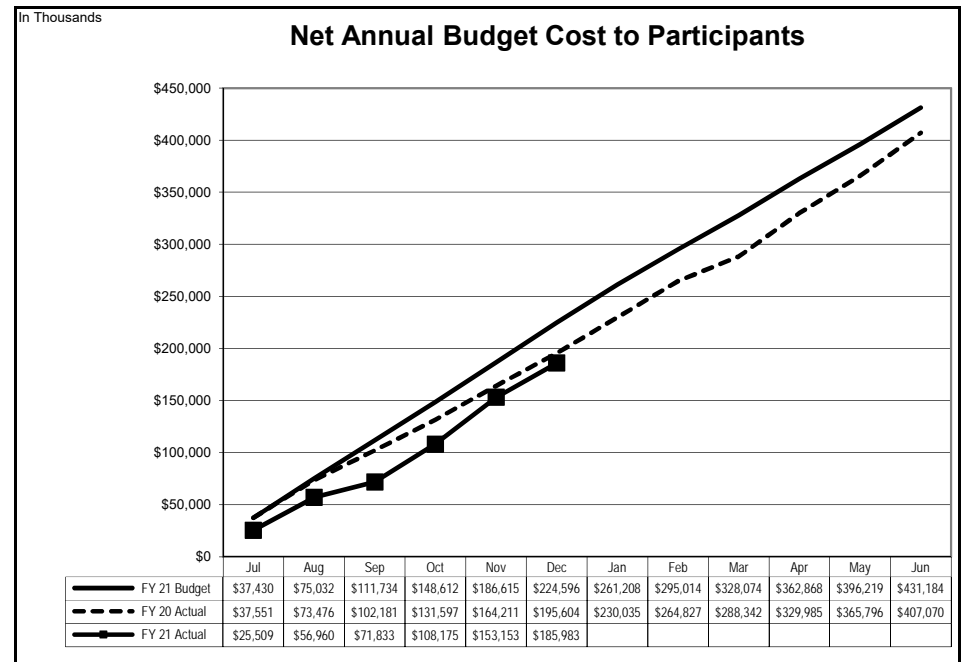
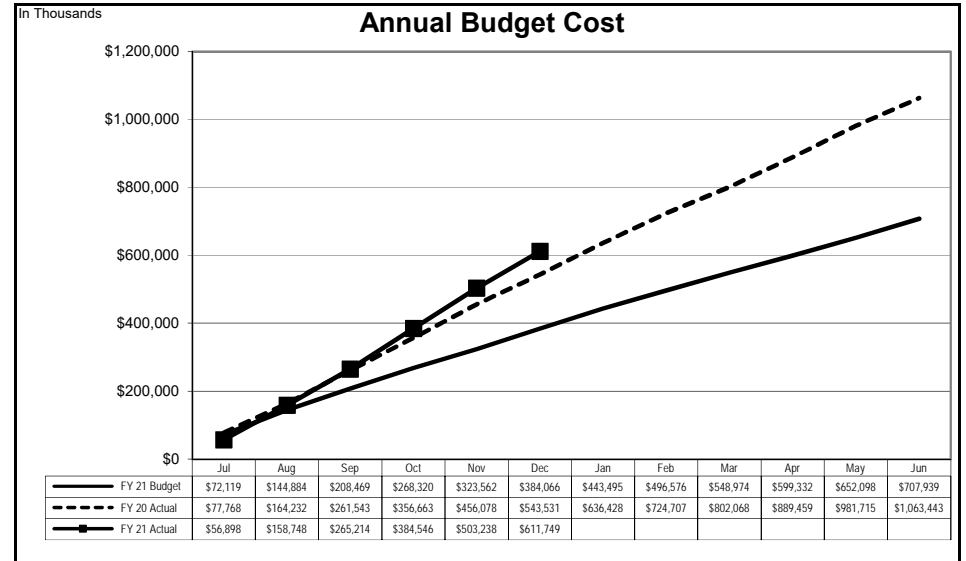
Eric Siu was promoted to Assistant Controller in our Accounting and Finance Department at our Roseville Headquarters offices. Eric was most recently an Accountant/Analyst III and has been with NCPA for over 14 years. Eric was integral in the recent Great Plains upgrade and will continue to act as a technical advisor for the Great Plains Path Forward Initiative which will include assessing our budgeting, planning, reporting, project management, and work order systems. He graduated with a Bachelor of Science degree in Accounting from San Francisco State University and is a Certified Public Accountant in the state of California.

Separations:

Jerry Pangle, Technician Operator V, retired from our Geothermal Facilities on December 17, 2020 after over ten years of service with NCPA.

Annual Budget 2020-2021 Fiscal Year To Date As of December 31, 2020

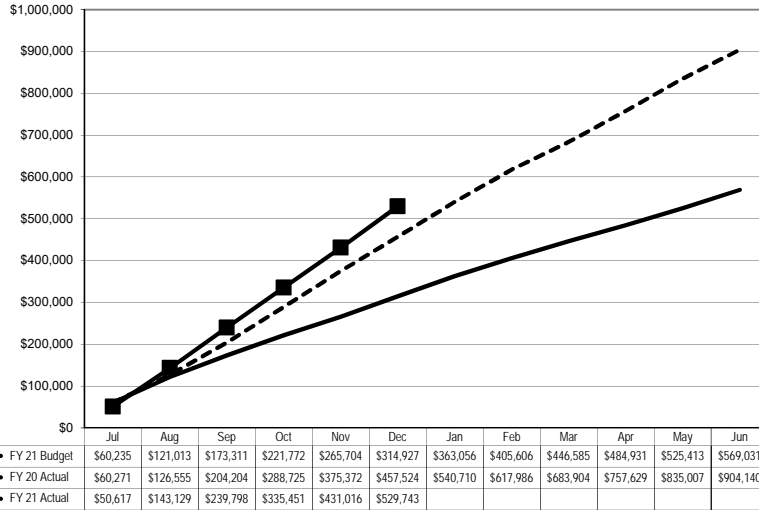
In Thousands	Program			
	Annual Budget	Actual	Under(Ovr) Budget	YTD % Remaining
GENERATION RESOURCES				
NCPA Plants				
Hydroelectric	54,260	25,847	\$ 28,414	52%
Geothermal Plant	35,561	17,742	17,819	50%
Combustion Turbine No. 1	7,884	3,189	4,694	60%
Combustion Turbine No. 2 (STIG)	7,989	5,198	2,791	35%
Lodi Energy Center	92,551	39,788	52,763	57%
	198,246	91,764	106,482	54%
Member Resources - Energy	60,056	30,345	29,711	49%
Member Resources - Natural Gas	2,442	2,030	412	17%
Western Resource	29,870	14,422	15,447	52%
Market Power Purchases	27,423	17,172	10,251	37%
Load Aggregation Costs - ISO	250,995	373,176	(122,181)	-49%
Net GHG Obligations	-	834	(834)	
	569,031	529,743	39,288	7%
TRANSMISSION				
Independent System Operator	120,026	72,696	47,330	39%
MANAGEMENT SERVICES				
Legislative & Regulatory				
Legislative Representation	2,180	780	1,401	64%
Regulatory Representation	715	355	360	50%
Western Representation	716	275	441	62%
Customer Programs	477	209	268	56%
	4,088	1,619	2,469	60%
Judicial Action	460	341	119	26%
Power Management				
System Control & Load Dispatch	6,766	3,022	3,744	55%
Forecasting & Prescheduling	2,934	1,314	1,620	55%
Industry Restructuring	425	198	227	53%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,000	478	522	52%
Gas Purchase Program	82	31	50	62%
Market Purchase Project	117	42	75	64%
	11,324	5,085	6,239	55%
Energy Risk Management	230	76	154	67%
Settlements	924	336	588	64%
Integrated System Support	266	104	163	61%
Participant Pass Through Costs	1,591	739	851	54%
Support Services	-	1,048	(1,048)	
	18,882	9,348	9,535	50%
TOTAL ANNUAL BUDGET COST	707,939	611,786	96,153	14%
LESS: THIRD PARTY REVENUE				
Plant ISO Energy Sales	105,258	64,251	41,007	39%
Member Resource ISO Energy Sales	26,422	17,658	8,763	33%
Member Owned Generation ISO Energy Sales	69,679	45,628	24,051	35%
Customer Owned Generation ISO Energy Sales	-	24	(24)	
NCPA Contracts ISO Energy Sales	18,915	11,043	7,872	42%
Western Resource ISO Energy Sales	17,481	16,824	657	4%
Load Aggregation Energy Sales	-	172,323	(172,323)	
Ancillary Services Sales	3,988	3,862	126	3%
Transmission Sales	110	55	55	50%
Western Credits, Interest & Other Income	34,902	94,097	(59,195)	-170%
	276,755	425,766	(149,011)	-54%
NET ANNUAL BUDGET COST TO PARTICIPANTS	431,185	186,020	\$ 245,164	57%



Annual Budget Budget vs. Actual By Major Area As of December 31, 2020

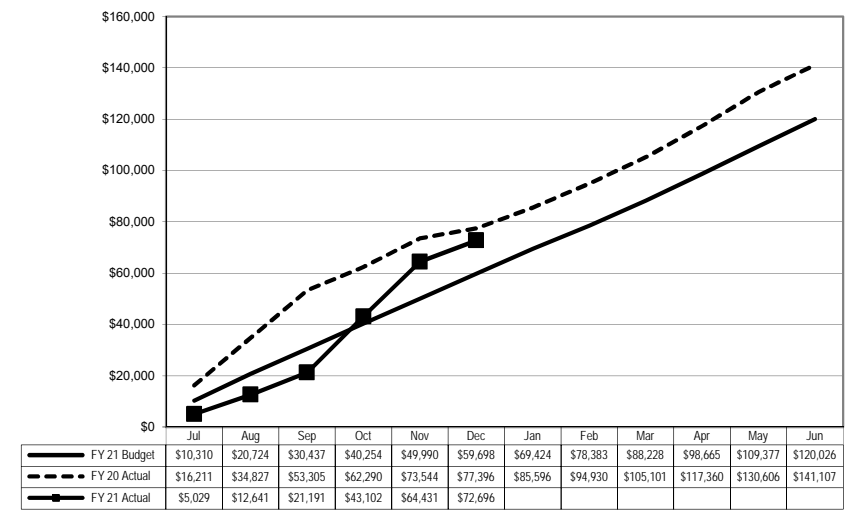
In Thousands

Generation Resources



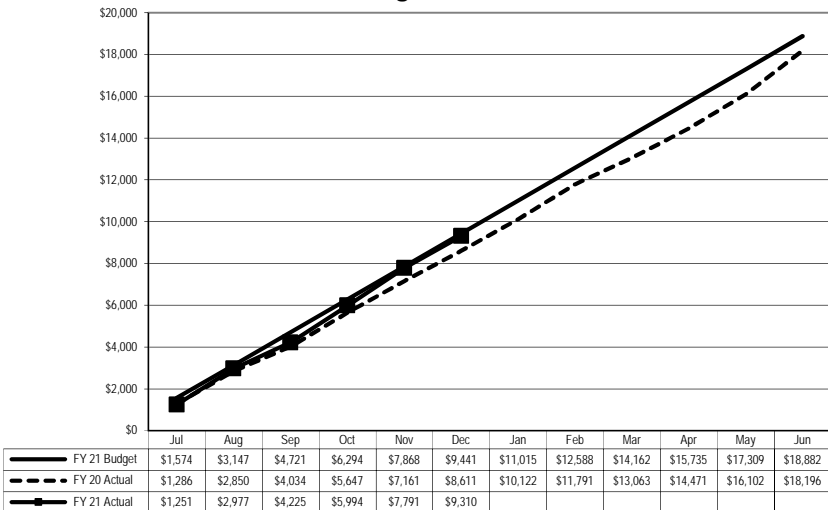
In Thousands

Transmission-ISO



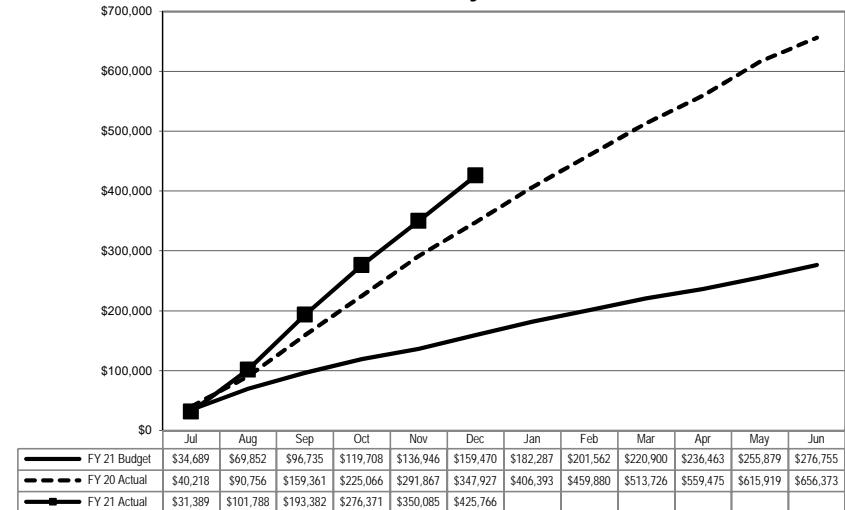
In Thousands

Management Services



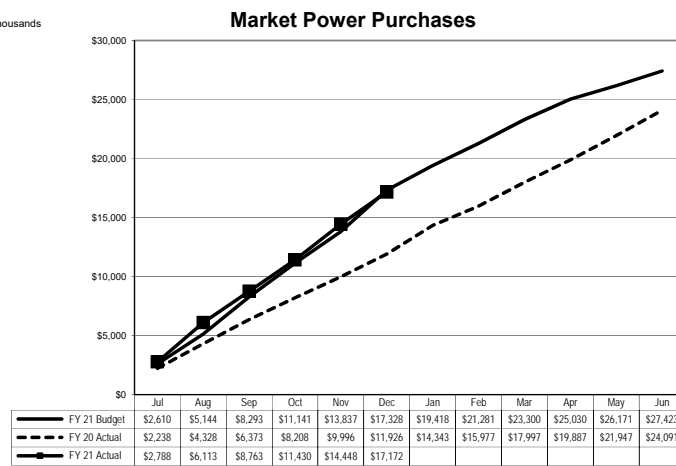
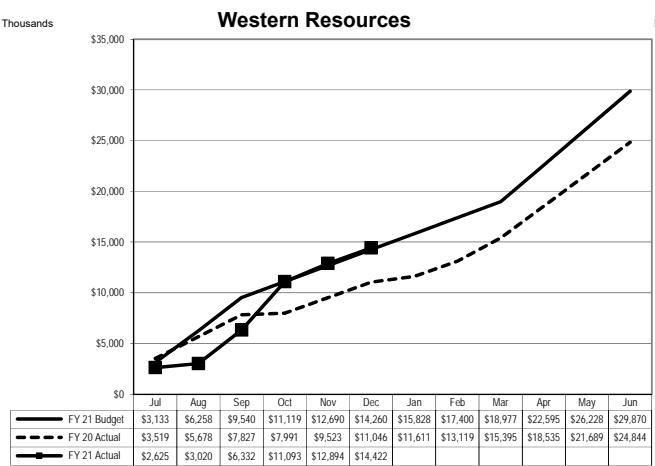
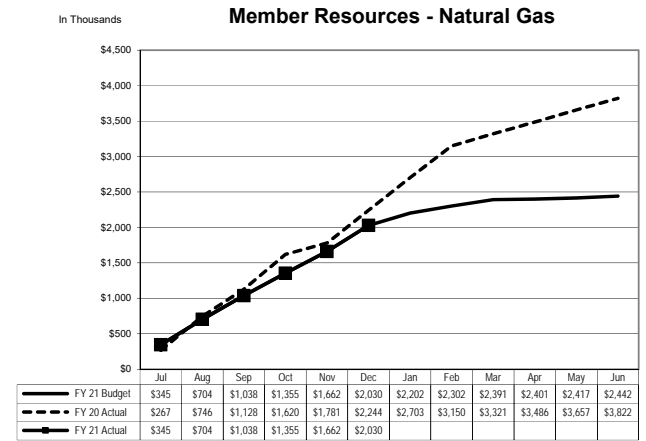
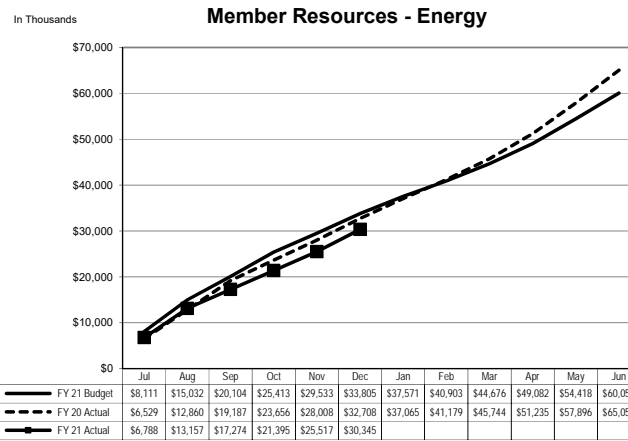
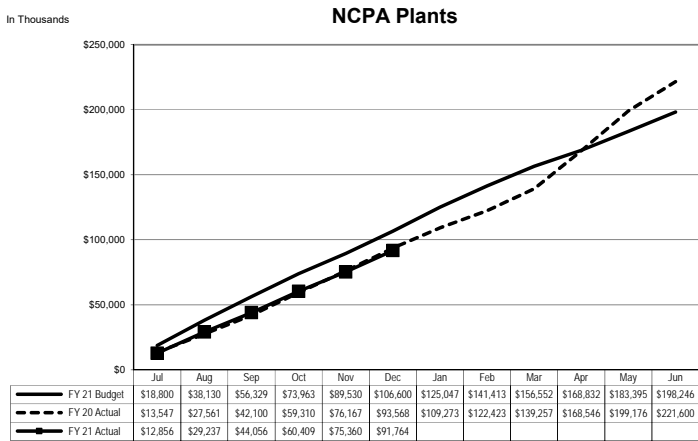
In Thousands

Third Party Revenue



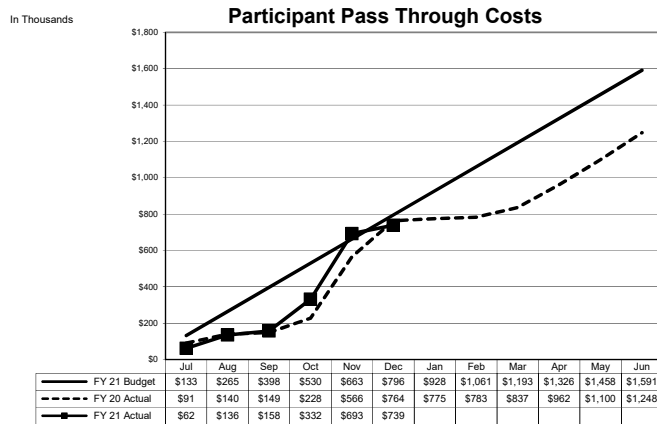
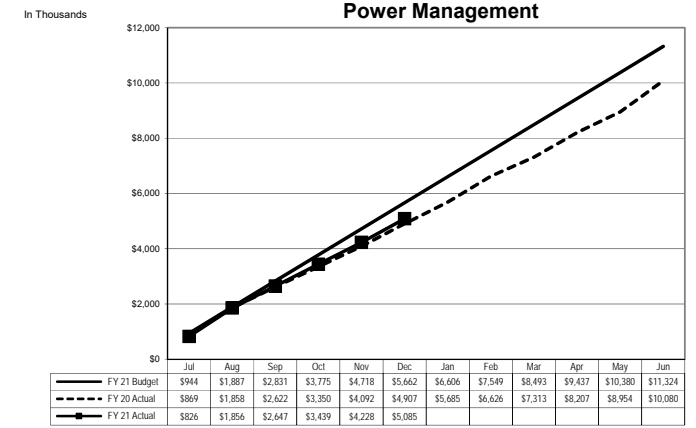
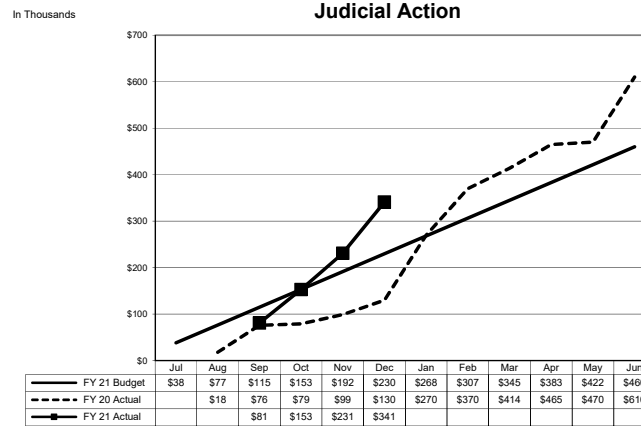
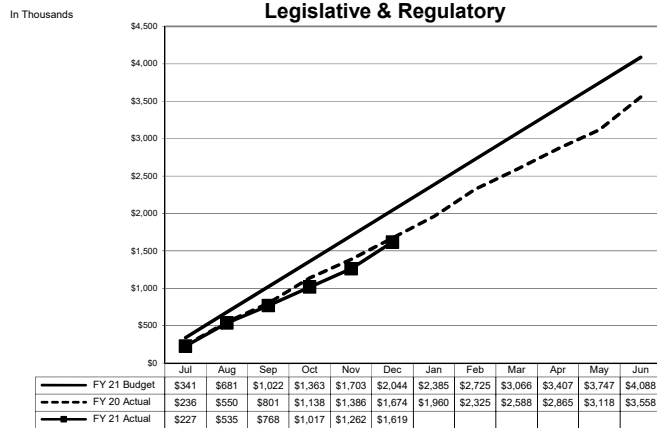
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

Annual Budget Cost Generation Resources Analysis By Source As of December 31, 2020



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

**Annual Budget Cost
Management Services Analysis By Source
As of December 31, 2020**



**Annual Budget Cost
Management Services Analysis By Source
As of December 31, 2020**

In Thousands

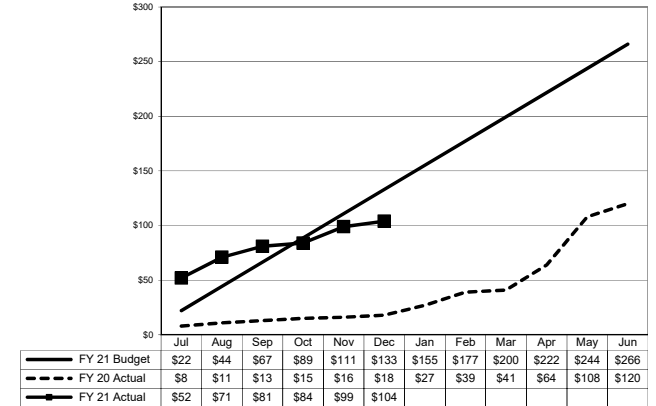
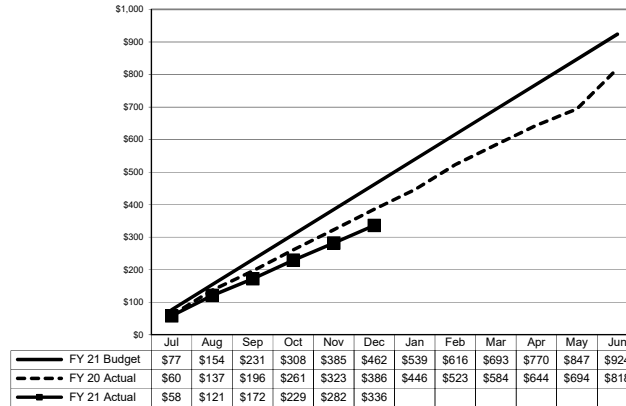
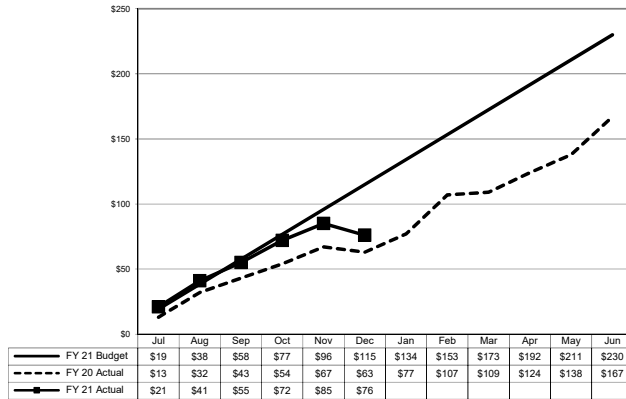
Energy Risk Management

In Thousands

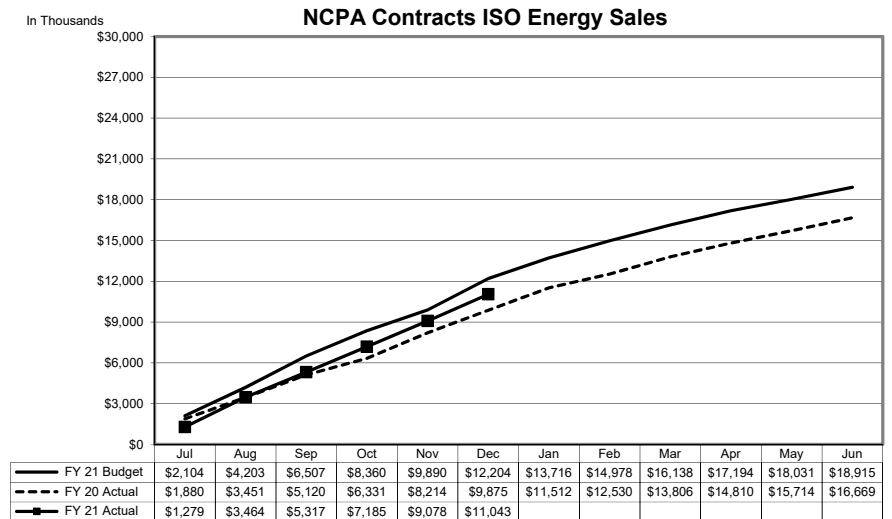
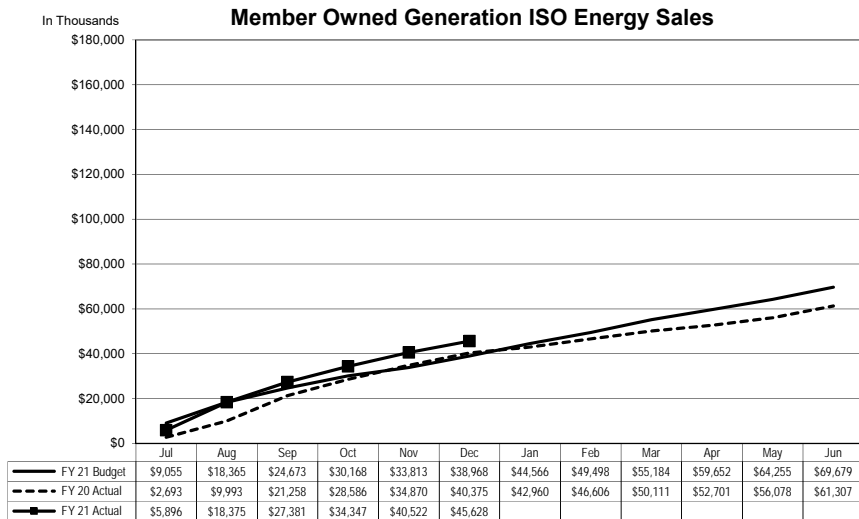
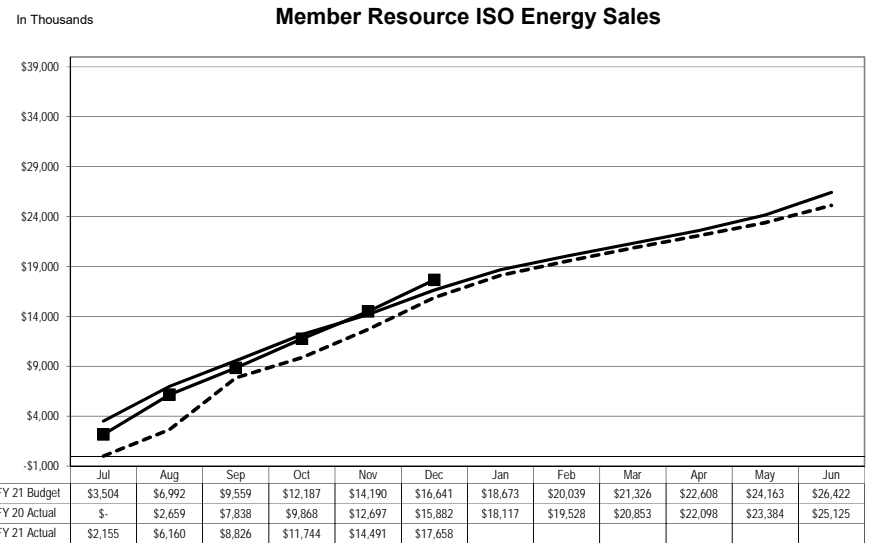
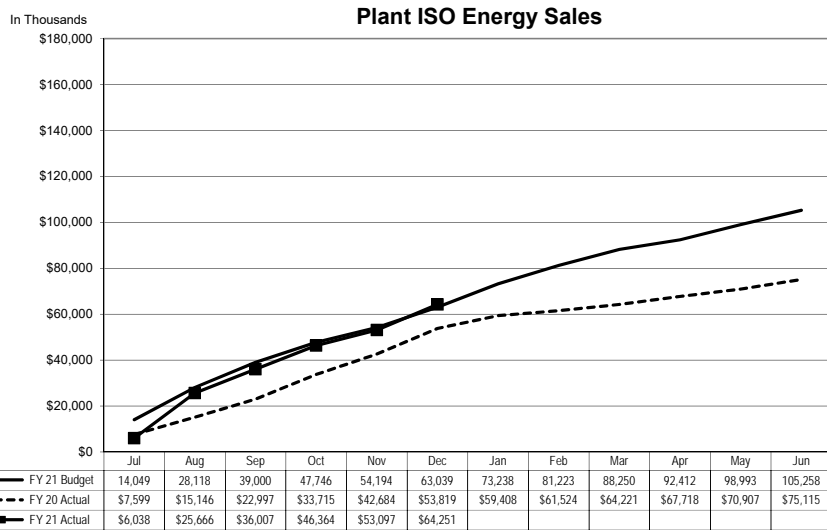
Settlements

In Thousands

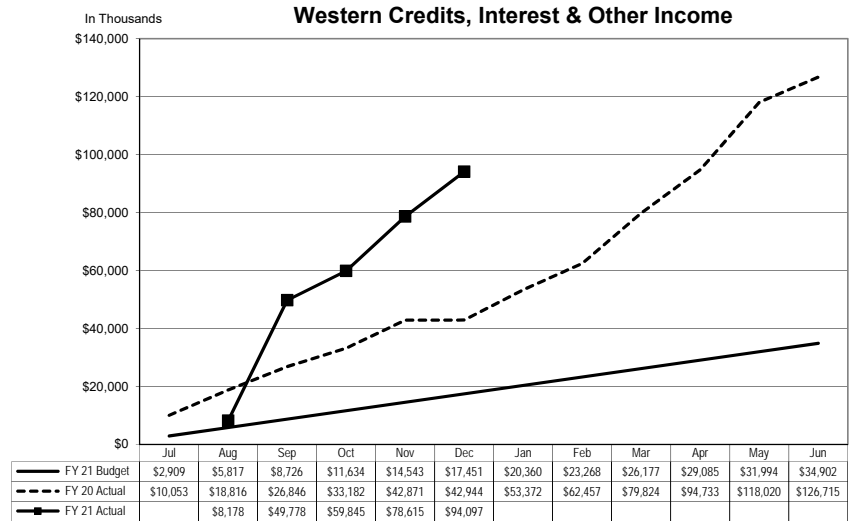
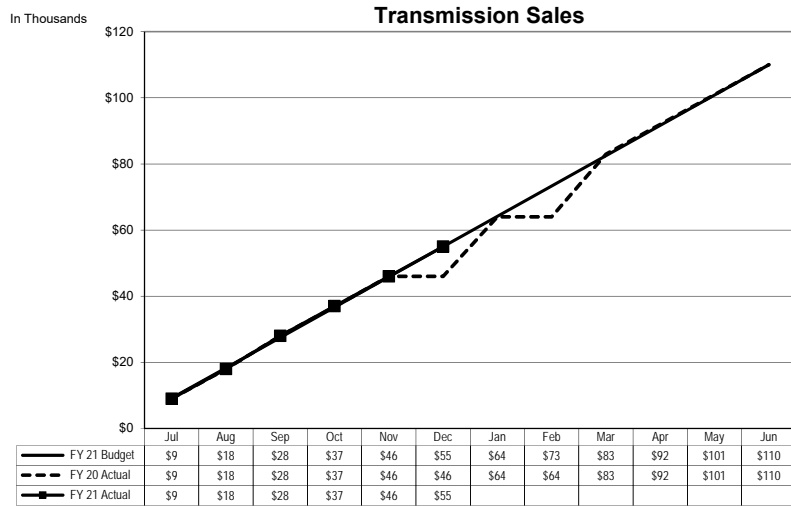
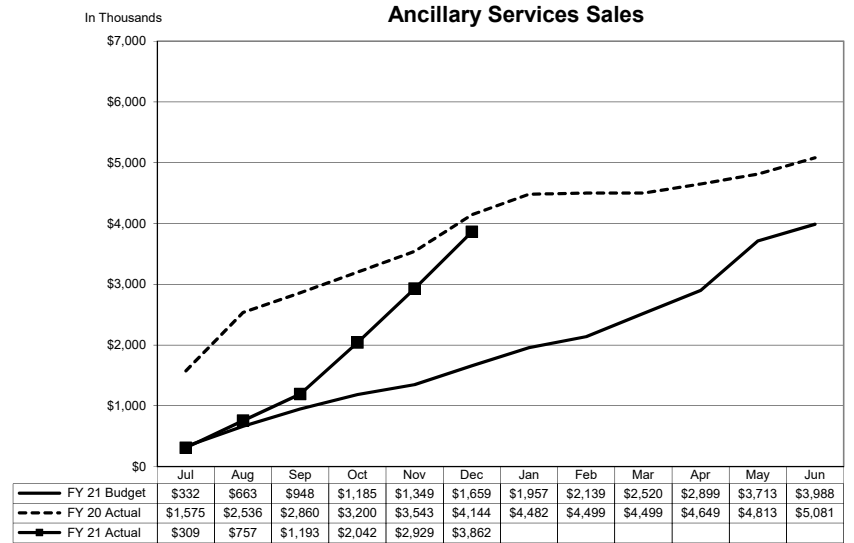
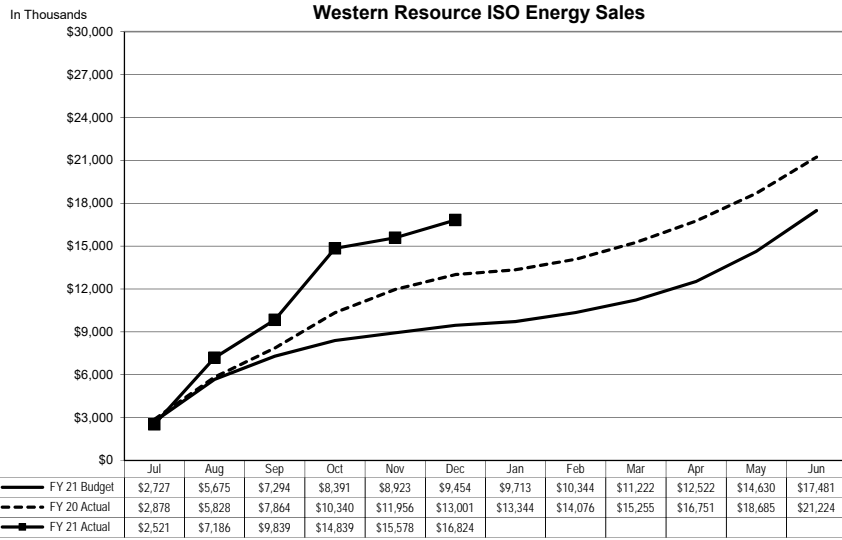
Integrated Systems Support



**Annual Budget Cost
Third Party Revenue Analysis By Source
As of December 31, 2020**



**Annual Budget Cost
Third Party Revenue Analysis By Source
As of December 31, 2020**



**Annual Budget
NCPA Generation Detail Analysis By Plant
As of December 31, 2020**

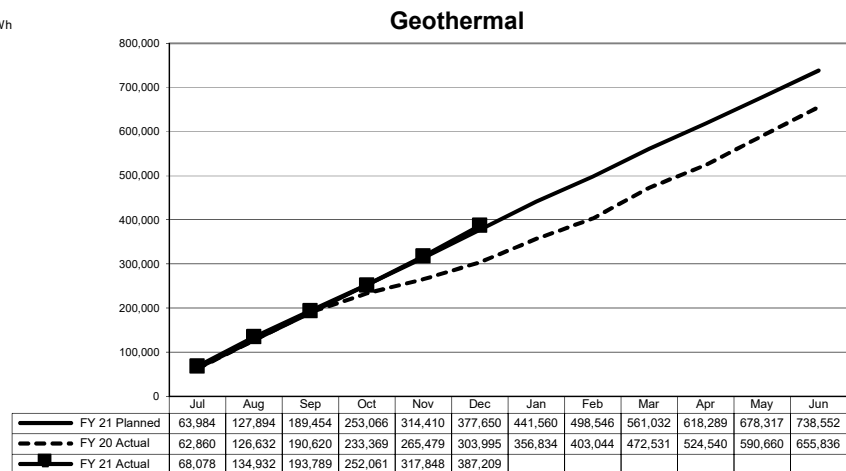
Generation Cost Analysis

\$ in thousands

	Geothermal				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
	Routine O & M	\$ 19,252	\$ 9,514	\$ 24.57	\$ 9,738
Capital Assets/Spare Parts Inventories	2,585	1,258	3.25	1,327	51%
Other Costs	8,239	3,694	9.54	4,546	55%
CA ISO Charges	534	801	2.07	(267)	-50%
Debt Service	4,950	2,475	6.39	2,475	50%
Annual Budget	35,561	17,742	45.82	17,819	50%
Less: Third Party Revenue					
Interest Income	382	76	0.20	306	80%
ISO Energy Sales	25,811	16,279	42.04	9,531	37%
Ancillary Services Sales	-	-	-	-	-
Effluent Revenues	750	648	1.67	102	14%
Misc	113	57	0.15	56	50%
	27,056	17,060	44.06	9,995	37%
Net Annual Budget Cost to Participants	\$ 8,506	\$ 682	\$ 1.76	\$ 7,824	92%
Net Generation--MWh @ Meter	738,552	387,209			
\$/MWh (A)	\$ 4.81	\$ (4.63)			

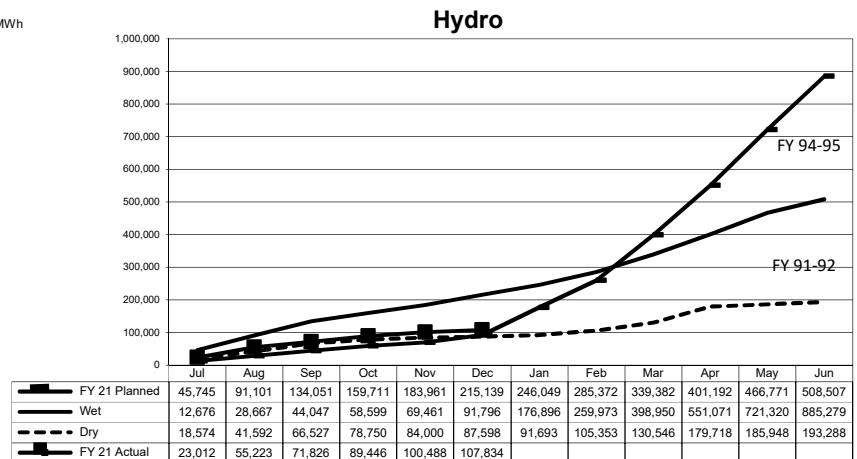
MWhs Generated

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
	Routine O & M	\$ 9,570	\$ 3,745	\$ 34.73	\$ 5,825
Capital Assets/Spare Parts Inventories	365	2,409	22.34	(2,045)	-561%
Other Costs	8,323	1,631	15.12	6,692	80%
CA ISO Charges	2,615	1,368	12.69	1,247	48%
Debt Service	33,388	16,694	154.81	16,694	50%
Annual Budget	54,260	25,847	239.69	28,414	52%
Less: Third Party Revenue					
Interest Income	670	103	0.96	567	85%
ISO Energy Sales	22,147	10,839	100.51	11,309	51%
Ancillary Services Sales	2,276	2,118	19.64	158	7%
Misc	-	-	-	-	-
	25,094	13,060	121.11	12,034	48%
Net Annual Budget Cost to Participants	\$ 29,167	\$ 12,787	\$ 118.58	\$ 16,380	
Net Generation--MWh @ Meter	508,507	107,834			
\$/MWh (A)	\$ (8.30)	\$ (36.24)			

In MWh



Footnotes:

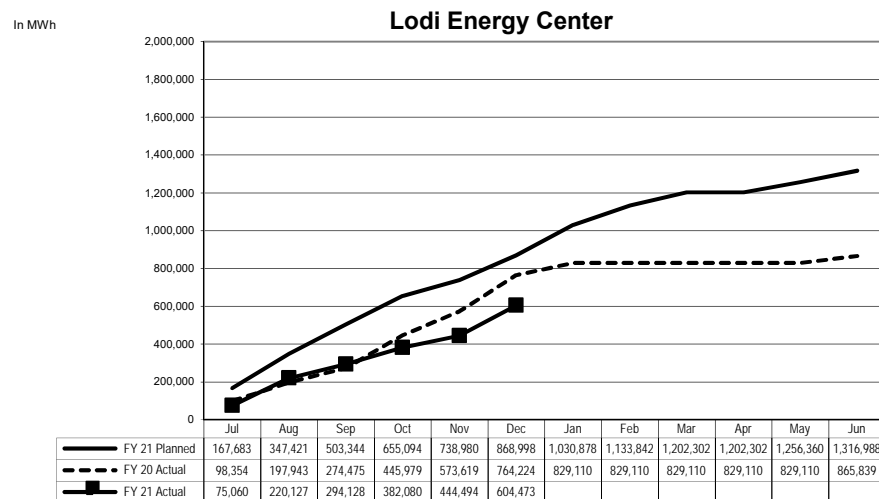
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

**Annual Budget
NCPA Generation Detail Analysis By Plant
As of December 31, 2020**

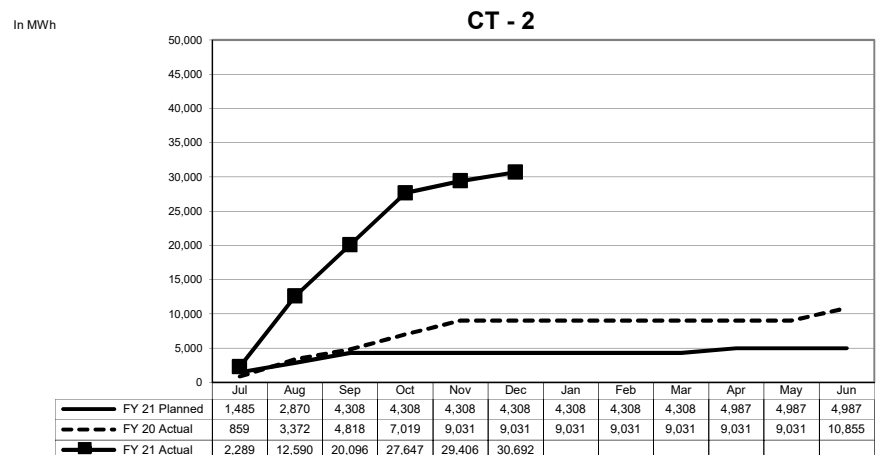
Generation Cost Analysis

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 14,463	\$ 6,560	\$ 10.85	\$ 7,903	55%
Fuel	32,956	15,883	26.28	17,073	52%
CA ISO Charges and Energy Purchases	3,831	1,502	2.48	2,329	61%
Capital Assets/Spare Parts Inventories	2,906	1,260	2.08	1,646	57%
Other Costs	12,372	1,571	2.60	10,801	87%
Debt Service	26,024	13,012	21.53	13,012	50%
Annual Budget	92,551	39,788	65.82	52,763	57%
Less: Third Party Revenue					
Interest Income	386	142	0.24	243	63%
ISO Energy Sales	55,590	31,850	52.69	23,740	43%
Ancillary Services Sales	1,712	1,147	1.90	565	33%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	8,463	-	-	8,463	100%
Misc	-	35	0.06	(35)	0%
	66,151	33,174	54.88	32,978	50%
Net Annual Budget Cost to Participants	\$ 26,400	\$ 6,614	\$ 10.94	\$ 19,786	75%
Net Generation--MWh @ Meter	1,316,988	604,473			
\$/MWh (A)	\$ 0.29	\$ (10.58)			

MWhs Generated



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,584	\$ 893	\$ 29.09	\$ 691	44%
Fuel and Pipeline Transport Charges	910	1,349	43.97	(439)	-48%
Capital Assets/Spare Parts Inventories	37	4	0.12	33	90%
Other Costs	593	227	7.40	365	62%
CA ISO Charges	40	312	10.15	(271)	-671%
Debt Service	4,826	2,413	78.62	2,413	50%
Annual Budget	7,989	5,198	169.35	2,791	35%
Less: Third Party Revenue					
Interest Income	109	23	0.73	86	79%
ISO Energy Sales	399	2,675	87.15	(2,276)	-571%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,821	639	20.80	1,182	65%
GHG Allowance Credits	43	-	-	43	100%
Misc	-	-	-	-	0%
	2,371	3,336	108.69	(965)	-41%
Net Annual Budget Cost to Participants	\$ 5,618	\$ 1,862	\$ 60.66	\$ 3,756	67%
Net Generation--MWh @ Meter	4,987	30,692			
\$/MWh (A)	\$ 158.75	\$ (17.96)			



Footnotes:

**Annual Budget
NCPA Generation Detail Analysis By Plant
As of December 31, 2020**

Generation Cost Analysis

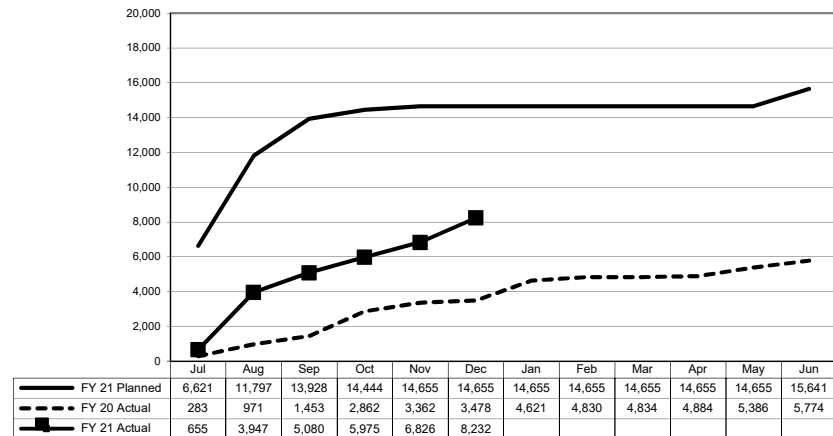
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,320	\$ 1,223	\$ 148.53	\$ 1,097	47%
Fuel and Pipeline Transport Charges	937	536	65.09	401	43%
Capital Assets/Spare Parts Inventories	3,667	720	87.49	2,947	80%
Other Costs	866	345	41.89	521	60%
CA ISO Charges	94	366	44.41	(272)	-289%
Debt Service	-	-	-	-	-
Annual Budget	7,884	3,189	387.41	4,694	60%
Less: Third Party Revenue					
Interest Income	-	23		(23)	-99%
ISO Energy Sales	1,311	2,609	316.94	(1,298)	0%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	16	1.90	(16)	0%
	1,311	2,647	318.84	(1,336)	-102%
Net Annual Budget Cost to Participants	\$ 6,572	\$ 542	\$ 65.81	\$ 6,030	92%
Net Generation--MWh @ Meter	15,641	8,232			
\$/MWh (A)	\$ 420.19	\$ 65.81			

MWhs Generated

In MWh

CT - 1



Footnotes: