



2020

BUSINESS PROGRESS REPORT

OCTOBER



Northern California Power Agency
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Table of Contents

Generation Costs & Reliability	1
Environmental, Health & Safety Projects	4
Power Management/NCPA Market Results.....	5
Debt & Financial Management	14
NCPA Bills & Settlements.....	15
Political Arena State/Federal/Western Programs	16
Human Resources.....	17
Annual Budget FY to Date	18
Budget vs. Actual by Major Area	19
Generation Resources Analysis by Source	20
Management Services Analysis by Source	21
Third Party Revenue Analysis by Source	23
Generation Detail Analysis by Plant	25

Generation Costs & Reliability

Combustion Turbine Project

Unit Operation for September 2020

Unit	Availability		Production			Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	436.9	MWh	CAISO / CAISO
	100.0%	100.0%	Unit 2	453.0	MWh	
Curtailements, Outages, and Comments:						
Unit 1: Normal operation.						
Unit 2: Normal operation.						
Unit	Availability		Production			Reason for Run
CT1 Lodi	91.0%		258.1 MWh			CAISO
Curtailements, Outages, and Comments:						
9/22 @ 10:00 - 21:00: Station Battery Trouble, OMS 9179487						
9/28 @ 18:01 - 9/30 23:59: Station Battery Trouble						
Unit	Availability		Production			Reason for Run
CT2 STIG	98.9%		7,326.4 MWh			CAISO
Curtailements, Outages, and Comments:						
9/8 @ 13:32 - 18:13: Temperature Sensor Trouble, OMS 9114003						
9/30 @ 11:25 - 14:45: Vibration Instrument Trouble						
Unit	Availability		Production			Reason for Run
LEC	84.4%		73,991 MWh			CAISO
Curtailements, Outages, and Comments:						
9/12 @ 00:00 - 9/16 @ 16:00: CTG Vibration Instrumentation Failure, OMS #9112733						

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for September 2020

Unit	Availability	Net Electricity Generated/Water Delivered	Out-of-Service/Descriptors
Unit 1	78.75 %	14,434 MWh	U1 was off line 0100 9/24/20 until 1010 9/27/20 for PG&E line outage/Plant 1 Stretford cleaning. U1 was off line 2247 9/27/20 through 9/30/20 due to PG&E line outage/Glass Fire
Unit 2	78.06 %	*14,872 MWh	U1 was off line 0100 9/24/20 until 1500 9/27/20 for PG&E line outage/Plant 1 Stretford cleaning U2 was off line 2247 9/27/20 through 9/30/20 due to PG&E line outage/Glass Fire
Unit 3	N/A %	N/A	Unit 3 remains out of service.
Unit 4	100 %	29,563 MWh	U4 had no outages for the month
Southeast Geysers Effluent Pipeline	70.0 %	113.1 mgallons	Average flow rate: 2,592 gpm
Southeast Solar Plant	N/A	81,669 KWh	Year-to-date KWh: 3,100,348
Bear Canyon Pump Station Zero Solar	N/A	67,369 KWh	Year-to-date KWh: 4,492,990

* Accounts for an additional 0 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for September 2020

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	100%	3881 MWh	No Outages.
Collierville Unit 2	99.32%	11959 MWh	CV Unit 2 was out of service on 9/25/20 from 0202 to 0653 for TSV position indication trouble.
Spicer Unit 1	25.79%	218 MWh	NSM1 was out of service on 9/1/20 from 000 to 1844 for PG&E Line Outage, on 9/7/20 to 9/9/20 from 2242 to 1055 for PSPS, from 9/9/20 to 9/26/20 from 1056 to 1451 for PG&E Line outage, on 9/26/20 to 9/27/20 from 1451 to 1818 for Failed Start- Overspeed, on 9/27/20 to 9/28/20 from 1818 to 1455 for PSPS, and on 9/28/20 to 9/29/20 from 1455 to 1016 for Failed start- Overspeed.
Spicer Unit 2	32.25%	489 MWh	NSM2 was out of service on 9/1/20 from 000 to 1848 for PG&E Line Outage, on 9/7/20 to 9/9/20 from 2245 to 1055 for PSPS, from 9/9/20 to 9/26/20 from 1056 to 1503 for PG&E Line outage, on 9/27/20 to 9/28/20 from 1817 to 1500 for PSPS
Spicer Unit 3	23.49%	56 MWh	NSM3 was out of service on 9/1/20 to 9/2/20 from 000 to 0818 for PG&E Line Outage, on 9/7/20 to 9/9/20 from 2248 to 1055 for PSPS, from 9/9/20 to 9/27/20 from 1056 to 1818 for PG&E Line outage, on 9/27/20 to 9/29/20 from 1818 to 1023 for PSPS, and on 9/29/20 from 1023 to 1327 for TSV position indication.

Operations & Maintenance Activities:

- CMMS work orders
- 230 KV Line 1 and 2 Insulator replacement project completion
- Union Dam grouting repair work
- Beaver Creek and NF reservoir cleanouts
- Conducted one in five year Tunnel Inspections

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

- There were no Cal OSHA Recordable, Lost Time, or vehicle accidents in the month of September.
- 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 September 26, 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.

September 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)	0	0	0	0
Days since Recordable	465	795	2,000	2,984
Work Hours Since Last Recordable	40,915	166,512	299,897	2,586,759
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	4,734	1,863	9,904	5,997
Work Hours without LTA	430,812	383,487	710,441	2,208,777
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 September 26, 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

	September 2020		Calendar Year 2020	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	431.79 9/7 @ 1700	195,912	467.45 8/14 @ 1700	1,708,827
SVP	573.82 9/28 @ 1600	333,874	586.3 8/14 @ 1700	2,865,850
MSSA	991.13 9/7 @ 1700	529,786	1053.75 8/14 @ 1700	4,574,677

Last Year 2019 Data*

	September 2019		Calendar Year 2019	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	442.64 9/25 @ 1700	199,967	478.77 8/15 @ 1700	1,763,679
SVP	574.22 9/25 @ 1700	318,142	587.78 6/11 @ 1600	2,790,685
MSSA	1016.86 9/25 @ 1700	518,109	1057.99 8/15 @ 1700	4,554,364

* 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.

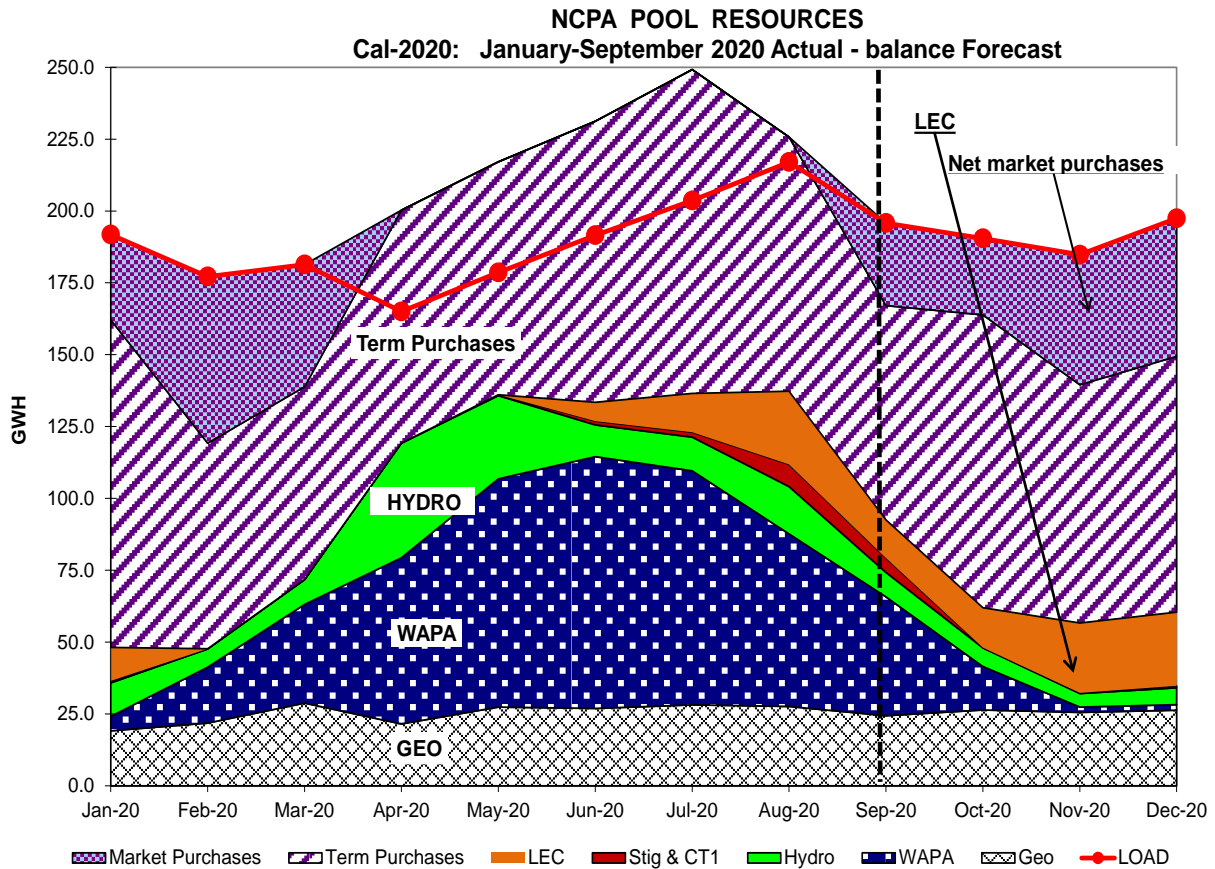
NCPA Deviation Band Performance		
	September 2020	Calendar Year 2020
MSSA % Within the Band	94.68%	95.82%

- Dispatch and SC groups continue operating in split mode occupying both Roseville HQ and DRC due to COVID-19. The hope is to bring back the SCs to Roseville HQ by the end of the year.
- Dispatch and SC groups continue parallel operations training with SVP during weekend night shifts for eventual NCPA assumption of SVP weekend/holiday night scheduling duties by the end of the year. Parallel operations training every night shift to start in October.
- Market Instruction Dispatch System (MIDS) went live in production on 9/21/2020. This replaced the legacy NCPA Automated Dispatch System (NADS) used to process the CAISO ADS instructions. The new MIDS has the ability to automate and process the Real-time Contingency Dispatch (RTCD) instructions that call on any economic and spin/non-spin bids that have been awarded.
- CAISO issued Stage 2 Emergency notifications on September 5-6, 2020.
- PG&E issued Public Safety Power Shutoff (PSPS) warnings September 8-9, 2020, and September 27-28, 2020.

Pooling, Portfolio Planning & Forecasting

- NCPA Pool load during September 2020 was 195,756 MWh, or 99.2% of forecast as well-above normal heat at the beginning and end of the month added cooling demand. Pool load during October is expected to continue above normal compared to the same period a year ago, as weather-related demand increased again early in the month.
- Lodi Energy Center (LEC) produced 13,305 MWh for the pool during September, reduced in part by a brief maintenance outage mid-month. Despite the current volatile market pricing structure and in-state pipeline limitations, LEC was projected to generate 29,245 MWh for the pool during October with nuclear refueling raising the need for thermal generation in the state with temperatures above average.
- During September 2020, 0.00" of rain was recorded at the Big Trees gauge. Average September Big Trees precipitation is 0.84".
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been increased to \$90/MWh.
- NSMR storage as of September 30, 2020 was at 93,686 acre feet. The historical average NSMR storage at the end of September is 104,248 acre feet. As of October 20, 2020 NSMR storage is 85,689 acre feet. The current NCPA Pool share of NSMR storage is 43,922 acre feet.
- Combined Calaveras Project generation for the Pool in September 2020 totaled 8.5 GWh, down from 16.3 GWh in August 2020. The Pool's 8.5 GWh in September 2020 was less than the pre-month forecast of 10.4 GWh.
- Western Base Resource (BR) deliveries for the Pool during September 2020 were 41,391 MWh, including Displacement energy totaling 13,633 MWh. Energy received was 118% of the pre-month forecast with hydro resources critical during the month's two heat events. Western's forecast for the pool's share of October generation is 15,103 MWh.
- The PG&E Citygate gas index averaged \$4.20/MMBtu for delivery on October 12, 2020, well above the average PG&E gas price during September of \$3.586/MMBtu. Gas prices have continued to rise as production curtailments cut into storage additions while power burn and LNG feed gas demand increase. The October 2020 PG&E Citygate Bidweek price is \$3.98/MMBtu, up 51.5 cents over the September Bidweek price and \$1.45 higher than the August Bidweek price.

- Day-Ahead NP15 electricity prices averaged \$42.58/MWh (HLH) and \$40.51 (LLH) during September 2020, with evening ramp hour prices reaching as high as \$822 at TH_NP15 during one of the two heat events as increased demand and somewhat limited renewables generation due to cloud and smoke cover from wildfires brought prices nearly up to August levels..



NCPA Pool Loads & Resources Value Summary									
	Peak and Energy Summary Sep-20				Estimated Production Costs			Cost of Serving Demand	
	Coincident Peak (MW)	Total MWh	Pre-Month Forecast Values		NCPA Pool			Totals	Avg (\$/MWh)
			Sep-07-20 Hour 17	6/9/20	Cost/Revenue (Estimate)	Variable Cost (\$/MWh)	N/A		
Demand	431.8	195,756	197,378	271.9	N/A	N/A	at Market Clearing Price		
WAPA	-	41,391	34,927	57.5	\$ 1,811,655	\$ 43.77	\$ 9,134,294	\$ 46.66	
Geothermal	-	24,365	25,621	33.8	462,926	19.00			
Hydro	-	8,464	11,682	11.8	50,785	6.00			
Stig & CTs	-	5,051	6,190	7.0	297,886	58.97	at Variable Cost of Pool Generation		
LEC	-	13,305	29,118	18.5	430,823	32.38			
Contracts	-	74,482	91,888	103.4	4,530,234	60.82	\$ 8,887,176	\$ 45.40	
Market - Net <small>(Net Sales = Negative)</small>	431.8	28,698	(2,048)	39.9	1,233,341	42.98			
Net Total	431.8	195,756	197,378	271.9	\$ 8,817,649	\$ 45.40			

Monthly Market Summary										
	Pool Energy (MWh)	HLH Avg MCP (\$/MWh)	Avg Variable Cost of Pool Generation (\$/MWh)	Forward Prices (EOX NP15 HLH Ask Prices)				NOTES TO SUMMARY TABLE:		
				NP15 9/1/2020 (\$/MWh)		10/13/2020 (\$/MWh)				
				Nov-20	Dec-20	Jan-21	Q1 2021			
Jan-20	191,771	\$ 32.76	\$ 39.71	Nov-20	\$ 43.45	\$ 47.87	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			
Feb-20	177,169	\$ 27.58	\$ 46.65	Dec-20	\$ 51.01	\$ 51.51				
Mar-20	181,339	\$ 27.90	\$ 40.59	Jan-21	\$ 51.35	\$ 52.36				
Apr-20	165,033	\$ 22.78	\$ 35.05	Q1 2021	\$ 43.15	\$ 44.57				
May-20	178,601	\$ 20.85	\$ 37.53	Q2 2021	\$ 32.08	\$ 31.48				
Jun-20	191,530	\$ 26.29	\$ 36.98	Q3 2021	\$ 58.19	\$ 50.84				
Jul-20	203,610	\$ 27.80	\$ 37.25	CY2021	\$ 44.58	\$ 42.64				
Aug-20	216,986	\$ 59.74	\$ 41.08	CY2022	\$ 40.39	\$ 39.80				
Sep-20	195,756	\$ 46.66	\$ 45.40	CY2023	\$ 40.45	\$ 37.78				
Oct-20				CY2024	\$ 38.79	\$ 37.25				
Nov-20				CY2025	\$ 39.57	\$ 37.02				
Dec-20				CY2026	\$ 39.43	\$ 36.89				

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 December 2020:
 - Monthly System Resource Adequacy Demonstration (filed October 17, 2020)
 - Monthly Supply Plan (October 17, 2020)

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:

Extended Day-Ahead Market

- Straw proposal comments due November 12, 2020. NCPA will focus on transmission cost allocation equity.
- CAISO published Bundle 1 Straw Proposal and held a 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 California ISO balancing area. The extended Day-Ahead market (EDAM) will improve market efficiency by integrating renewable resources using Day-Ahead unit commitment and scheduling across a larger area.

Resource Adequacy Enhancements

- Draft final proposal is due November 3, 2020
- Two-day workshop scheduled for week of September 14, 2020.
 - Reviewed UCAP evaluations and announced that October would now be considered a “summer” month in the seasonal assessments due to the fact that data now suggests that it has a monthly distribution of the hourly supply cushion equivalent to existing summer months of May through September.
 - CAISO shared its first proposal for import UCAP assessments. Indicated that they would be tied to entries from the CAISO Outage Management System. Import curtailments are currently not logged in OMS.
 - CAISO notified that there will be no planned outage process enhancements and that the planning process will remain status quo as opposed to developing a planned outage reserve margin in off-peak months.

- NCPA submitted the following comments:
 - NCPA did not oppose any of the proposals generally.
 - Asked for more clarification behind proposal to log import curtailments in OMS.
 - Requested CAISO to clarify that the “off-peak opportunity outage” will remain available in the Planned Outage window.
 - Reminded CAISO that they still need to address “planned to forced” outage reporting and requested the ability to submit “Urgent” outages in the Planned Outage Window that could be exempt from UCAP if the supply cushion is adequate or subject to UCAP if not.
 - Reminded CAISO of the benefits the NCPA Metered Subsystem brings to the market and the resulting MSS RA provisions as well as the fact that CAISO pledged in an earlier version of the proposal to not modify such provisions.
- Due to the rapid transformation of the resource mix in California, the CAISO is currently re-examining the CAISO Resource Adequacy requirements and rules. This initiative will explore changes to the CAISO’s Resource Adequacy requirements and rules to ensure the resources providing reserve services are effectively supporting reliable operations of the grid.
- CAISO is proposing massive overhauls to its RA program in conjunction with CPUC changes. Specific areas the CAISO is looking at are termination of the Resource Adequacy Availability Mechanism for System capacity and replacing it with “less complicated” counting rules similar to eastern RTOs, import eligibility, exemptions, and redefining Planned and Forced outages.
- NCPA will continue to advocate for must offer obligation exemption due to existing LF-MSS balancing requirements.

Day-Ahead Market Enhancements

- Second Revised Straw Proposal expected October 26. NCPA hopes to see concepts discussed in bullet below in latest proposal. CAISO is developing an updated schedule.
- NCPA met with CAISO staff in order to share concerns with Metered Subsystem Provisions. CAISO requested that NCPA provide proposed revisions recognizing benefits of Load Following Metered Subsystems that justify reduced cost allocation or outright exemption of DAME products.
- In latest proposal, CAISO is dropping new Reliability Energy product due to cost formation issues with bid in energy while retaining Reliability Up and Down Capacity. This is an improvement over current Residual Unit Capacity process in that it allows for procurement of downward capacity. Latest proposal does not address Load Following Metered Subsystem specific issues such as Reliability Capacity exemption and Imbalance Reserve Product settlements netting. We will continue to press on those issues.
- 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.
- CASIO 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 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. 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 cost 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	\$1,792,187	\$ 43.30	\$ 0.60	\$ 27.58
Oct-20	30,317	-	(30,317)	\$889,070	\$ 29.33	\$ -	\$ 28.70
Nov-20	14,598	-	(14,598)	\$889,070	\$ 60.91	\$ -	\$ 29.40
Dec-20	13,128	-	(13,128)	\$889,070	\$ 67.72	\$ -	\$ 30.43
Jan-21	6,278	-	(6,278)	\$889,070	\$ 141.63	\$ -	\$ 31.10
Feb-21	16,372	-	(16,372)	\$889,070	\$ 54.30	\$ -	\$ 31.55
Mar-21	26,497	-	(26,497)	\$889,070	\$ 33.55	\$ -	\$ 31.94
Apr-21	41,629	-	(41,629)	\$1,974,958	\$ 47.44	\$ -	\$ 33.35
May-21	74,036	-	(74,036)	\$1,974,958	\$ 26.68	\$ -	\$ 34.09
Jun-21	93,177	-	(93,177)	\$1,974,958	\$ 21.20	\$ -	\$ 34.16
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 41,391 MWh Base Resource (BR) energy in September 2020. This includes 13,633 MWh of Displacement Energy for an estimated savings of \$69,390 or about \$5.10/MWh.
- Pool Members' total savings under Market Efficiency Enhancement Agreement (MEEA) for Pool Members was approximately \$16,730 in September 2020. The cumulative net MEEA savings for FY 2021 (July 2020 through September 2020) is about \$15,100.

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. The contract permits termination or reduction of Base Resource share for any reason through June 30, 2024.
- 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.
- NCPA will continue to work with WAPA to develop a 10-year forecast (FY 2021 – FY 2030) to aid the membership's BR Contract signing efforts. WAPA's latest update indicates the forecast will be shared by the end of October 2020.

Energy Imbalance Market (EIM)

- WAPA will begin to participate in the CAISO Energy Imbalance Market (EIM) on March 25, 2021. WAPA is in the process of filing the new formula rate schedule to capture the costs and benefits associated with EIM. The effective date of the new rate schedules is March 25, 2021. WAPA held its Public Information Forum & Verbal Comment Forum on August 17, 2020. NCPA will submit comments for the October 29, 2020 deadline. WAPA expects to publish the Final Federal Register Notice (FRN) in February 2021.

Interconnection Affairs

PG&E Update

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.
- We anticipate having a NCPA-PG&E Operating Procedure complete by the first week of November. Next step will be to have the CAISO implement a full network model change.

TO-20 Rate Case

- Partial settlement was filed at FERC at the end of March 2020. Key items not settled are ROE, Capital Structure, and Depreciation.
- Joint Interveners have reached a settlement in principle on all remaining issues. PG&E is aiming to file settlement on October 15.

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 CASIO has current and accurate system information.
- NCPA has submitted updated data and power flow models for all Hydro, Geo, and CT units. The Alameda CTs have been deemed compliant by the CAISO, however CAISO pointed out a few quality issues which NCPA is working to address. Hydro units have been deemed compliant and complete. ISO identified new deficiencies with the Geo Units, NCPA has submitted cured data and is awaiting CAISO review of the Geo Units.

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 June 1, PG&E submitted a 10-year capital plan to all stakeholders. The list included 1,209 total projects (equal to or greater than \$1M), 989 total Non-ISO Approved/Self Approved Projects, 120 total Self Approved Projects that have not started construction, and over 600 supporting documents (Project Authorizations/Business Cases).
- NCPA filtered self-approved member specific projects and sent to all UD’s for review and feedback, drafted stakeholders comments with more emphasize on projects which are in planning (i.e. not in construction phase), projects which fall under the “work requested by others” category, and projects which might be related to non-CAISO controlled facilities.
- PG&E held a stakeholder meeting on September 30th. Notable topics discussed were the accuracy of data, wildfire related cost especially in Tier 1 zones, network vs non-network upgrades, and breaker and half schemes across PG&E’s territory. Next step is for PG&E to submit updated project data by December 1, 2020.

PG&E Annual Formula Rate Update

- The following is a comparison of 2020 and the new proposed rates for 2021:

	Calculation of PG&E Wholesale Rates	Rate Year 2021	Rate Year 2020
<u>Line</u>	<u>Description</u>	<u>Values</u>	<u>Values</u>
	Calculation of High Voltage Access Charge		
100	High Voltage TRR	\$1,020,007,111	\$788,444,596
101	Gross Load (MWh)	83,846,544	85,012,937
102	High Voltage Access Charge (\$/MWh)	\$12.17	\$9.27
	Calculation of Low Voltage Access Charge		
200	Low Voltage TRR	\$1,527,679,602	\$1,199,254,803
201	Gross Load (MWh)	83,846,544	85,012,937
202	Low Voltage Access Charge (\$/MWh)	\$18.22	\$14.11

- 2021 increase is mostly due to forecasted capital additions, O&M expenses, ROE, and Depreciation.
- We expect the 2021 rates to be lower by January 1 as a result of TO-20 settlement (especially on ROE) and negotiations between PG&E and the Joint Interveners from now until November 1, 2020 on amounts that are excessive or unsupported. NCPA will monitor this and present final rates for 2021 to Members.

Debt and Financial Management

- At the September Federal Open Market Committee meeting, members continued to acknowledge the “tremendous human and economic hardship” the COVID-19 pandemic is causing. In new economic projections, the Committee extended the horizon of expected zero rates through 2023. They also referenced their new inflation policy by suggesting that they will allow “inflation moderately above 2% for some time so that inflation averages 2% over time.” Fed leaders continue to strongly call for additional fiscal stimulus.
- Low volatility and directionless trading barely moved Treasury yields in September. The yield on the benchmark 2-year Treasury note remained anchored at 0.13%, and the yield on the benchmark 10-year Treasury note slipped two basis points (bps) to 0.68%.
- The Finance Committee met on October 13th and received a report from Baker Tilly regarding the results of the FY2020 audit. Baker Tilly reported the Agency received an unmodified opinion (clean audit), no material weaknesses or significant deficiencies in controls and no audit findings or concerns. The reports will be included in the October agenda package for review.

Schedule Coordination Goals

Software Development

- Technology upgrade and business rule integration for a new Market Instruction Dispatch System (MIDS) application to replace NCPA’s legacy NADS application finally rolled out in production on September 21st.
- New applications and enhancements under development
 - ABISS (Accounting, Budget, Information and Settlements System) is under development. It is a new Business Intelligence Reporting 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. Anticipated release first week of December 2020.
 - Enhancements to Prescheduler with MSG
- New Integrations into the Scheduling Suite
 - Wind Resource for East Bay Community Energy
 - Santa Clara’s Central 40 Solar Resource
 - Sonoma Clean Power with its Wind and Solar Resources. Configuration of core applications are on-going
- IS is facilitating PCWA’s transitioning into NCPA Deal Manager and Risk Manager System scheduled to rollout in January 2021
- IS is engaged in working with Accounting and its software consultant to enhance the financial reporting. Stakeholder sessions scheduled between Q4/2020 and Q1/2021.

Network

- Progress continues to be made upgrading staff to Windows 10 with over 94% 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 and Dispatch met with NID staff to review the remote shutdown procedures for South Combie Powerhouse. The procedures were then updated and sent to NID staff for further review and plans to walk through them in the coming weeks.
- Operations and Support staff are working to migrate from the HQ Cisco core switch to a new Aruba stack for better performance and support. This project is expected to be complete by the end of the calendar year.
- IS continues working with EBCE and technical contractors to begin discussions on the upcoming Altamont Wind integration project, which is expected to Go Live by end of 2020.
- With the anticipation of the CAISO's new launch of ADS October 1st, both SCADA and System Administration staff worked with Developers and Dispatchers to deploy the new Market Instruction Dispatch System (MIDS) successfully. This is an automated process to help streamline dispatch instructions from the CAISO.
- Network upgrades for the business infrastructure is 50% complete at Geo. This was an effort to replace aging equipment that is no longer supported.

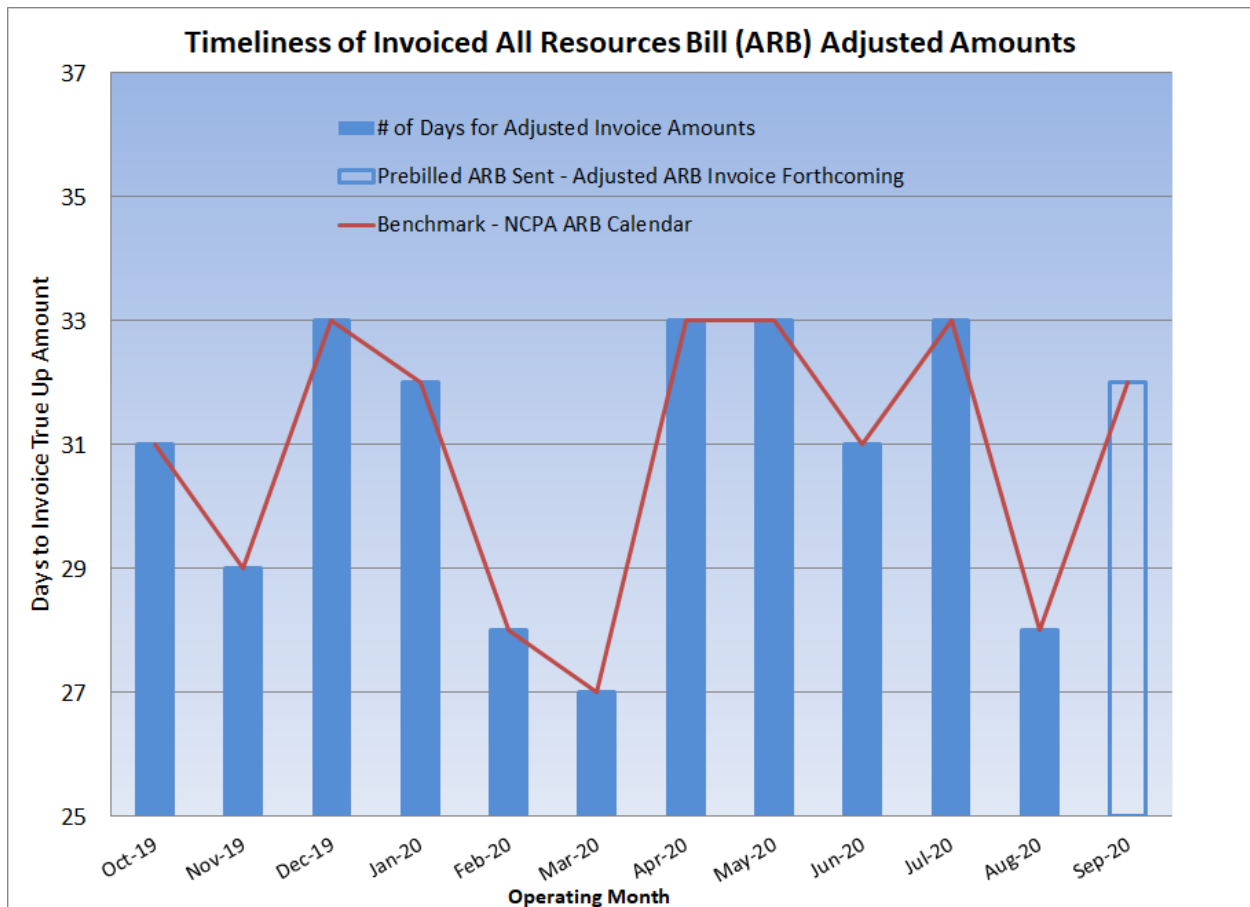
NCPA Bills & Settlements

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 September 2020 NCPA All Resources Bill (ARB) monthly invoice sent to members on August 25, 2020 contains:

- September 2020 monthly pre-billed budget/forecast amounts;
- July 2020 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- June 2020 (2nd Adjustment) NCPA Project settlement true-up and T+12 business day recalculated CAISO settlement true-up allocations;
- April 2020 (3rd Adjustment) T+55 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- October 2019 (4th Adjustment) T+9 month recalculated CAISO settlement true-up allocations;
- December 2018 (5th Adjustment) T+18 month recalculated CAISO settlement true-up allocations;
- September 2017 (6th Adjustment) T+33 month recalculated CAISO settlement true-up;
- June 2017 (7th Adjustment) T+36 month CAISO settlement true-up;



Legislative & Regulatory

Political Arena State/Federal/Western Programs

Regulatory Update

- NCPA has been awarded a Demonstration of Energy and Efficiency Developments (DEED) program grant for \$48,450 to fund half of the cost associated with a study to explore the feasibility of establishing a renewable hydrogen production facility at a site near the Lodi Energy Center (LEC). The feasibility study is a key step in the agency’s consideration of hydrogen integration to reduce the plant’s carbon footprint, support the state’s decarbonization goals, and prolong the life of the project itself. The production of green hydrogen at a facility adjacent to the LEC would be an essential element of the plant’s transition to a hydrogen blend, and importantly, would support transportation electrification along nearby traffic corridors.

State Legislative Update

- NCPA L&R staff, in collaboration with the agency’s Power Management team, have been coordinating with affected members to facilitate discussions with Senator Mike McGuire’s office and Pacific Gas & Electric regarding improvements to notifications and operational implementation of Public Safety Power Shut-off events.

Federal Legislative Update

- Last month, NCPA wrote a letter of support for Senator Feinstein's (D-CA) wildfire mitigation bill, the "Emergency Wildfire and Public Safety Act of 2020 which is now pending in the Senate Energy and Natural Resources Committee. The bill would provide additional tools and programs for the federal government to improve wildfire mitigation efforts on federal forested land. As well, NCPA has been keeping its congressional delegation closely apprised of recent grid reliability issues related to high temperature events, and continues to be a resource to policymakers on events and issues impacting the utility industry in Northern California.

Human Resources

Hires:

Jerred Whitbey was hired as a Computer Technology Analyst I at our Roseville Headquarters office effective September 12, 2020. Jerred comes to NCPA with over 7 years of professional desktop support experience and is dedicated to providing reliable technical services to his customers.

Intern Hires:

None

Promotions/Position Changes:

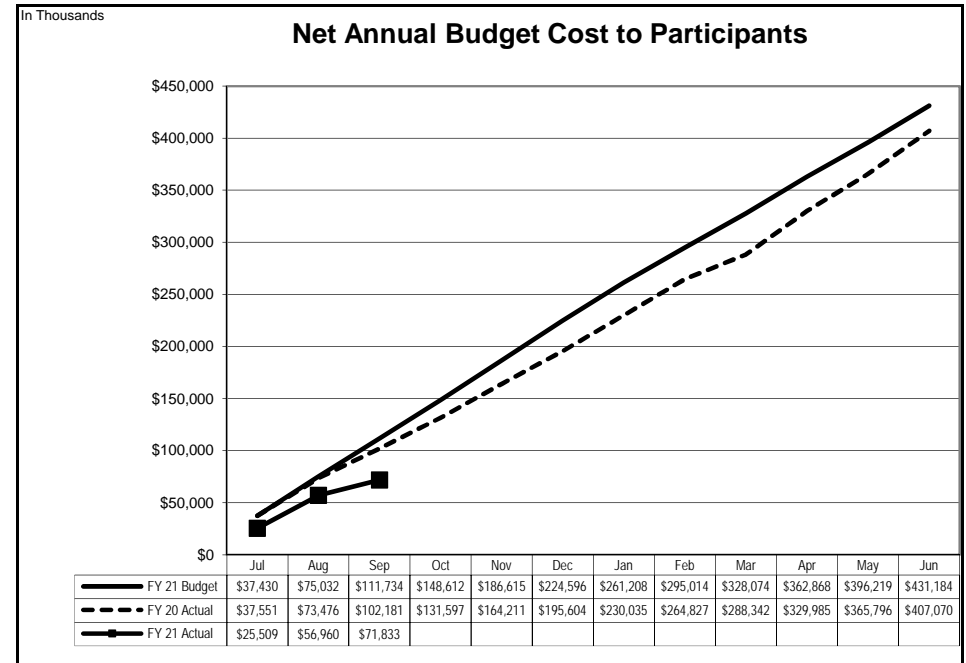
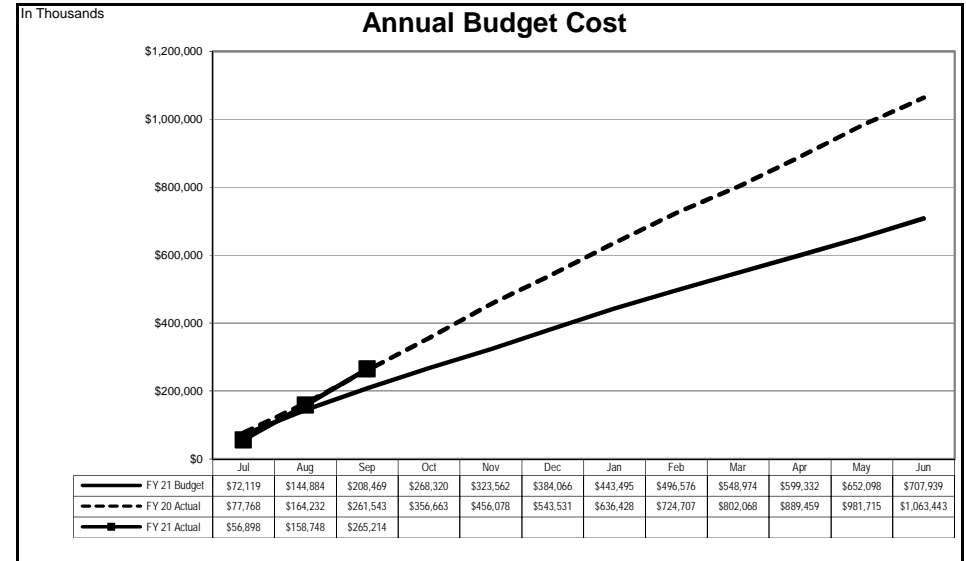
None

Separations:

None

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

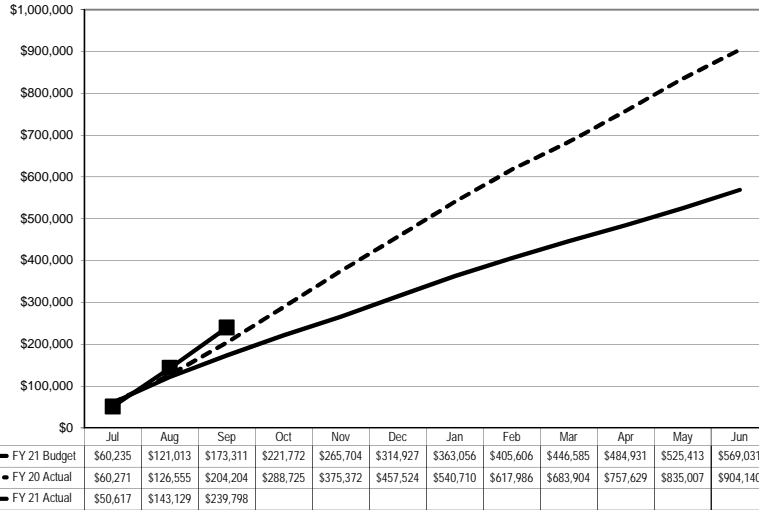
In Thousands	Program			
	Annual Budget	Actual	Under(Ovr) Budget	YTD % Remaining
GENERATION RESOURCES				
NCPA Plants				
Hydroelectric	54,260	12,590	\$ 41,670	77%
Geothermal Plant	35,561	8,386	27,175	76%
Combustion Turbine No. 1	7,884	1,669	6,214	79%
Combustion Turbine No. 2 (STIG)	7,989	2,485	5,504	69%
Lodi Energy Center	92,551	18,926	73,625	80%
	198,246	44,056	154,189	78%
Member Resources - Energy	60,056	17,274	42,782	71%
Member Resources - Natural Gas	2,442	1,038	1,404	57%
Western Resource	29,870	6,332	23,538	79%
Market Power Purchases	27,423	8,763	18,660	68%
Load Aggregation Costs - ISO	250,995	162,202	88,793	35%
Net GHG Obligations	-	133	(133)	
	569,031	239,798	329,232	58%
TRANSMISSION				
Independent System Operator	120,026	21,191	98,836	82%
MANAGEMENT SERVICES				
Legislative & Regulatory				
Legislative Representation	2,180	401	1,779	82%
Regulatory Representation	715	163	552	77%
Western Representation	716	142	574	80%
Customer Programs	477	62	414	87%
	4,088	768	3,320	81%
Judicial Action	460	81	379	82%
Power Management				
System Control & Load Dispatch	6,766	1,572	5,194	77%
Forecasting & Prescheduling	2,934	690	2,244	76%
Industry Restructuring	425	91	335	79%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,000	254	746	75%
Gas Purchase Program	82	17	65	79%
Market Purchase Project	117	24	93	80%
	11,324	2,647	8,677	77%
Energy Risk Management	230	55	174	76%
Settlements	924	172	752	81%
Integrated System Support	266	81	185	70%
Participant Pass Through Costs	1,591	158	1,433	90%
Support Services	-	263	(263)	
	18,882	4,225	14,657	78%
TOTAL ANNUAL BUDGET COST	707,939	265,214	442,725	63%
LESS: THIRD PARTY REVENUE				
Plant ISO Energy Sales	105,258	36,007	69,251	66%
Member Resource ISO Energy Sales	26,422	8,826	17,596	67%
Member Owned Generation ISO Energy Sales	69,679	27,381	42,298	61%
Customer Owned Generation ISO Energy Sales	-	24	(24)	
NCPA Contracts ISO Energy Sales	18,915	5,317	13,598	72%
Western Resource ISO Energy Sales	17,481	9,839	7,642	44%
Load Aggregation Energy Sales	-	54,991	(54,991)	
Ancillary Services Sales	3,988	1,193	2,796	70%
Transmission Sales	110	28	83	75%
Western Credits, Interest & Other Income	34,902	49,778	(14,876)	-43%
	276,755	193,382	83,373	30%
NET ANNUAL BUDGET COST TO PARTICIPANTS	431,185	71,833	\$ 359,352	83%



Annual Budget Budget vs. Actual By Major Area As of September 30, 2020

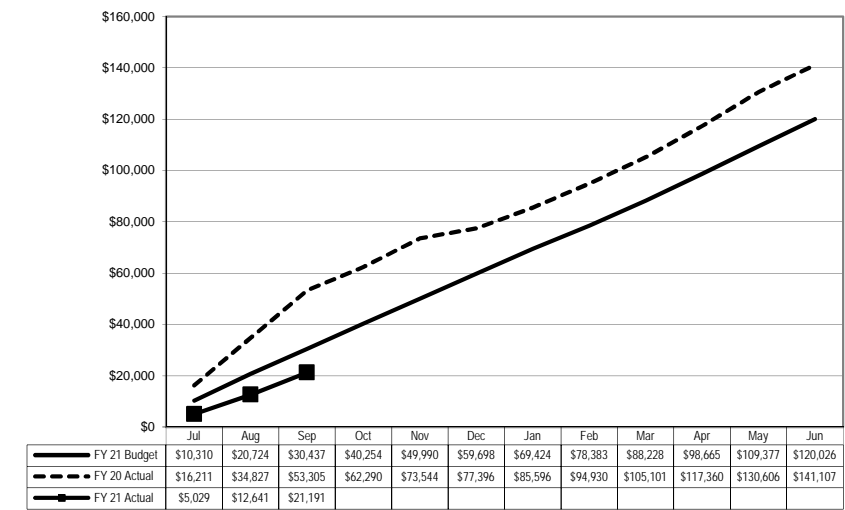
In Thousands

Generation Resources



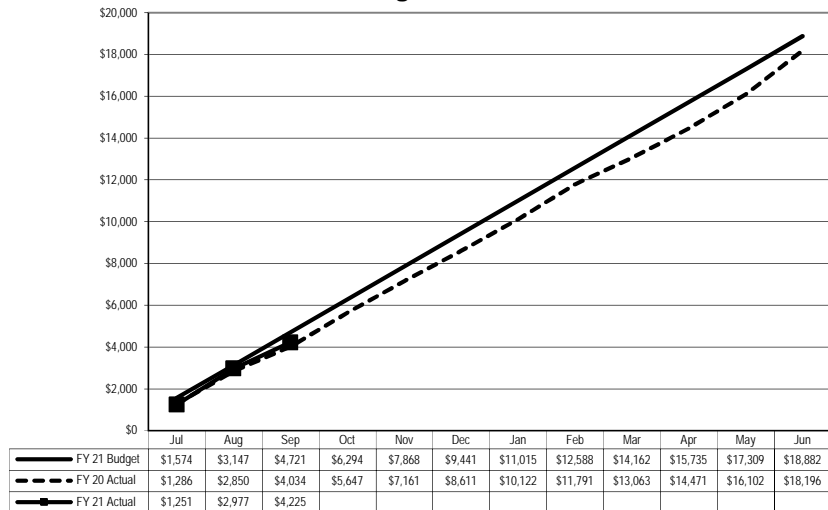
In Thousands

Transmission-ISO



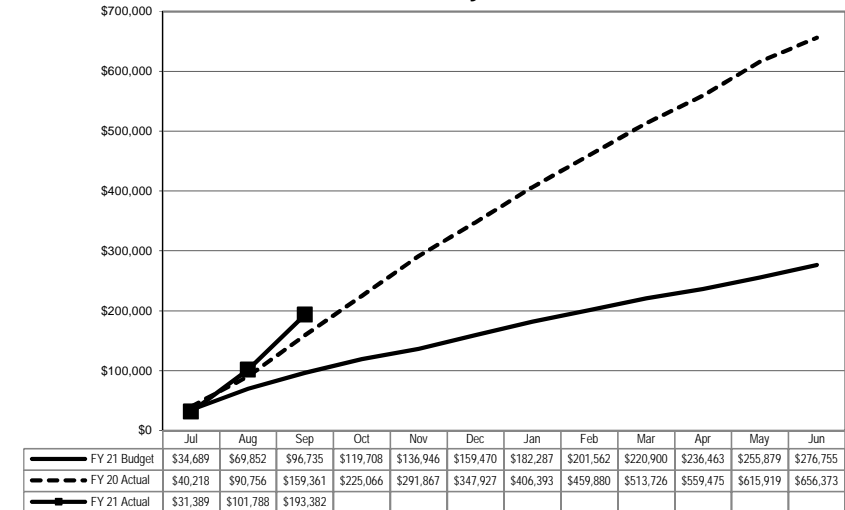
In Thousands

Management Services



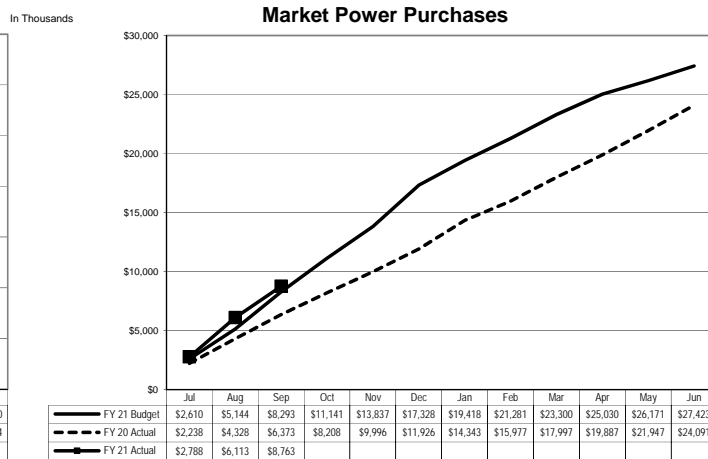
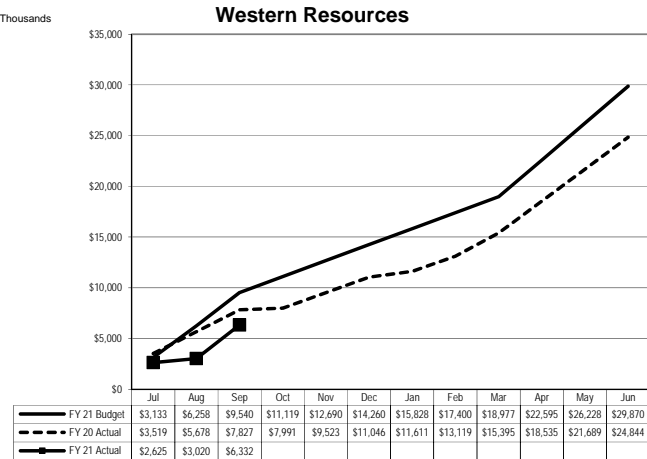
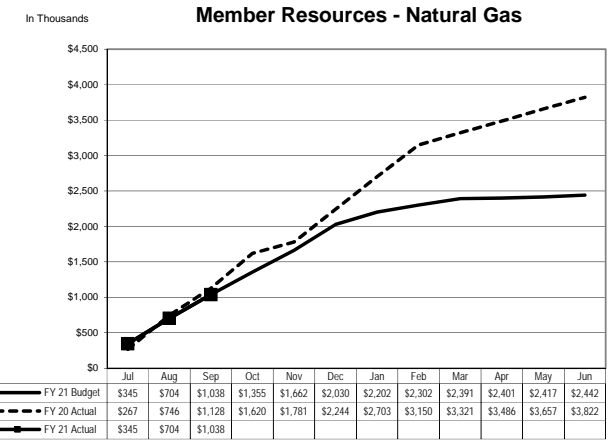
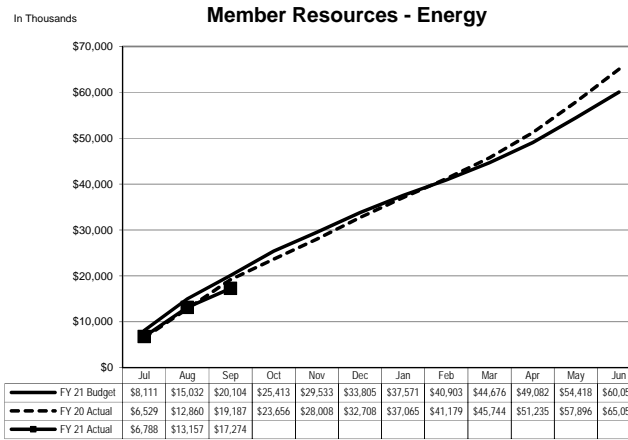
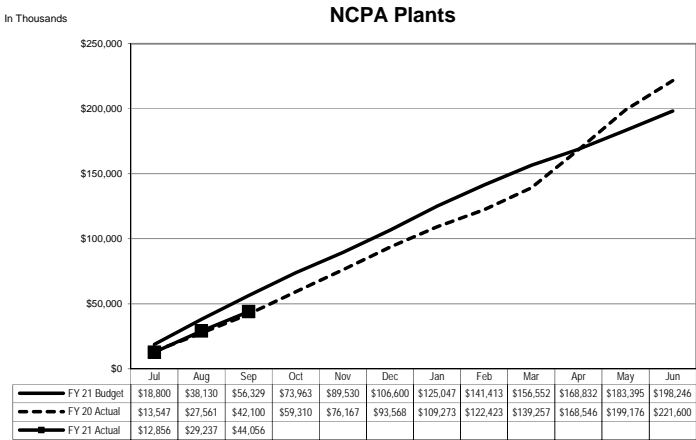
In Thousands

Third Party Revenue



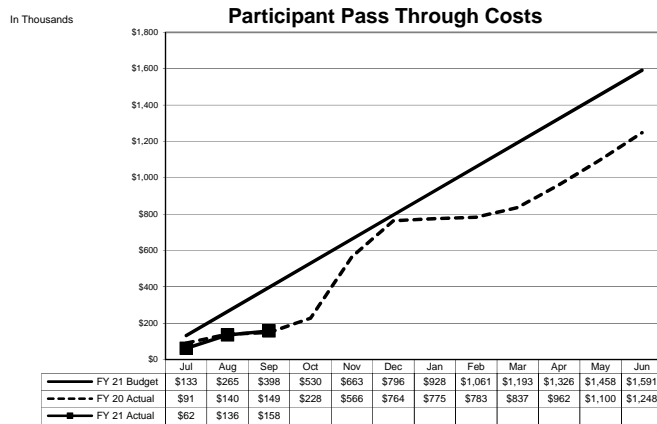
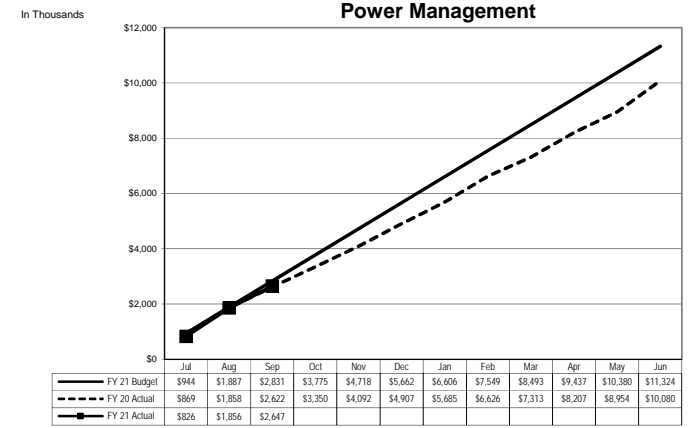
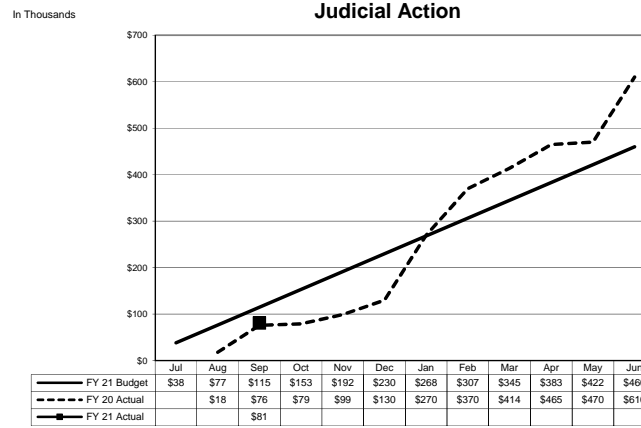
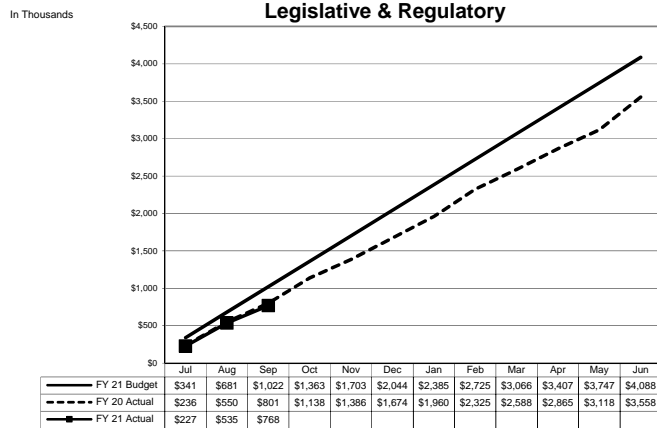
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

**Annual Budget Cost
Generation Resources Analysis By Source
As of September 30, 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 September 30, 2020



**Annual Budget Cost
Management Services Analysis By Source
As of September 30, 2020**

In Thousands

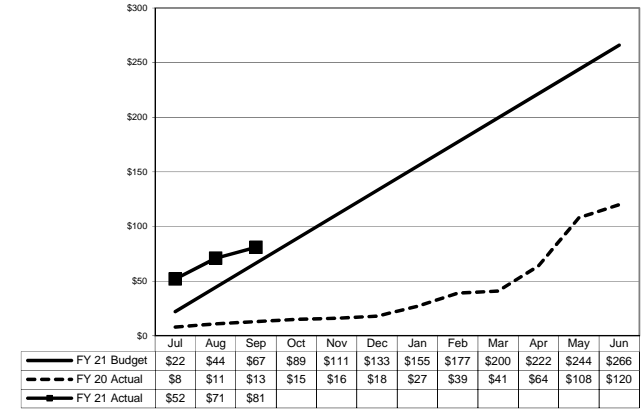
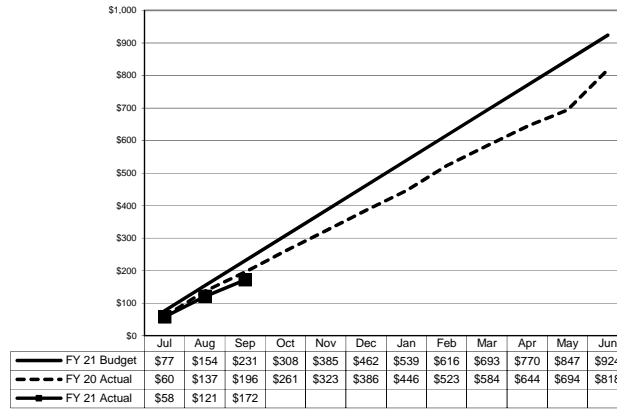
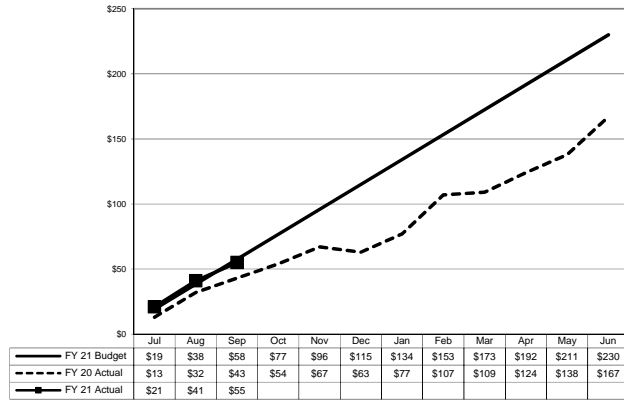
Energy Risk Management

In Thousands

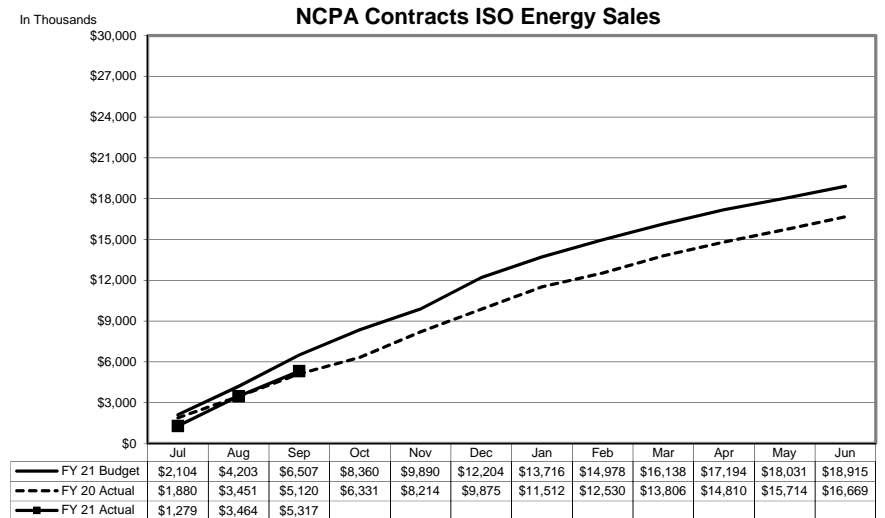
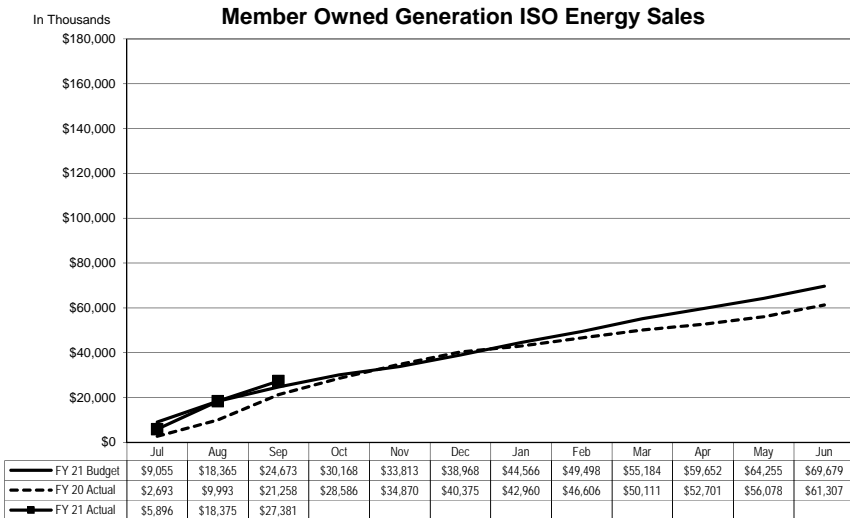
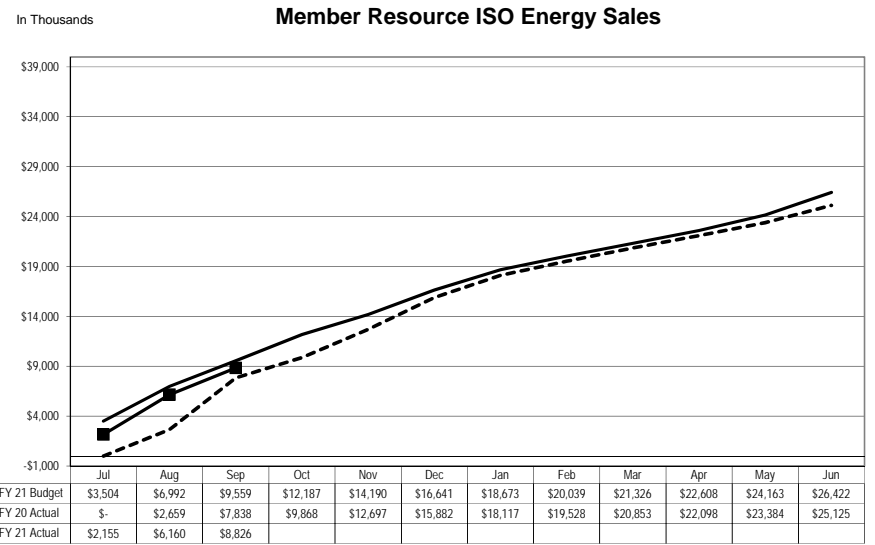
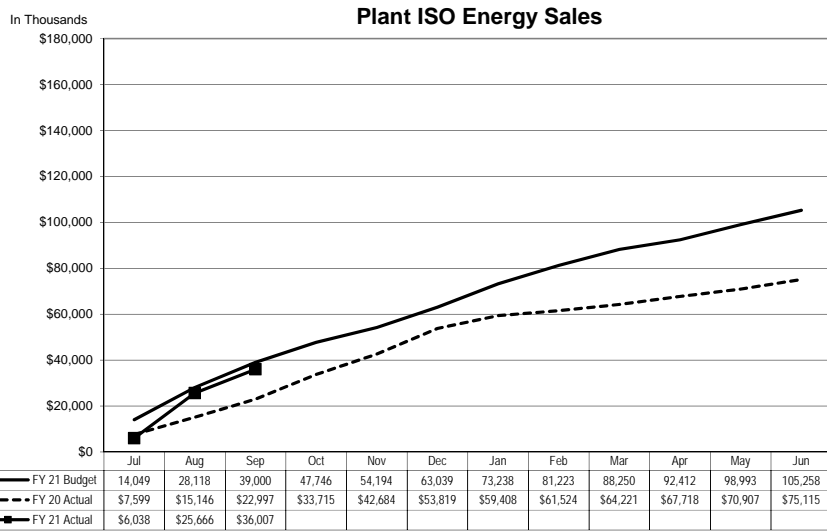
Settlements

In Thousands

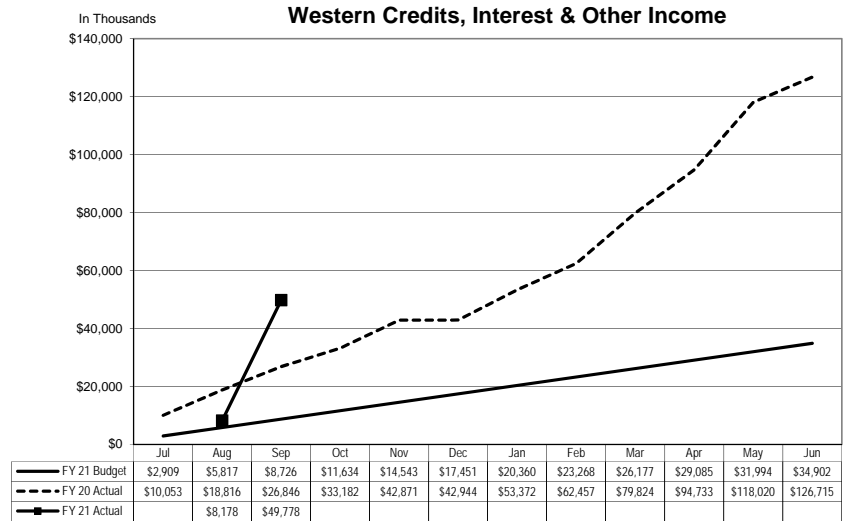
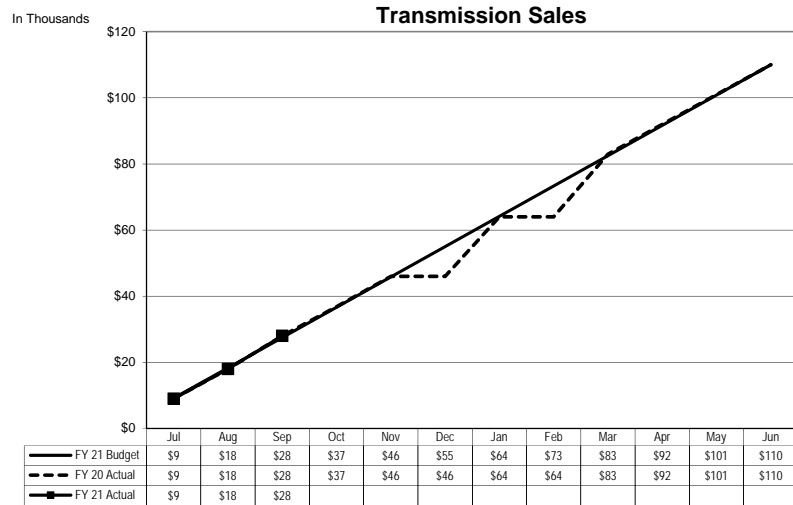
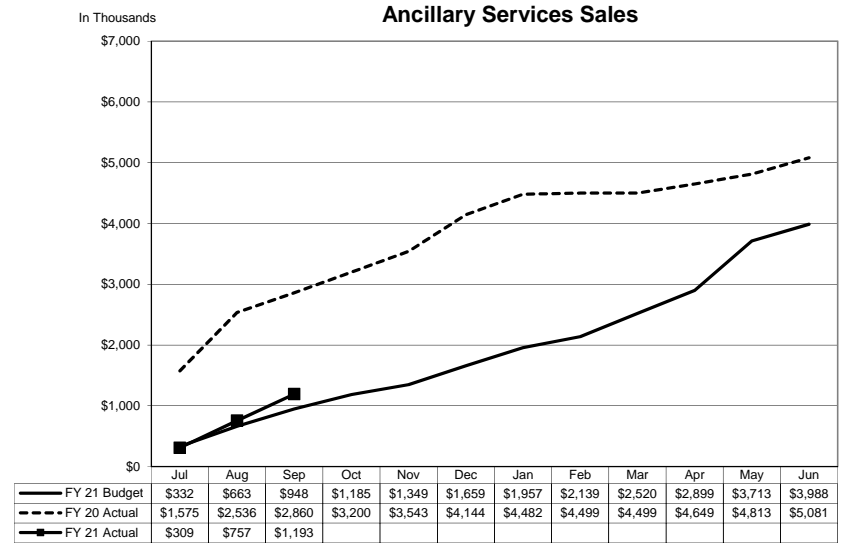
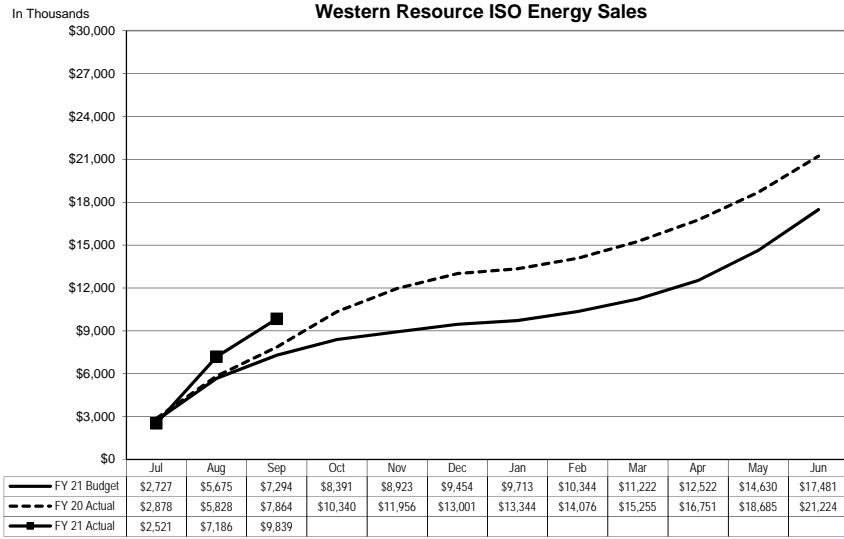
Integrated Systems Support



**Annual Budget Cost
Third Party Revenue Analysis By Source
As of September 30, 2020**



**Annual Budget Cost
Third Party Revenue Analysis By Source
As of September 30, 2020**



**Annual Budget
NCPA Generation Detail Analysis By Plant
As of September 30, 2020**

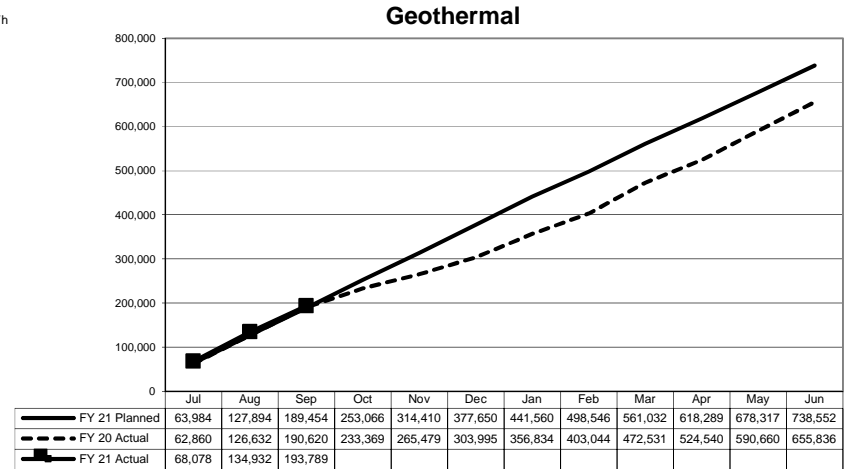
Generation Cost Analysis

\$ in thousands

	Geothermal				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
	Routine O & M	\$ 19,252	\$ 4,474	\$ 23.09	\$ 14,778
Capital Assets/Spare Parts Inventories	2,585	532	2.74	2,053	79%
Other Costs	8,239	1,876	9.68	6,364	77%
CA ISO Charges	534	267	1.38	267	50%
Debt Service	4,950	1,238	6.39	3,713	75%
Annual Budget	35,561	8,386	43.28	27,175	76%
Less: Third Party Revenue					
Interest Income	382	37	0.19	346	90%
ISO Energy Sales	25,811	8,039	41.48	17,772	69%
Ancillary Services Sales	-	-	-	-	-
Effluent Revenues	750	(192)	(0.99)	942	126%
Misc	113	28	0.15	85	75%
	27,056	7,912	40.83	19,144	71%
Net Annual Budget Cost to Participants	\$ 8,506	\$ 474	\$ 2.45	\$ 8,032	94%
Net Generation--MWh @ Meter	738,552	193,789			
\$/MWh (A)	\$ 4.81	\$ (3.94)			

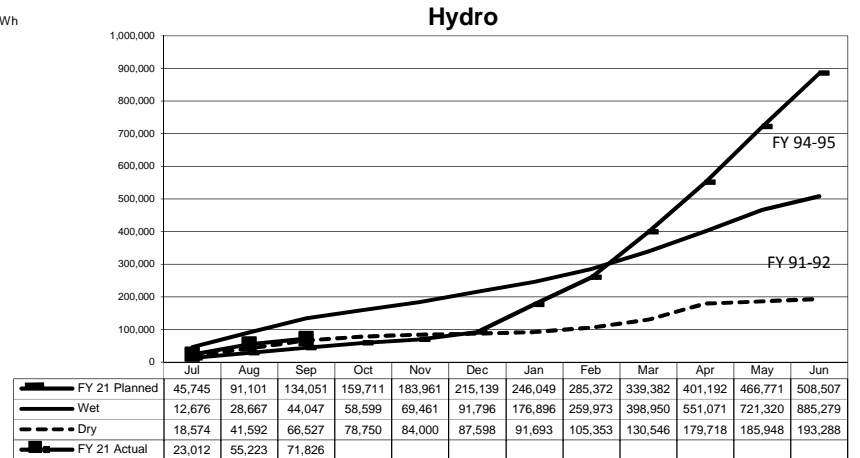
MWhs Generated

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
	Routine O & M	\$ 9,570	\$ 1,638	\$ 22.80	\$ 7,932
Capital Assets/Spare Parts Inventories	365	1,201	16.72	(837)	-229%
Other Costs	8,323	767	10.68	7,556	91%
CA ISO Charges	2,615	638	8.88	1,978	76%
Debt Service	33,388	8,347	116.21	25,041	75%
Annual Budget	54,260	12,590	175.29	41,670	77%
Less: Third Party Revenue					
Interest Income	670	52	0.73	618	92%
ISO Energy Sales	22,147	7,765	108.11	14,382	65%
Ancillary Services Sales	2,276	795	11.07	1,481	65%
Misc	-	-	-	-	-
	25,094	8,612	119.91	16,481	66%
Net Annual Budget Cost to Participants	\$ 29,167	\$ 3,978	\$ 55.38	\$ 25,189	
Net Generation--MWh @ Meter	508,507	71,826			
\$/MWh (A)	\$ (8.30)	\$ (60.83)			

In MWh



Footnotes:

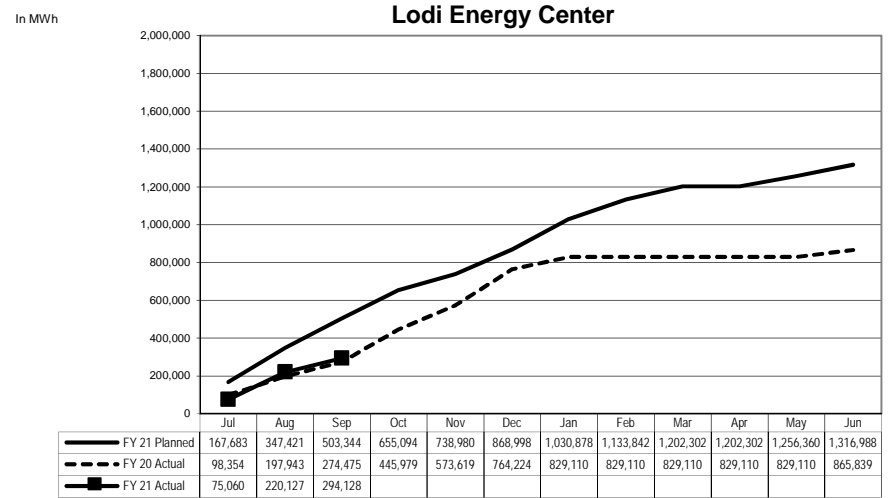
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

**Annual Budget
NCPA Generation Detail Analysis By Plant
As of September 30, 2020**

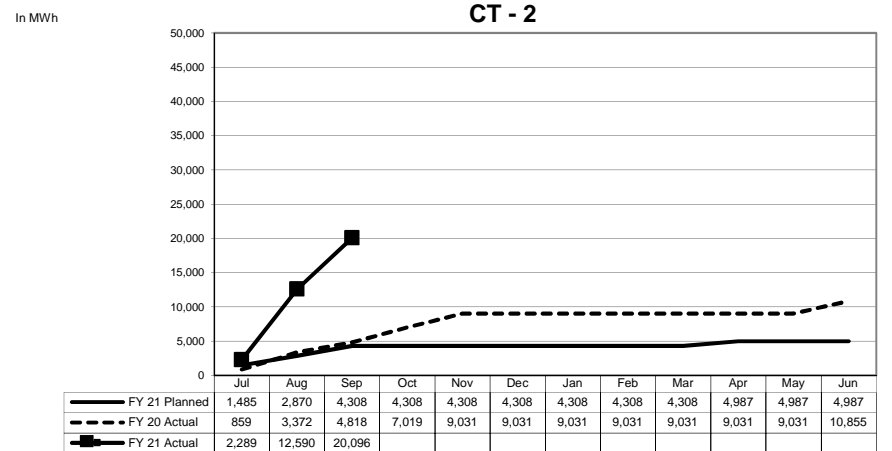
Generation Cost Analysis

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 14,463	\$ 3,163	\$ 10.75	\$ 11,301	78%
Fuel	32,956	6,972	23.70	25,983	79%
CA ISO Charges and Energy Purchases	3,831	689	2.34	3,141	82%
Capital Assets/Spare Parts Inventories	2,906	783	2.66	2,123	73%
Other Costs	12,372	812	2.76	11,560	93%
Debt Service	26,024	6,506	22.12	19,518	75%
Annual Budget	92,551	18,926	64.34	73,625	80%
Less: Third Party Revenue					
Interest Income	386	64	0.22	321	83%
ISO Energy Sales	55,590	16,619	56.50	38,972	70%
Ancillary Services Sales	1,712	228	0.77	1,484	87%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	8,463	-	-	8,463	100%
Misc	-	(1,391)	(4.73)	1,391	0%
	66,151	15,520	52.77	50,631	77%
Net Annual Budget Cost to Participants	\$ 26,400	\$ 3,405	\$ 11.58	\$ 22,994	87%
Net Generation--MWh @ Meter	1,316,988	294,128			
\$/MWh (A)	\$ 0.29	\$ (10.54)			

MWhs Generated



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,584	\$ 436	\$ 21.72	\$ 1,147	72%
Fuel and Pipeline Transport Charges	910	562	27.94	348	38%
Capital Assets/Spare Parts Inventories	37	4	0.18	33	90%
Other Costs	593	116	5.75	477	81%
CA ISO Charges	40	161	8.03	(121)	-299%
Debt Service	4,826	1,207	60.04	3,620	75%
Annual Budget	7,989	2,485	123.66	5,504	69%
Less: Third Party Revenue					
Interest Income	109	12	0.61	96	89%
ISO Energy Sales	399	1,879	93.51	(1,480)	-371%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,821	232	11.53	1,589	87%
GHG Allowance Credits	43	-	-	43	100%
Misc	-	-	-	-	0%
	2,371	2,123	105.65	248	10%
Net Annual Budget Cost to Participants	\$ 5,618	\$ 362	\$ 18.02	\$ 5,256	94%
Net Generation--MWh @ Meter	4,987	20,096			
\$/MWh (A)	\$ 158.75	\$ (42.02)			



Footnotes:

**Annual Budget
NCPA Generation Detail Analysis By Plant
As of September 30, 2020**

Generation Cost Analysis

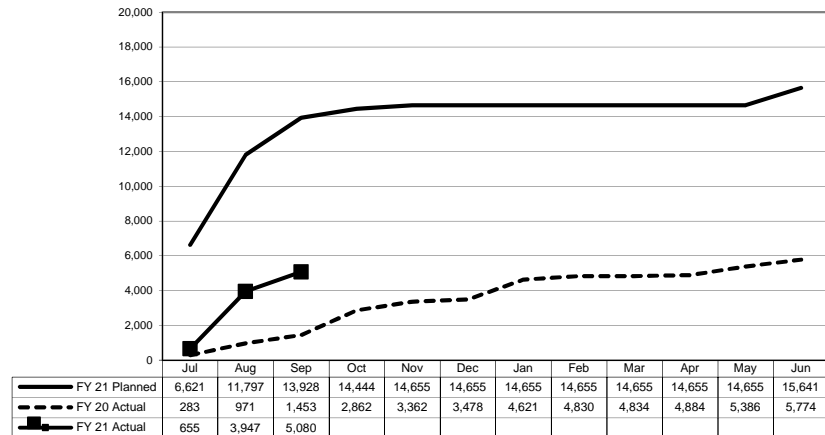
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,320	\$ 672	\$ 132.29	\$ 1,648	71%
Fuel and Pipeline Transport Charges	937	304	59.93	632	68%
Capital Assets/Spare Parts Inventories	3,667	325	63.98	3,342	91%
Other Costs	866	180	35.53	685	79%
CA ISO Charges	94	187	36.87	(93)	-99%
Debt Service	-	-	-	-	-
Annual Budget	7,884	1,669	328.60	6,214	79%
Less: Third Party Revenue					
Interest Income	-	10		(10)	
ISO Energy Sales	1,311	1,705	335.75	(394)	-30%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	16	3.08	(16)	0%
	1,311	1,731	338.82	(420)	-32%
Net Annual Budget Cost to Participants	\$ 6,572	\$ (62)	\$ (12.24)	\$ 6,634	101%
Net Generation--MWh @ Meter	15,641	5,080			
\$/MWh (A)	\$ 420.19	\$ (12.24)			

MWhs Generated

In MWh

CT - 1



Footnotes: