



Northern California Power Agency
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BUSINESS PROGRESS REPORT

2022

March

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Generation Costs & Reliability

Combustion Turbine Project

Unit Operation for February 2022

Unit	Availability		Production			Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	5,993.4	MWh	CAISO / CAISO
	92.2%	38.4%	Unit 2	3,809.6	MWh	
Curtailments, Outages, and Comments:						
Unit 1:	2/18 @ 18:28 - 19:11; EGT Temp Indication Trouble 2/20 @ 14:16 - 14:40; Diesel Cranking Engine Trouble 2/25 @ 11:14 - 14:22; Lube Oil Leak, OMS 11412633 2/26 @ 23:35 - 2/28 @ 23:59; Oil Containment Fire, OMS 11417957					
Unit 2:	2/2 @ 07:00; Generator AVR Failed. Unit available for Day Ahead bidding; not available for Real Time Dispatch.					
Unit	Availability		Production			Reason for Run
CT1 Lodi	100.0%		0.0 MWh			CAISO
Curtailments, Outages, and Comments:						
Normal Operation.						
Unit	Availability		Production			Reason for Run
CT2 STIG	100.0%		0.0 MWh			CAISO
Curtailments, Outages, and Comments:						
Normal operation.						
Unit	Availability		Production			Reason for Run
LEC	96.6%		29,581 MWh			CAISO
Curtailments, Outages, and Comments:						
Normal Operation.						

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for February 2022

Unit	Availability		Net Electricity Generated/Water Delivered		Out-of-Service/Descriptors
Unit 1	97.99	%	18,721	MWh	U1 was OOS 2/4/22 0300 until 2/4/22 1640 for stretford system repairs.
Unit 2	97.99	%	*18,176	MWh	U2 was OOS 2/4/22 0300 until 2/4/22 1635 for stretford system repairs.
Unit 3	N/A	%	N/A	-	Unit 3 remains out of service.
Unit 4	100	%	26,337	MWh	U4 had no outages for the month
Southeast Geysers Effluent Pipeline	84	%	53.3	mgallons	Average flow rate: 1,202 gpm
Southeast Solar Plant	N/A		80,319	KWh	Year-to-date KWh: 1,175,809
Bear Canyon Pump Station Zero Solar	N/A		69,919	KWh	Year-to-date KWh: 1,585,472

* Accounts for an additional 440 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for February 2022

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	100%	13751 MWh	CV Unit 1 – No Outages
Collierville Unit 2	100%	7206 MWh	CV Unit 2 – No Outages
Spicer Unit 1	89.3%	0 MWh	NSM1- Out 2/20/22 to 2/23/22 from 1304 to 1258 for 21kV Line Outage
Spicer Unit 2	89.3%	0 MWh	NSM2- Out 2/20/22 to 2/23/22 from 1304 to 1258 for 21kV Line Outage
Spicer Unit 3	89.18%	113 MWh	NSM3- Out 2/20/22 to 2/23/22 from 1304 to 1349 for 21kV Line Outage

Operations & Maintenance Activities:

- CMMS work orders
- Repaired McKays foundation gallery drain 13MD3 per DSOD request
- Prepared USFS framework response for McKays sediment relocation regarding SUP revision
- Prepared Hydro 2023 budget for Facilities Committee

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

- There were no vehicle, Cal OSHA recordable incidents, or Lost Time accidents in the month of February.
- 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 February 26, 2022.
- The “CT Group” column reflects the combined safety numbers of all CT employees. Beginning with the November 2009 report, the CT Group Column also includes Lodi Energy Center staff.

February 2022 Generation Services Safety Report

	Hydro	GEO	CT Group *	NCPA HQ **
Cal OSHA Recordable (this month)	0	0	0	0
Cal OSHA Recordable (calendar year)	0	0	0	0
Days since Recordable	503	127	2,518	3,502
Work Hours Since Last Recordable	42,539	24,507	378,127	2,784,415
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	5,252	2,381	10,422	6,515
Work Hours without LTA	475,109	188,717	788,671	2,406,433
Vehicle Incident (month)	0	0	0	0
Vehicle Incident (calendar year)	0	0	0	0

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

** NCPA HQ: Roseville employees at the Main Office

Data originates from OSHA logs, HR records and payroll information.
Days and Hours are calculated through pay period ended February 26, 2022.

Power Management/NCPA Market Results

Dispatch and Schedule Coordination

- NCPA Dispatch and Schedule Coordination Center safely, reliably, and economically schedules, monitors, and manages NCPA and NCPA member power resources and loads 24 hours per day, 7 days per week on a continuous basis. This process includes balancing MSSA loads and resources on a 5-minute basis, optimizing NCPA resources and minimizing ISO costs.
- NCPA MSSA Load Data:

Current Year 2022 Data

	February 2022		Calendar Year 2022	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	313.28 2/22 @ 1900	169,429	322.82 1/3 @ 1800	360,580
SVP	546.08 2/10 @ 1400	335,969	546.08 2/10 @ 1400	700,372
MSSA	840.25 2/22 @ 1900	505,398	841.28 1/3 @ 1800	1,060,952

Last Year 2021 Data*

	February 2021		Calendar Year 2021	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	311.11 2/3 @ 1900	167,670	440.56 6/17 @ 1700	358,640
SVP	483.99 2/23 @ 1600	298,216	591.96 8/27 @ 1500	627,708
MSSA	776.55 2/11 @ 1900	465,886	1025.46 6/17 @ 1700	986,348

* Last year's data added for comparison purposes only

System Peak Data

	All Time Peak Demand	2022 Peak Demand
NCPA Pool	517.83 MW on 7/24/06 @ 1500	322.82 1/3 @ 1800
SVP	591.96 MW on 8/27/21 @ 1500	546.08 2/10 @ 1400
MSSA	1070.79 MW on 9/1/17 @ 1700	841.28 1/3 @ 1800

- 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		
	February 2022	Calendar Year 2022
MSSA % Within the Band	98.13%	98.01%

- There were no PG&E PSPS events.

- CAISO Oversupply Potential Notifications:
 - 2/13/22, HE11-13
 - 2/19/22, HE11-15
 - 2/21/22, HE12-15
 - 2/26/22, HE11-15
- There were no CAISO Real-time Contingency Dispatches (RTCD)

Pooling, Portfolio Planning & Forecasting

- NCPA Pool load during February 2022 was 169,430 MWh versus the budget forecast of 174,904 MWh, resulting in a forecast error of 3.23%. The forecast error this month was mainly due to lack of heating load. The current weather outlook for March 2022 is for above normal temperatures and below average rainfall. The Pool's March load forecast is 185,616 MWh compared with extrapolated actuals of 182,641 MWh as of March 14, 2022.
- Lodi Energy Center (LEC) ran 131 hours out of a possible 672 producing 29,584 MWh. Natural gas and power prices are significantly higher than a year ago due to the low reservoir levels throughout the state and the situation in Ukraine. LEC is on outage through May.
- During February 2022, 0.22" of rain was recorded at the Big Trees gauge. February average rainfall at Big Trees is 6.90". New Spicer Meadows storage increased by just over 5,500 acre feet in February, mainly due some melt and maintaining minimum reservoir releases under 25cfs.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has remained at \$300/MWh. Releases from NSMR are just enough to maintain the November 1st winter minimum Big Trees flows of 100 CFS.
- New Spicer Meadows storage as of February 28, 2022 was 74,297 acre feet. The historical average storage at the end of February is 75,340 acre feet. As of March 14th, storage was 77,069 acre feet.
- Combined Calaveras Project generation for the Pool in February 2022 totaled 10,730 MWh, up from 9,628 MWh in January 2022. The Pool's 10,730 MWh in February 2022 was lower than its forecast due to basically no precipitation in February.
- Western Base Resource (BR) deliveries for the Pool during February 2022 were 6,343 MWh. Displacement program energy totaled 0 MWh. The Pool's share of expected total delivery from the Western Base Resource for March 2022 is 8,500 MWh.
- The PG&E Citygate gas index averaged \$5.10 / MMBtu during the month of February as compared to an average of \$5.24 for January. March's current average price is \$5.36. Both NYMEX gas and basis prices increased slightly due to the cold spells in the eastern half of the United States. The April 2022 PG&E Citygate forward price is \$5.30 / MMBtu.

- Day-Ahead PG&E DLAP electricity prices for February averaged \$49.95 / MWh On-Peak and \$47.98 Off-Peak, with a high of \$113.37. For the dates of March 1st through the 15th, 2022 prices have averaged \$46.66 On-Peak and \$44.48 Off-Peak. The forward prices for April are \$43.83 On-Peak and \$47.40 Off-Peak. These forwards are unique in that the Off-Peak price is higher than On-Peak due to the supply of renewables in the daylight hours.

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 May 2022:
 - Monthly System Resource Adequacy Demonstration (filed March 17, 2022)
 - Monthly Supply Plan (filed March 17, 2022)

Industry Restructuring

NCPA is actively participating in a number of CAISO stakeholder initiatives on behalf of the members. The following is a brief description of key active initiatives:

Extended Day-Ahead Market

- Debrief summarizing Resource Sufficiency Evaluation, Transmission, and GHG working group discussions was held on February 16th.
 - RSE - Discussed and vetted capacity tests, daily energy and start limitations, timing requirements, treatment of VERs, counting of storage resources, demand response treatment, and what demand response forecast is used. Next focus will be on treatment and qualification of different types of import arrangements for resource sufficiency, consequences for failing RSE, and confidence of EDAM transfers.
 - Transmission Commitment – Discussed defining quality of transmission, modeling energy transfers and exports, existing transmission uses, risks, timing of availability, duration of availability, compensation for buckets 2 and 3, and congestion rent allocation. The working group is reaching consensus on timing and availability. Transmission rights of different durations are made available to market via an automated mechanism by 9AM before the EDAM run. Upcoming topics of discussion are compensation, types of transmission rights that can be made available to the market, and how intertie bidding will function in an EDAM.
 - GHG Accounting and Costs - Discussed compliance area, costs being optimized, multiple GHG zones, and integration with other proposed GHG tracking systems. Upcoming discussion topics include fleshing out resource-specific or unspecified resource market designs, GHG cost settlement, roll-over to real-time market, and reporting results.
- The next working group debrief meeting including summaries on all three topics will be held March 18. A straw proposal is scheduled for publication on April 15.

- EDAM is a voluntary expansion of CAISO's real-time Western Energy Imbalance Market into the Day Ahead timeframe. EDAM is not equivalent to becoming a full member of CAISO or any other RTO. Transmission control, planning, and cost allocation remains with the member entity and it is unlikely that EDAM will result in a single, unified transmission rate across the EDAM footprint. Resource Adequacy and Resource Planning will continue to remain with member entities and their respective regulating authorities. EDAM is not intended to result in any changes to state regulatory authority. EDAM benefits include potential production cost savings through more efficient day-ahead hourly trading, day-ahead unit commitment, use of transmission across larger footprint, more cost-effective day ahead solution serving load with increased load and generation diversity, and lastly potential environmental benefits.
- Common design principles/scope are voluntary participation requires minimum commitment, maximize the amount of transmission made available to EDAM, while respecting the existing OATT framework and contractual commitments, provide certainty to the EDAM market participants as to the amount of participating load and resources, utilize congestion rent allocation between balancing authority areas to hold transmission customers harmless without creating new uplifts, congestion rent allocation distribution to LSEs and transmission customers in an equitable and implementable manner, achieve high level of confidence in EDAM transfers by considering them as firm transfers serving load, account for GHG costs of EDAM transfers equitably, stay consistent with state policies of different participating entities, and consider price formation concepts.
- EDAM policy will be developed in 2022, implemented in 2023, and will become open for participating in 2024.

Resource Adequacy Enhancements

- CAISO delayed further work on RA Enhancements indefinitely in order to align bid insertion, must offer obligation, and flexible RA proposals with DAME and EDAM. No schedule is currently available other than fall 2023 expansion.

Day-Ahead Market Enhancements

- CAISO held a workshop on March 2, and presented on the following: a new proposal to have imbalance reserve stepped penalty price in both scheduling and pricing runs, Market Power Mitigation, Accounting for energy offer price in upward capacity procurement and Resource Adequacy real-time must offer obligation.
 - Imbalance reserves - proposed option relaxes IRU procurement as energy prices rise. Allows bid-in demand to clear instead of scheduling incremental IRU. It prices IRU requirement relaxation consistent with priority in scheduling run in order to address efficiency and incentive issues. The proposal could result in clearing exports while reducing IRU procurement. Such exports could be curtailed in real-time if a large amount uncertainty materializes.
 - Market Power Mitigation - CAISO covered various Imbalance Reserve deployment scenarios including changes in demand and transmission constraint requirements and explained that Energy bids are mitigated if they provide counter flow to uncompetitive binding transmission constraints in the base scenario and the IRU/IRD deployment scenarios and that mitigating Energy bids

also mitigates IRU/IRD opportunity costs. Reliability Capacity Up bids should be mitigated if they provide counter flow to uncompetitive binding transmission constraints. The bid ceiling and floor for new capacity products will be tied to existing ancillary service penalty prices and flexible ramping product demand curve. The imbalance reserve bid range will be from \$0 to \$247 and the Reliability Capacity bid range will be from \$0 to \$250. CAISO mitigates energy offers to the greater of what it calls “default energy bids” or the competitive locational marginal price. CAISO will not mitigate imbalance reserve bids; no longer need to develop default availability bids for imbalance reserves. CAISO proposes to use the 90th percentile historical non-RA RUC bid as a default availability bid for reliability capacity. CAISO would mitigate reliability capacity bids to the greater of a competitive reliability capacity price or that default availability bid.

- Accounting for energy offer price in upward capacity procurement – Policy objective is to prevent opportunities for high-energy-cost resource from routinely being awarded capacity payments and rarely dispatched for energy in the real-time market. The objective is not to minimize energy costs of resources awarded Reliability Capacity Up and/or Imbalance Reserve Capacity Up. CAISO proposes to limit RT energy bid price to P97.5 price, disqualify the resource if accompanied by day ahead energy bids with any segment above P97.5 cap, or do not limit energy bids.
- RA Real-Time Must Offer Obligation – CAISO proposes to make real-time must offer obligations optional by Local Regulatory Authority.
 - CAISO would no longer enforce bid insertion or real-time must-offer obligations on unscheduled resources
 - LRAs can obligate its load-serving entities to require real-time must-offers in their supply contracts
 - CAISO will provide LRAs with data to help them enforce.
- Next steps: 3rd revised straw proposal out April 6, Draft Final Proposal in early July, Final Proposal in early August, September 2022 ISO Board of Governors Decision.

Transmission Access Charge Structure Enhancements

- Initiative draft final proposal is complete and the initiative is currently on hold pending developments from Extend Day Ahead Market to EIM 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. 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 LFMS 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-21	90,622	64,857	(25,765)	\$1,943,287	\$ 29.96	\$ 0.50	\$ 48.51
Aug-21	67,967	54,903	(13,064)	\$1,943,287	\$ 35.39	\$ (0.06)	\$ 49.58
Sep-21	28,320	34,068	5,748	\$1,849,800	\$ 54.30	\$ (0.13)	\$ 50.66
Oct-21	22,710	25,992	3,282	\$759,202	\$ 29.21	\$ 0.59	\$ 49.01
Nov-21	8,712	-	(8,712)	\$759,202	\$ 87.14	\$ -	\$ 49.25
Dec-21	7,036	1,094	(5,942)	\$759,202	\$ 693.97	\$ 1.31	\$ 50.71
Jan-22	5,620	880	(4,740)	\$759,202	\$ 862.73	\$ -	\$ 51.22
Feb-22	14,806	6,343	(8,463)	\$759,202	\$ 119.69	\$ 0.02	\$ 50.12
Mar-22	21,003	-	0	\$759,202	\$ 36.15	\$ -	\$ 48.97
Apr-22	55,270	-	0	\$1,735,370	\$ 31.40	\$ -	\$ 44.71
May-22	90,965	-	0	\$1,735,370	\$ 19.08	\$ -	\$ 38.17
Jun-22	86,068	-	0	\$1,735,370	\$ 20.16	\$ -	\$ 35.10

1/ As forecasted in NCPA 21/22 Budget
2/ = (Western Cost + Restoration Fund)/BR Delivered, for Pool Participants only.
3/ = (MEEA LMP - PG&E LAP LMP) using public market information (i.e. not settlement quality).
4/ Based on BR Delivered (Actual) when available and BR Forecast in all other cases. Includes CAISO LMP impact.

- NCPA Pool received 6,343 MWh of Base Resource (BR) energy in February 2022. There was zero MWh of Displacement Energy as the program is temporary suspended due to limited base resource availability forecast. At this time displacement program is suspended from November 2021 through March 2022. The displacement program is scheduled to resume operations on April 1, 2022.
- Pool Members' total savings under Market Efficiency Enhancement Agreement (MEEA) was \$110 in February 2022 as there were minimal differences between Captain Jack and MEEA for the BR generation days and hours. The cumulative MEEA savings for FY2022 is approximately \$42,400 for July 2021 through February 2022.

Interconnection Affairs

PG&E Update

TO-18 Rate Case

- On October 15, 2020 FERC issued a ruling on the PG&E Transmission Owner Tariff 18 Filing.
- The ruling came over four years after the initial filing and over two years from an initial favorable decision back in 2018.
- The ruling is not the end of TO-18 as FERC has requested further testimony and briefs on ROE matters. The initial decision reduced ROE from 10.40% to 9.13%.
- Once ROE is decided, TO-18 rates will be effective for a 12-month period from March 1, 2017 – Feb 28, 2018.
- TO-19, which was settled at a TRR of 98.85% of TO-18 will be effective for a 14-month period from March 1, 2018 – April 30, 2019.
- FERC denied all PG&E request for rehearing on non-ROE issues and directed further briefing on ROE. PG&E has appealed and NCPA has intervened in that appeal. Paper hearing on ROE awaiting FERC order. Appeal of non-ROE issues pending in DC Circuit Court.

Permanent Inter-Tie Switch Between Geo Plants 1 and 2

- The permanent no-load intertie switch has been approved by the CAISO. The switch can be used when either the Fulton or Lakeville line is out of service to combine the outputs of Geo Plant 1 and Plant 2.
- NCPA and PG&E operating procedure is complete.
- Use of the intertie switch is still pending CEC approval. CEC application submission is complete and CEC has also issued initial data request. Interim solution if necessary will be to use the temporary jumpers as in Jan of 2020.

Cotenancy Agreement

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

- In Feb 2021, PG&E came across an opportunity to engage in mediation with CDWR to address the cost of removal issue. NCPA has agreed to join the mediation with PG&E.

PG&E RY2022 Formula Rate

In July 2021, PG&E proposed the following RY2022 transmission rates:

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

Major contributing factors were:

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

Stakeholders/Joint Interveners (TANC, CPUC, CDWR, and Six Cities) engaged in the 2022 TRR review process to negotiate with PG&E over amounts found to be excessive or unsupported.

The following PG&E Area only rates became effective Jan 1, 2022:

PG&E Wholesale Rates	As Filed RY 2022	Effective RY 2022	Delta	% Change
Revenue Requirement	\$2.6B	\$2.6B	\$0.00	0
HV TAC (\$/MWH)	\$12.80	\$12.62 ¹	\$0.18	1%
LV TAC (\$/MWH)	\$17.76	\$17.51	\$0.25	1%

Several items are still pending/outstanding. Notable items are the tower coating program where PG&E wishes to capitalize expenditures and the RTO adder appeal. TANC estimates a favorable ruling in the RTO adder appeal would reduce the access charge by about \$0.38/MWh.

Note¹: The HV rate is PG&E specific and does not take into account all regional IOU revenue requirements and loads.

CAISO 20 Year Transmission Outlook Comments

The Draft 20-Year Transmission Outlook estimates \$30.5 billion of new transmission investment will be needed to integrate resources to achieve SB 100's "Starting Point" scenario.

The Bay Area Municipal Transmission group (BAMx) estimates, in comments it filed in this stakeholder initiative on February 22, 2022, that CAISO's High Voltage Transmission Access Charge will grow from \$16/MWh today to \$47/MWh ((for the capital projects component only) in 2036 based on projects that CAISO may approve.

NCPA agreed with the ISO to achieve state and local policy objectives while urging the ISO to refocus its efforts on cost containment citing two areas for further analysis:

- Evaluate alternative cost allocation mechanisms for new out of state transmission other than the full cost being allocated to California ratepayers.
- Evaluate alternative scenarios based on different load forecast other than the SB100 core scenario which assumes "high electrification." If costs for transmission triple, as is projected, basic economics suggests that more customers will seek out alternatives to relying on the transmission grid. If the "high electrification" load scenario is not realized, the \$30.5 billion in new transmission will be unneeded, but captive ratepayers will still be forced to pay those costs.

Debt and Financial Management

- Annual inflation rate in the US accelerated to 7.9% in February of 2022, the highest since January of 1982, matching market expectations. Energy remained the biggest contributor (25.6% vs 27% in January) with gasoline prices surging 38% (40% in January).
- On March 10th, NCPA staff along with our financial advisor, PFM, finalized the refunding of the 2012 Hydro Series A bonds, termination of the interest rate swap and refunding of the 2008 Hydro variable rate bonds. The transaction attracted a diverse group of institutional and private accounts being almost 4 times over-subscribed while receiving \$510 million in orders for \$132 million in bonds. This allowed our Underwriter to reduce yields creating additional savings to the project participants. Final numbers include the following:
 - NPV savings of \$12.2 million or 16.5% of 2012 Hydro refunded bonds
 - All-in TIC 1.8%
 - Average annual savings of approximately \$1.7 million per year
- On March 16th, the Federal Reserve announced they would raise their benchmark federal-funds rate by a quarter percentage point to a range between 0.25% and 0.5% from near zero. The market was expecting them to push it up to at least the level that prevailed before the pandemic hit the U.S. economy two years ago. The Federal Reserve said it would lift interest rates and penciled in a series of further increases (forecasts six more hikes) this year aimed at stopping the economy from overheating and reducing inflation that is running at its highest levels in four decades.

Schedule Coordination Goals

Software Development

- Applications and Enhancements under development
 - Development of the Renewable Portfolio Standards application continues and data validation continues. Rollout delayed pending completion of other higher priority projects
 - IS team deploying apps in the test environment to test the Oracle 2019 database and testing is on-going
- Customer and Resource Integration
 - Work continues on the Settlements-related configurations for the South Feather Water and Power Agency Resources.
 - Systems customizations for third-party resource data being processed for the CCA customers
 - Configuration of the Camp Far West is underway and is anticipated to start scheduling mid-April
- ReQLogic Mobile, the mobile version of the Agency's 3rd-party Requisition app, was rolled out into production this month.

Network

- SCADA and Networking team continue to work with a variety of customers in an effort to integrate several new wind, solar and hydro resources:
 - Camp Far West – IS team continues to work with NID and SSWD on integrating this hydro resource into our SCADA Dispatch operations. Expected to go-live beginning of April.
 - Deer Creek – IS team is currently working with NID staff to collect the required information needed to perform a successful integration of the Deer Creek hydro resource by mid-April.
- Operations and Support is working to implement a new Enterprise VOIP system with selected vendor Integration Partners. Kick off meeting is being scheduled for late March/April to start with Headquarters and Disaster Recovery Center locations with the plants expected to be started later this calendar year.
- IS has rolled out a new patch management solution by Ivanti to help track and stay current with security updates as they become available. The new product will allow the Agency to routinely test and deploy software for a variety of Operating Systems and applications.
- Oracle 2019 is currently being tested with the anticipation of it replacing the current Oracle 11 and 12 versions in production. Application testing has started and staff is preparing for a full upgrade in late spring of 2022.

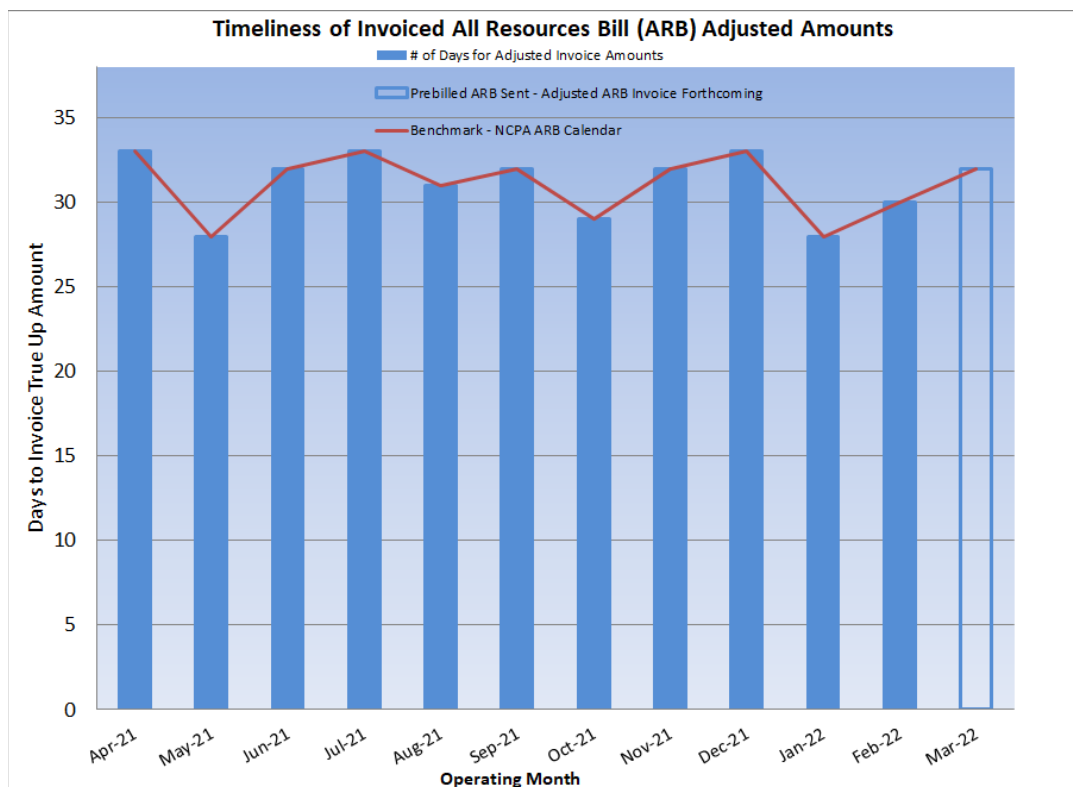
NCPA Bills & Settlements

Progress Against the Strategic Plan

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

The March 2022 NCPA All Resources Bill (ARB) monthly invoice sent to members on February 22, 2022 contains:

- March 2022 monthly pre-billed budget/forecast amounts;
- January 2022 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- December 2021 (2nd Adjustment) NCPA Project settlement true-up and T+20 business day recalculated CAISO settlement true-up allocations;
- October 2021 (3rd Adjustment) T+70 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- February 2021 (4th Adjustment) T+11 month recalculated CAISO settlement true-up allocations;
- June 2020 (5th Adjustment) T+18 month recalculated CAISO settlement true-up allocations;
- March 2019 (6th Adjustment) T+33 month recalculated CAISO settlement true-up;
- December 2018 (7th Adjustment) T+36 month CAISO settlement true-up;



Legislative & Regulatory

Federal Legislative Update

- Last month, several NCPA representatives flew to Washington, DC, to represent the agency at the American Public Power Association's Annual Legislative Rally. The Rally provides a venue for public power communities to come together and have their voices heard in our Nation's Capital. Due to ongoing COVID-19 concerns, many of the meetings with federal agency staff and congressional offices remained virtual. Nonetheless, NCPA prevailed in effectively communicating our priority issues such as opportunities for federal funding, climate change and wildfires, Central Valley Project hydropower, and NCPA's green hydrogen future. During APPA's Legislative and Resolutions Committee, NCPA sponsored a resolution in support of comparable energy tax incentives for public power and was a co-sponsor to several other resolutions including tax-exempt municipal bond financing. NCPA looks forward to partnering with the Northwest Public Power Association next month for our Federal Policy Conference to hear from policymakers about their priorities in Congress for the coming year.

Human Resources

Hires:

None.

Intern Hires:

None.

Promotions:

None.

Separations:

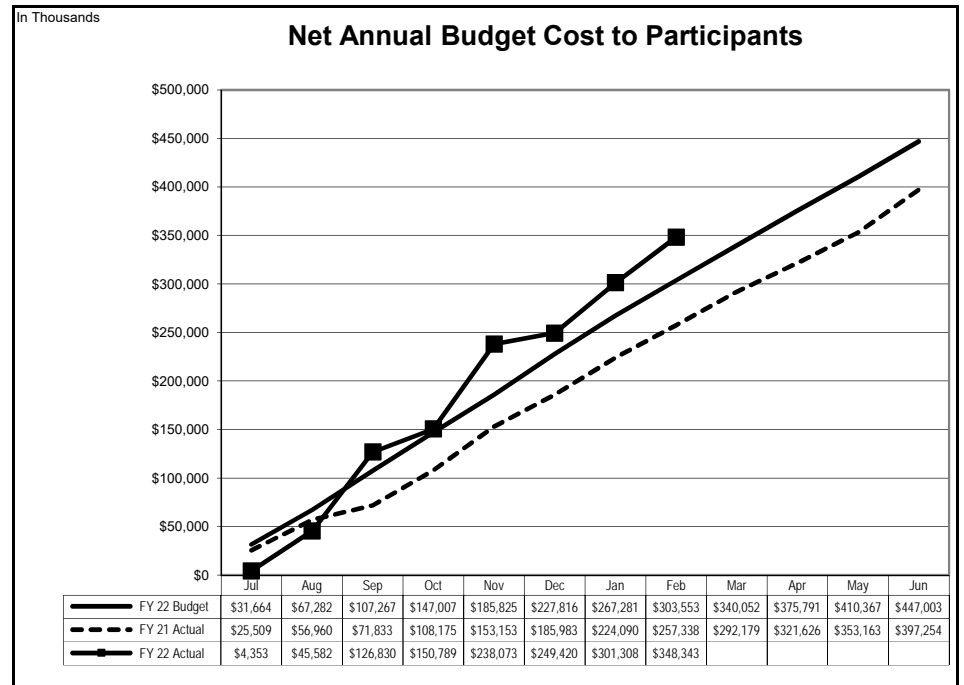
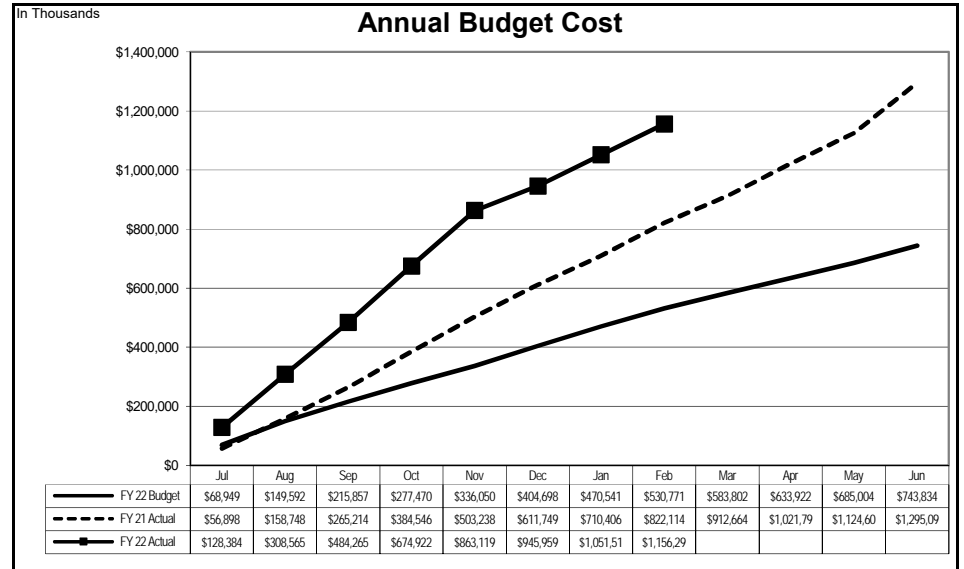
Gillian Biedler resigned from her position as an Energy Resource Analyst IV, at our Headquarters office on February 18, 2022.

Elizabeth Gonzalez resigned from her position as Human Resources Manager, at our Headquarters office on March 6, 2022.

Amir Javanbakht resigned from his position as an Energy Resource Analyst IV, at our Headquarters office on March 8, 2022.

**Annual Budget
2021-2022 Fiscal Year To Date
As of February 28, 2022**

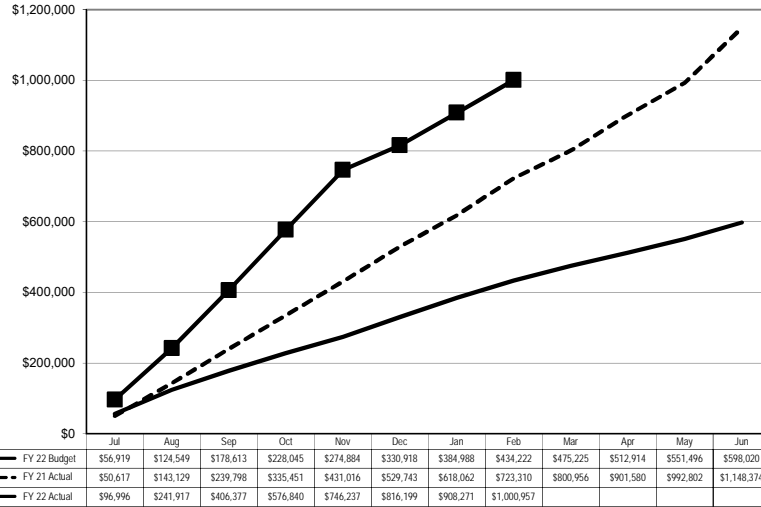
In Thousands	Program			
	Annual Budget	Actual	Under(Ovr) Budget	YTD % Remaining
GENERATION RESOURCES				
NCPA Plants				
Hydroelectric	54,081	36,317	\$ 17,764	33%
Geothermal Plant	40,662	26,118	14,544	36%
Combustion Turbine No. 1	7,055	6,783	272	4%
Combustion Turbine No. 2 (STIG)	8,962	6,217	2,745	31%
Lodi Energy Center	88,813	103,733	(14,919)	-17%
	199,574	179,168	20,406	10%
Member Resources - Energy	67,417	53,131	14,285	21%
Member Resources - Natural Gas	2,981	4,783	(1,802)	-60%
Western Resource	27,302	14,215	13,087	48%
Market Power Purchases	17,225	33,489	(16,265)	-94%
Load Aggregation Costs - ISO	282,244	715,564	(433,320)	-154%
Net GHG Obligations	1,277	606	671	
	598,020	1,000,957	(402,937)	-67%
TRANSMISSION				
Independent System Operator	126,573	141,766	(15,193)	-12%
MANAGEMENT SERVICES				
Legislative & Regulatory				
Legislative Representation	2,101	1,115	986	47%
Regulatory Representation	634	415	219	35%
Western Representation	694	363	331	48%
Customer Programs	481	318	163	34%
	3,911	2,212	1,699	43%
Judicial Action	300	753	(453)	-151%
Power Management				
System Control & Load Dispatch	7,427	4,591	2,836	38%
Forecasting & Prescheduling	2,811	1,877	933	33%
Industry Restructuring	423	260	164	39%
Contract Admin, Interconnection Svcs & Ext. Affairs	975	638	337	35%
Gas Purchase Program	81	39	42	52%
Market Purchase Project	116	60	56	49%
	11,833	7,464	4,369	37%
Energy Risk Management	198	74	125	63%
Settlements	975	551	424	43%
Integrated System Support	307	228	80	26%
Participant Pass Through Costs	1,718	965	753	44%
Support Services	-	1,328	(1,328)	
	19,242	13,574	5,668	29%
TOTAL ANNUAL BUDGET COST	743,834	1,156,297	(412,463)	-55%
LESS: THIRD PARTY REVENUE				
Plant ISO Energy Sales	101,640	136,004	(34,364)	-34%
Member Resource ISO Energy Sales	34,353	36,321	(1,969)	-6%
Member Owned Generation ISO Energy Sales	83,030	88,096	(5,065)	-6%
Revenue from Customers	-	84,527	(84,527)	
Customer Owned Generation ISO Energy Sales	-	91	(91)	
NCPA Contracts ISO Energy Sales	12,615	29,351	(16,736)	-133%
Western Resource ISO Energy Sales	19,297	14,586	4,711	24%
Load Aggregation Energy Sales	-	367,056	(367,056)	
Ancillary Services Sales	4,317	7,246	(2,929)	-68%
Transmission Sales	110	74	37	33%
Western Credits, Interest & Other Income	41,469	44,600	(3,131)	-8%
	296,831	807,953	(511,123)	-172%
NET ANNUAL BUDGET COST TO PARTICIPANTS	447,003	348,343	\$ 98,660	22%



Annual Budget Budget vs. Actual By Major Area As of February 28, 2022

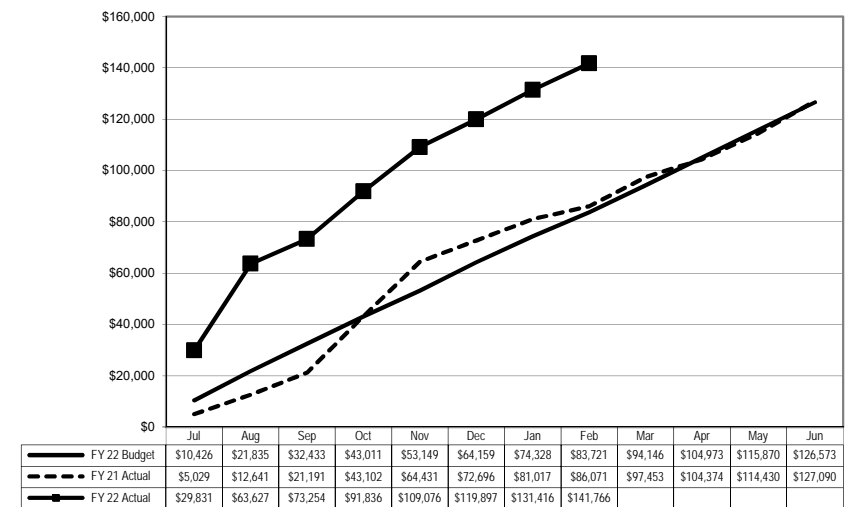
In Thousands

Generation Resources



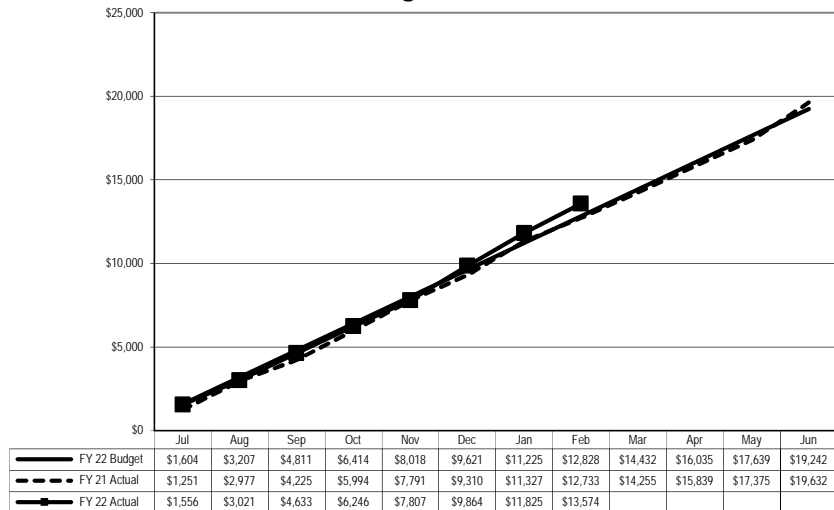
In Thousands

Transmission-ISO



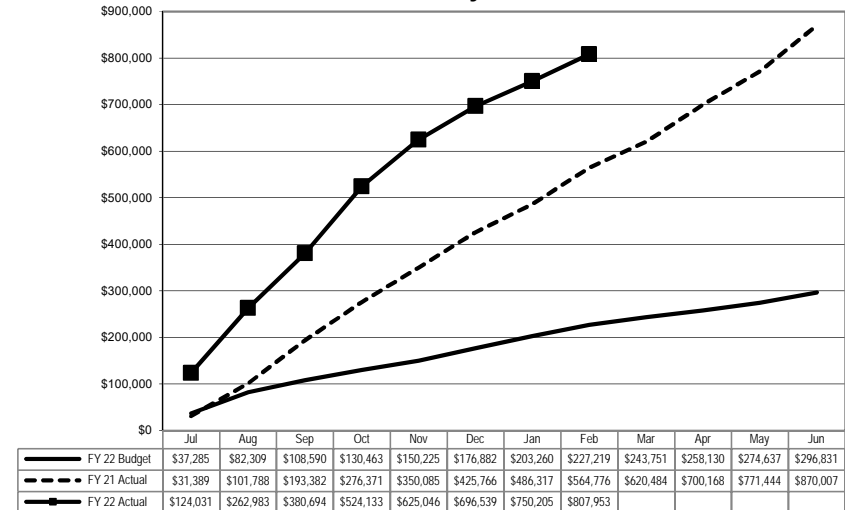
In Thousands

Management Services



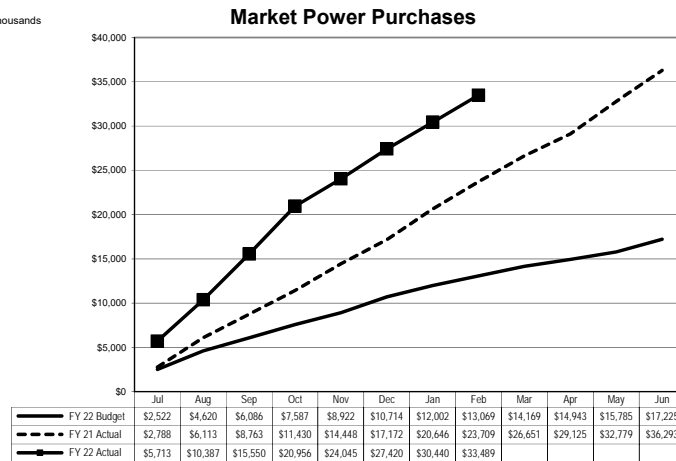
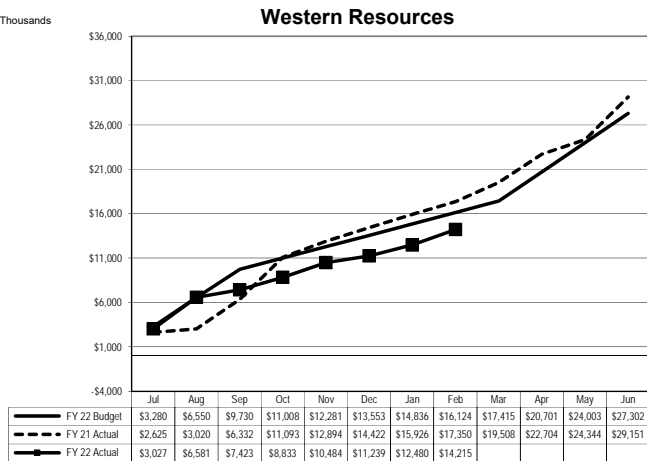
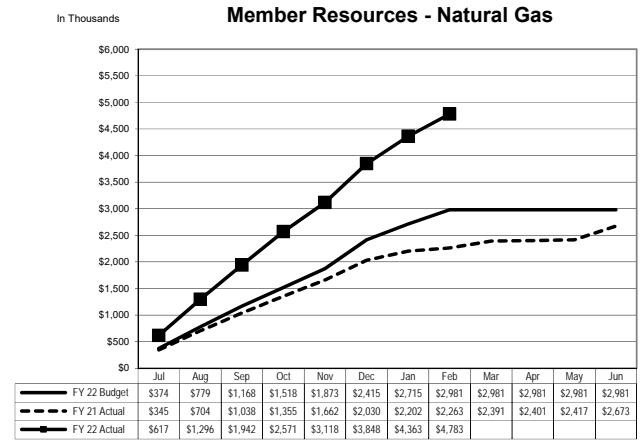
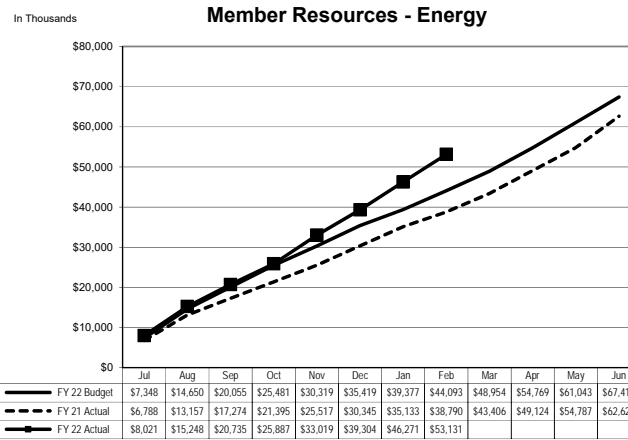
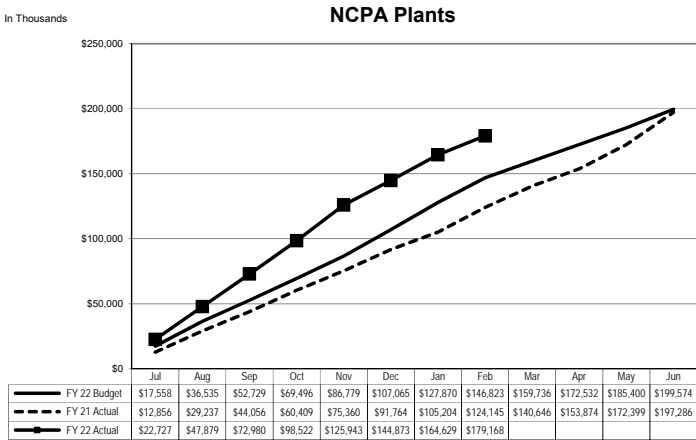
In Thousands

Third Party Revenue



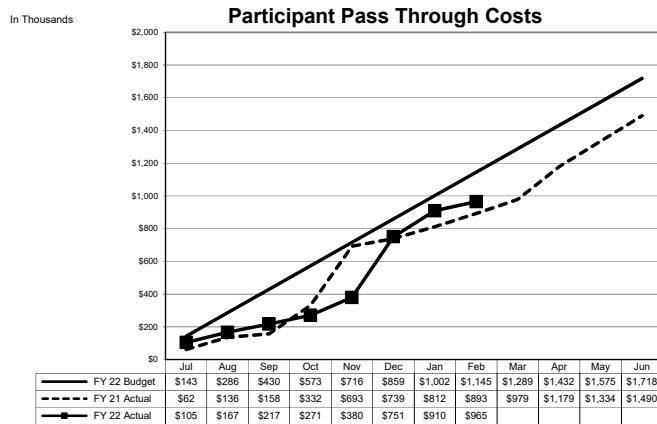
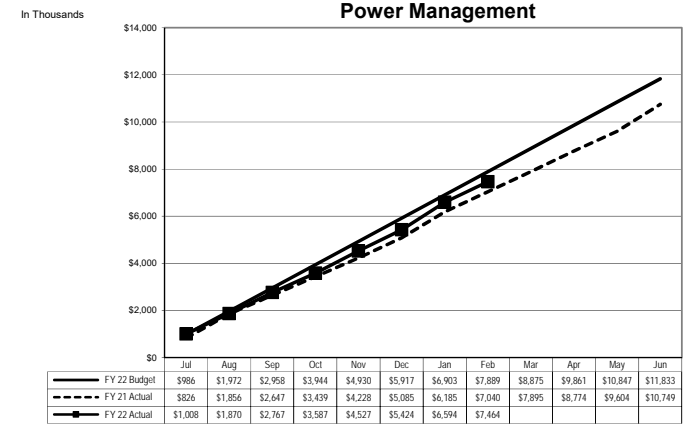
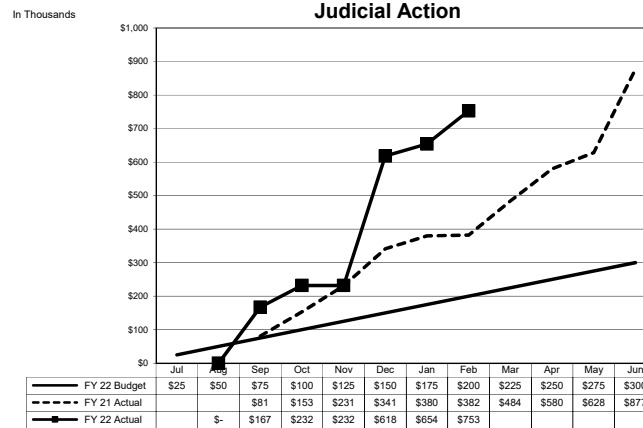
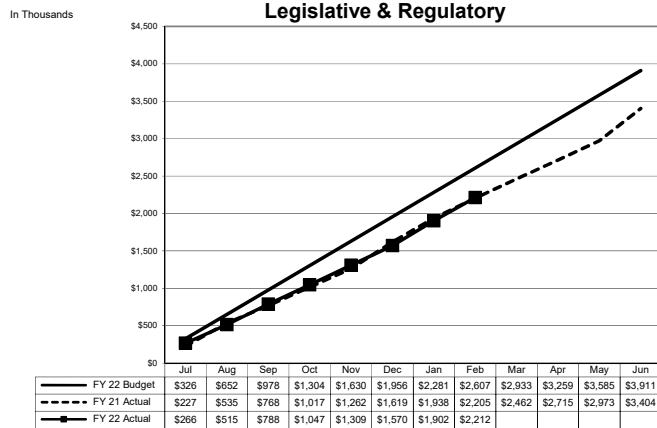
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

Annual Budget Cost Generation Resources Analysis By Source As of February 28, 2022



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

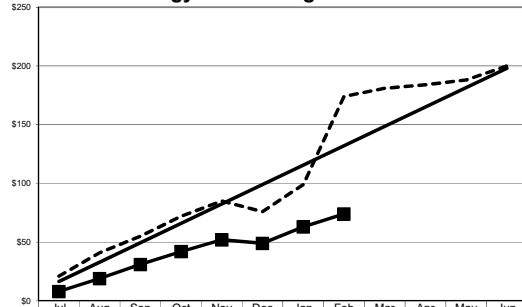
**Annual Budget Cost
Management Services Analysis By Source
As of February 28, 2022**



**Annual Budget Cost
Management Services Analysis By Source
As of February 28, 2022**

In Thousands

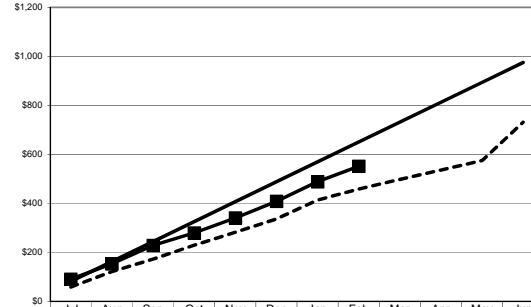
Energy Risk Management



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 22 Budget	\$17	\$33	\$50	\$66	\$83	\$99	\$116	\$132	\$149	\$165	\$182	\$198
FY 21 Actual	\$21	\$41	\$55	\$72	\$85	\$76	\$99	\$174	\$181	\$184	\$188	\$200
FY 22 Actual	\$8	\$19	\$31	\$42	\$52	\$49	\$63	\$74				

In Thousands

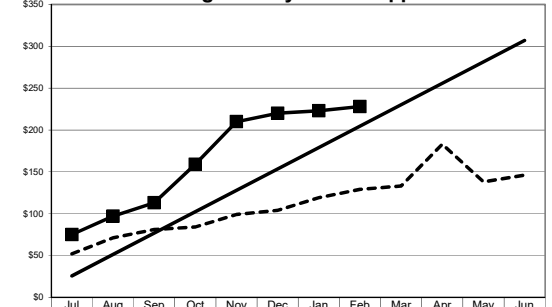
Settlements



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 22 Budget	\$81	\$163	\$244	\$325	\$406	\$488	\$569	\$650	\$731	\$813	\$894	\$975
FY 21 Actual	\$58	\$121	\$172	\$229	\$282	\$336	\$413	\$458	\$497	\$536	\$574	\$731
FY 22 Actual	\$90	\$153	\$228	\$279	\$340	\$408	\$488	\$551				

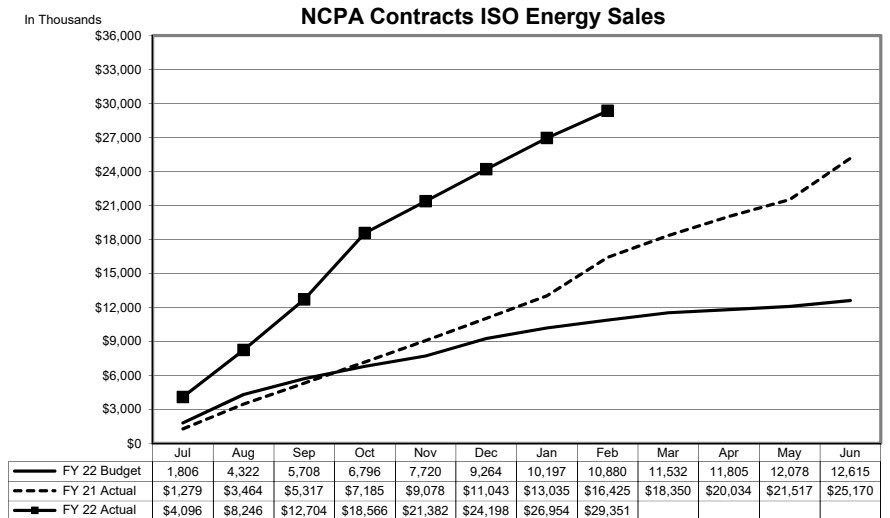
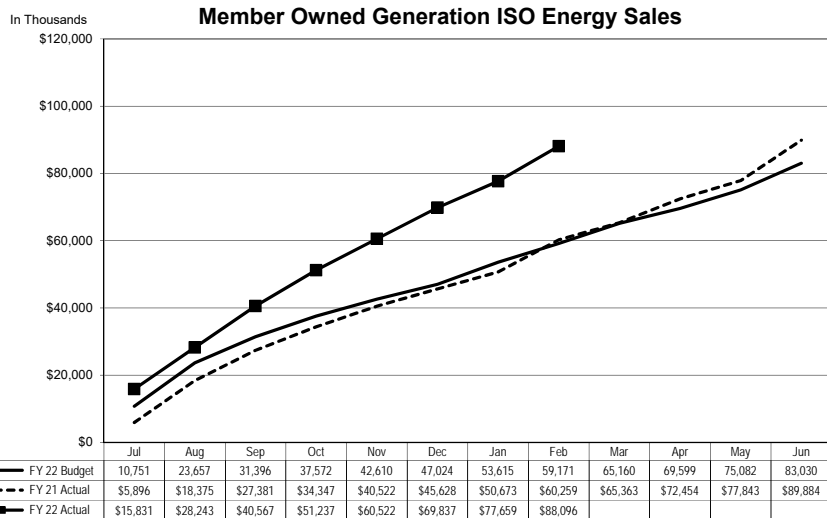
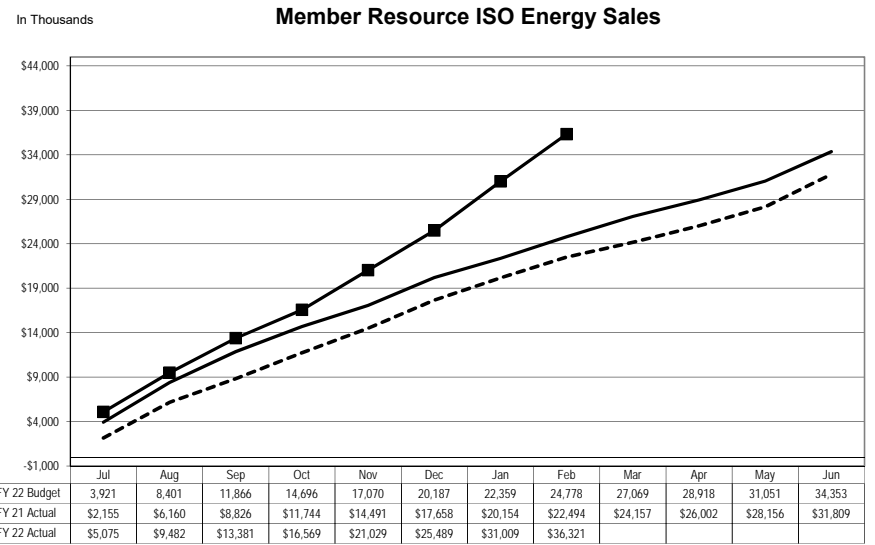
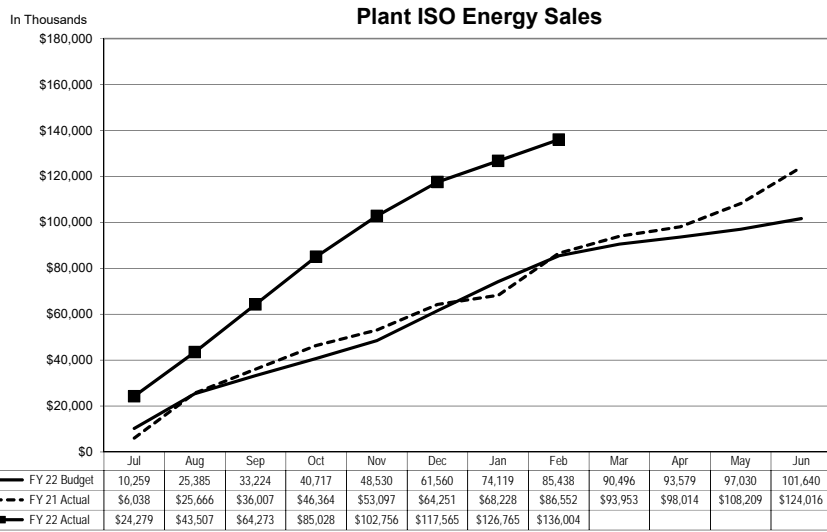
In Thousands

Integrated Systems Support

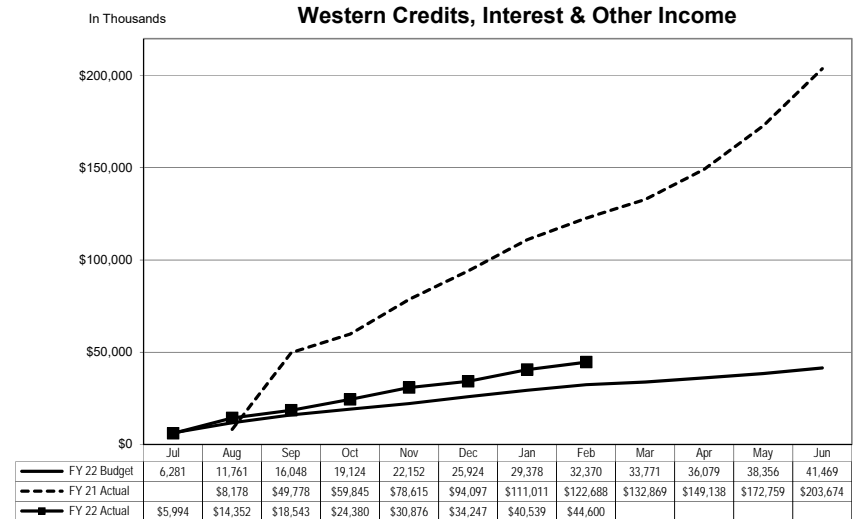
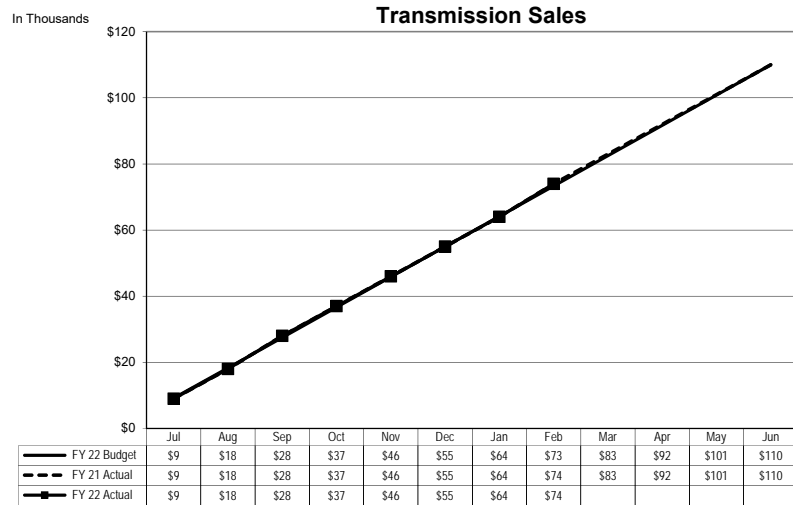
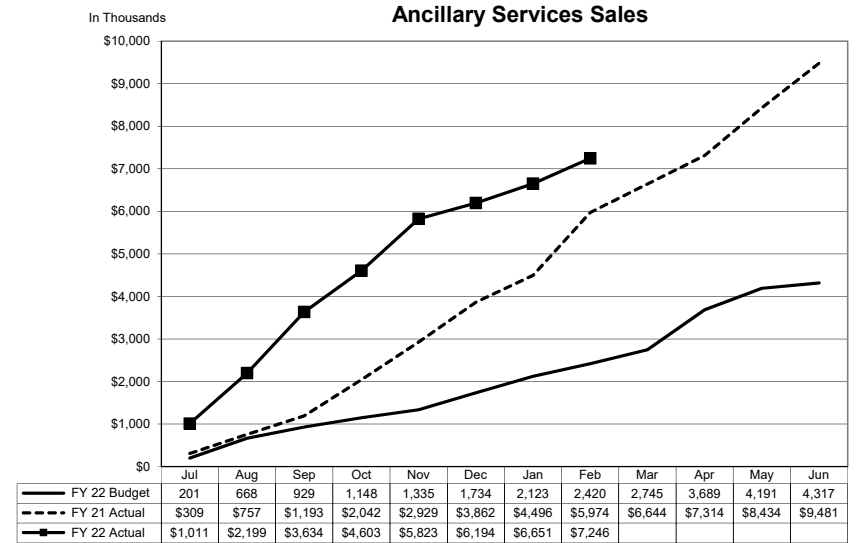
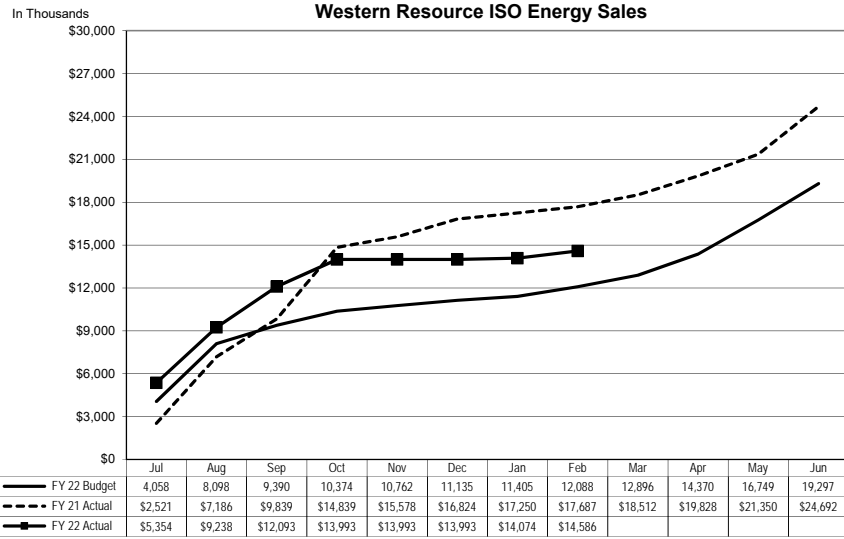


	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
FY 22 Budget	\$26	\$51	\$77	\$102	\$128	\$154	\$179	\$205	\$230	\$256	\$281	\$307
FY 21 Actual	\$52	\$71	\$81	\$84	\$99	\$104	\$119	\$129	\$133	\$183	\$138	\$146
FY 22 Actual	\$75	\$97	\$113	\$159	\$210	\$220	\$223	\$228				

**Annual Budget Cost
Third Party Revenue Analysis By Source
As of February 28, 2022**



**Annual Budget Cost
Third Party Revenue Analysis By Source
As of February 28, 2022**



**Annual Budget
NCPA Generation Detail Analysis By Plant
As of February 28, 2022**

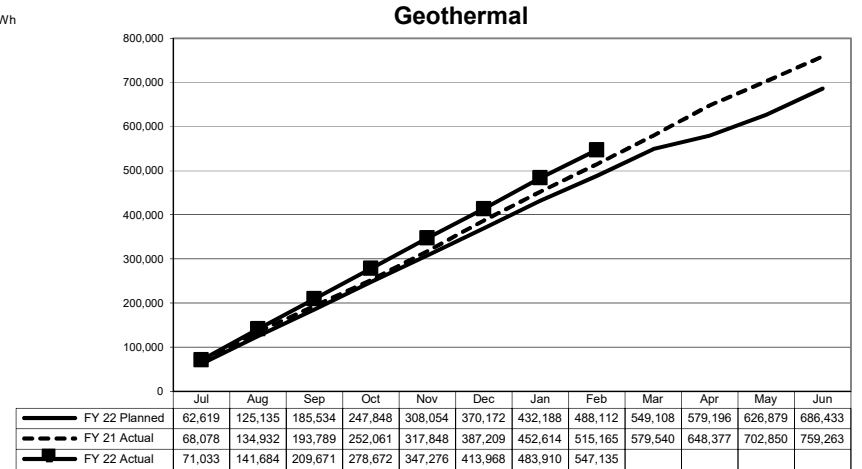
Generation Cost Analysis

\$ in thousands

	Geothermal				
	Budget	Actual	\$/MWh	Under(Over)	YTD %
			Actual	Budget	Remaining
Routine O & M	\$ 17,803	\$ 10,351	\$ 18.92	\$ 7,453	42%
Capital Assets/Spare Parts Inventories	6,205	3,804	6.95	2,401	39%
Other Costs	11,197	7,991	14.61	3,206	29%
CA ISO Charges	504	670	1.22	(166)	-33%
Debt Service	4,953	3,302	6.04	1,651	33%
Annual Budget	40,662	26,118	47.74	14,544	36%
Less: Third Party Revenue					
Interest Income	382	51	0.09	331	87%
ISO Energy Sales	27,578	34,295	62.68	(6,717)	-24%
Ancillary Services Sales	-	-	-	-	-
Effluent Revenues	750	427	0.78	323	43%
Misc	113	77	0.14	36	32%
	28,823	34,850	63.70	(6,027)	-21%
Net Annual Budget Cost to Participants	\$ 11,839	\$ (8,732)	\$ (15.96)	\$ 20,572	174%
Net Generation--MWh @ Meter	686,433	547,135			
\$/MWh (A)	\$ 10.03	\$ (22.00)			

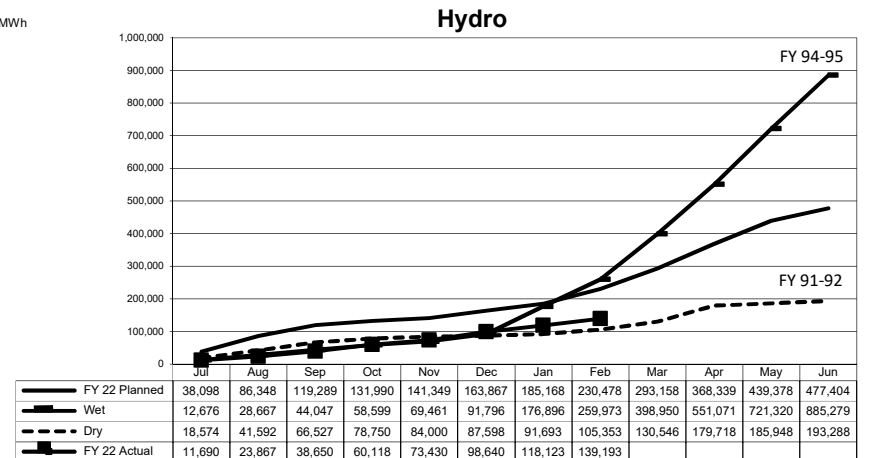
MWhs Generated

In MWh



	Hydroelectric				
	Budget	Actual	\$/MWh	Under(Over)	YTD %
			Actual	Budget	Remaining
Routine O & M	\$ 9,882	\$ 5,041	\$ 36.21	\$ 4,842	49%
Capital Assets/Spare Parts Inventories	3,465	2,490	17.89	975	28%
Other Costs	4,677	3,267	23.47	1,410	30%
CA ISO Charges	2,635	3,238	23.26	(603)	-23%
Debt Service	33,422	22,281	160.07	11,141	33%
Annual Budget	54,081	36,317	260.91	17,764	33%
Less: Third Party Revenue					
Interest Income	670	57	0.41	613	92%
ISO Energy Sales	22,047	14,745	105.93	7,302	33%
Ancillary Services Sales	2,241	3,759	27.00	(1,518)	-68%
Misc	-	-	-	-	-
	24,959	18,561	133.35	6,398	26%
Net Annual Budget Cost to Participants	\$ 29,123	\$ 17,756	\$ 127.57	\$ 11,366	
Net Generation--MWh @ Meter	477,404	139,193			
\$/MWh (A)	\$ (9.00)	\$ (32.51)			

In MWh



Footnotes:

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

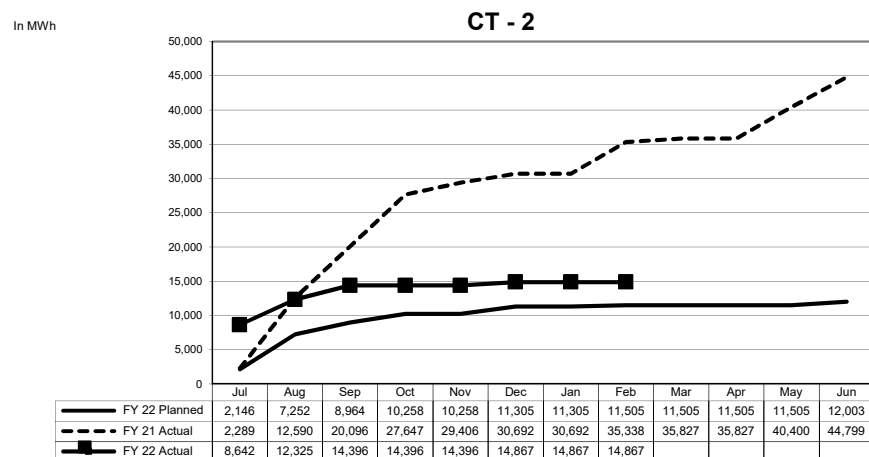
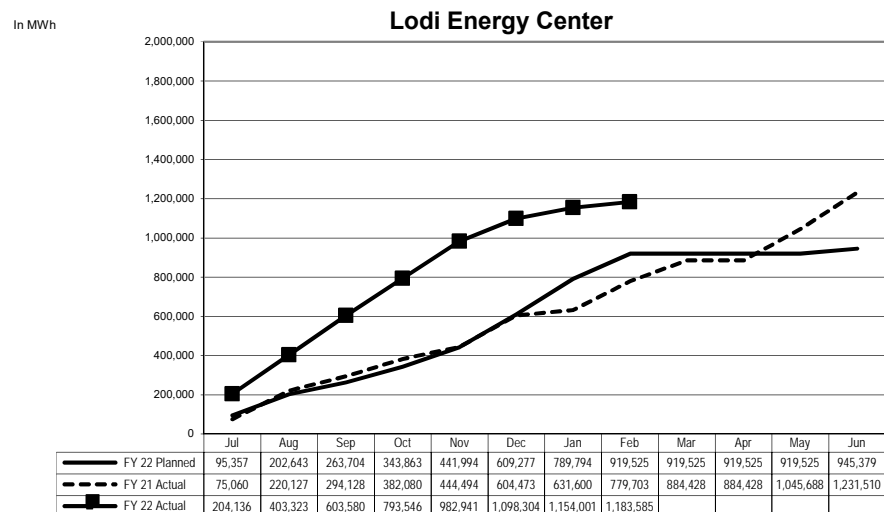
**Annual Budget
NCPA Generation Detail Analysis By Plant
As of February 28, 2022**

Generation Cost Analysis

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 9,558	\$ 8,603	\$ 7.27	\$ 955	10%
Fuel	31,029	52,487	44.35	(21,458)	-69%
AB 32 GHG Offset	6,269	13,755	11.62	(7,486)	-119%
CA ISO Charges and Energy Purchases	3,137	3,300	2.79	(163)	-5%
Capital Assets/Spare Parts Inventories	5,007	1,520	1.28	3,487	70%
Other Costs	7,805	6,491	5.48	1,314	17%
Debt Service	26,008	17,576	14.85	8,432	32%
Annual Budget	88,813	103,733	87.64	(14,919)	-17%
Less: Third Party Revenue					
Interest Income	386	175	0.15	211	55%
ISO Energy Sales	49,394	80,914	68.36	(31,519)	-64%
Ancillary Services Sales	1,152	3,242	2.74	(2,090)	-181%
Transfer Gas Credit	-	-	-	-	0%
GHG Allowance Credits	6,102	14,700	12.42	(8,598)	-141%
Misc	-	2	0.00	(2)	0%
	57,034	99,032	83.67	(41,998)	-74%
Net Annual Budget Cost to Participants	\$ 31,779	\$ 4,701	\$ 3.97	\$ 27,078	85%
Net Generation--MWh @ Meter	945,379	1,183,585			
\$/MWh (A)	\$ 6.10	\$ (10.88)			

	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 1,627	\$ 869	\$ 58.49	\$ 758	47%
Fuel and Pipeline Transport Charges	1,265	1,449	97.45	(183)	-14%
Capital Assets/Spare Parts Inventories	46	-	-	46	100%
Other Costs	735	418	28.09	318	43%
CA ISO Charges	136	116	7.82	20	14%
Debt Service	5,048	3,365	226.37	1,683	33%
Annual Budget	8,858	6,217	418.22	2,641	30%
Less: Third Party Revenue					
Interest Income	109	14	0.94	95	87%
ISO Energy Sales	1,321	1,809	121.65	(488)	-37%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	1,788	1,770	119.06	18	1%
GHG Allowance Credits	104	-	-	104	100%
Misc	-	-	-	-	0%
	3,322	3,593	241.66	(271)	-8%
Net Annual Budget Cost to Participants	\$ 5,536	\$ 2,625	\$ 176.56	\$ 2,912	53%
Net Generation--MWh @ Meter	12,003	14,867			
\$/MWh (A)	\$ 40.69	\$ (49.81)			

MWhs Generated



Footnotes:

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

**Annual Budget
NCPA Generation Detail Analysis By Plant
As of February 28, 2022**

Generation Cost Analysis

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Over) Budget	YTD % Remaining
Routine O & M	\$ 2,497	\$ 3,982	\$ 250.72	\$ (1,486)	-60%
Fuel and Pipeline Transport Charges	792	803	50.54	(11)	-1%
Capital Assets/Spare Parts Inventories	2,573	667	41.97	1,907	74%
Other Costs	1,104	705	44.37	399	36%
CA ISO Charges	90	626	39.42	(536)	-598%
Debt Service	-	-	-	-	-
Annual Budget	7,055	6,783	427.02	272	4%
Less: Third Party Revenue					
Interest Income	-	22		(22)	
ISO Energy Sales	1,300	4,242	267.07	(2,943)	-226%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	-	-	-	0%
	1,300	4,264	267.07	(2,965)	-228%
Net Annual Budget Cost to Participants	\$ 5,755	\$ 2,519	\$ 158.56	\$ 3,237	56%
Net Generation--MWh @ Meter	10,440	15,884			
\$/MWh (A)	\$ 551.26	\$ 158.56			

Footnotes:

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

MWhs Generated

In MWh

CT - 1

