



Northern California Power Agency  
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# BUSINESS PROGRESS REPORT

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**2021**

*February*

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# Generation Costs & Reliability

## Combustion Turbine Project

### Unit Operation for January 2021

| Unit   | Availability |                   | Production |     |     | Reason for Run |
|--|--------------|-------------------|------------|-----|-----|----------------|
| CT1 Alameda  | Unit 1       | Unit 2            | Unit 1     | 0.0 | MWh | CAISO / CAISO  |
|  | 100.0 %      | 100.0 %           | Unit 2     | 0.0 | MWh |                |
| Curtailments, Outages, and Comments:                     |              |                   |            |     |     |                |
| Unit 1:  |              | Normal operation. |            |     |     |                |
| Unit 2:  |              | Normal operation. |            |     |     |                |
| 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  | 99.5%        |                   | 27,121 MWh |     |     | CAISO          |
| Curtailments, Outages, and Comments:                     |              |                   |            |     |     |                |
| 1/15 @ 13:06 - 17:06: Cooling tower trouble, OMS 9667117 |              |                   |            |     |     |                |

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

## Geothermal Facilities

### Availability/Production for January 2021

| Unit                                       | Availability | Net Electricity Generated/Water Delivered | Out-of-Service/Descriptors   |
|--|--------------|---|--|
| <b>Unit 1</b>                              | 100 %        | 21,335 MWh                                | U1 had no outages for the month  |
| <b>Unit 2</b>                              | 99.06 %      | *21,948 MWh                               | U2 was OOS 1/31 0600 until 1/31 1245 for 2B circ pp repair.  |
| <b>Unit 3</b>                              | N/A %        | N/A                                       | Unit 3 remains out of service.   |
| <b>Unit 4</b>                              | 82.33 %      | 22,126 MWh                                | U4 was OOS 1/25 0300 until 1/30 1440 due to PG&E line outage and inner condenser tube cleaning/PG&E line back 1/26 @ 1715. |
| <b>Southeast Geysers Effluent Pipeline</b> | 65 %         | 78.3 mgallons                             | Average flow rate: 1,717 gpm   |
| <b>Southeast Solar Plant</b>               | N/A          | 27,205 KWh                                | Year-to-date KWh: 3,211,864  |
| <b>Bear Canyon Pump Station Zero Solar</b> | N/A          | 68,109 KWh                                | Year-to-date KWh: 4,666,805  |

\* Accounts for an additional 732 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

## Hydroelectric Project

### Availability/Production for January 2021

| Units                      | Availability | Net Electricity Generated | Out-of-Service   |
|----------------------------|--------------|---------------------------|--|
| <b>Collierville Unit 1</b> | 100%         | 6691 MWh                  | CV Unit 1 – No Outages   |
| <b>Collierville Unit 2</b> | 100%         | 250 MWh                   | CV Unit 2 – No Outages   |
| <b>Spicer Unit 1</b>       | 91.99%       | 28 MWh                    | NSM1 was out of service on 1/28/21 to 1/30/21 from 0808 to 1944 due to PGE 21kV line outage  |
| <b>Spicer Unit 2</b>       | 88.19%       | 563 MWh                   | NSM2 was out of service on 1/28/21 to 1/30/21 from 0808 to 1913 due to PGE 21kV line outage and on 1/30/21 to 3/31/21 from 1913 to 2359 due to site access issues.                             |
| <b>Spicer Unit 3</b>       | 88.19%       | 112 MWh                   | NSM3 was out of service on 1/28/21 to 1/30/21 from 0808 to 1913 due to PGE 21kV line outage and on 1/30/21 to 3/31/21 from 1913 to 2359 due to unit being islanded supplying house power only. |

### Operations & Maintenance Activities:

- CMMS work orders
- Winter Snow Removal Site access work
- Utica Dam Low Level Outlet Valve Stem Guide repair
- One in 5 year Adit 2 Tunnel Inspection

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

- There were no Cal OSHA Recordable, Lost Time, or vehicle accidents in the month of January.
- 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 January 30, 2021.
- The “CT Group” column reflects the combined safety numbers of all CT employees. Beginning with the November 2009 report, the CT Group Column also includes Lodi Energy Center staff.

### January 2021 Generation Services Safety Report

|                                     | Hydro   | GEO     | CT Group * | NCPA HQ ** |
|-------------------------------------|---------|---------|------------|------------|
| Cal OSHA Recordable (this month)    | 0       | 0       | 0          | 0          |
| Cal OSHA Recordable (calendar year) | 0       | 0       | 0          | 0          |
| Days since Recordable               | 111     | 921     | 2,126      | 3,110      |
| Work Hours Since Last Recordable    | 9,262   | 190,972 | 317,870    | 2,633,366  |
| LTA's (this month)                  | 0       | 0       | 0          | 0          |
| LTA's (calendar year)               | 0       | 0       | 0          | 0          |
| Days without LTA                    | 4,860   | 1,989   | 10,030     | 6,123      |
| Work Hours without LTA              | 441,833 | 407,947 | 728,414    | 2,255,384  |
| 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 January 30, 2021.



# Power Management/NCPA Market Results

## Dispatch and Schedule Coordination

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

### Current Year 2021 Data

|           | January 2021       |         | Calendar Year 2021 |         |
|-----------|--------------------|---------|--------------------|---------|
|           | Peak MW            | MWh     | Peak MW            | MWh     |
| NCPA Pool | 329.69 1/26 @1900  | 190,970 | 329.69 1/26 @1900  | 190,970 |
| SVP       | 482.41 1/28 @1300  | 329,492 | 482.41 1/28 @1300  | 329,492 |
| MSSA      | 804.83 1/27 @ 1900 | 520,462 | 804.83 1/27 @ 1900 | 520,462 |

### Last Year 2020 Data\*

|           | January 2020       |         | Calendar Year 2020  |         |
|-----------|--------------------|---------|---------------------|---------|
|           | Peak MW            | MWh     | Peak MW             | MWh     |
| NCPA Pool | 336.72 1/16 @1900  | 197,528 | 467.45 8/14 @ 1700  | 197,528 |
| SVP       | 472.32 1/16 @1200  | 316,398 | 586.3 8/14 @ 1700   | 316,398 |
| MSSA      | 804.23 1/16 @ 1200 | 513,926 | 1053.75 8/14 @ 1700 | 513,926 |

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

### System Peak Data

|           | All Time Peak Demand        | 2021 Peak Demand   |
|-----------|-----------------------------|--------------------|
| NCPA Pool | 517.83 MW on 7/24/06 @ 1500 | 326.69 1/26 @ 1900 |
| SVP       | 587.78 MW on 6/11/19 @ 1600 | 482.41 1/28 @ 1300 |
| MSSA      | 1070.79 MW on 9/1/17 @ 1700 | 804.83 1/27 @ 1900 |

- 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 |              |                    |
|---------------------------------|--------------|--------------------|
|                                 | January 2021 | Calendar Year 2021 |
| MSSA % Within the Band          | 98.89%       | 98.89%             |

- NCPA continues to operate in a split operation with the SC's working out of the backup control center and the system dispatchers working out of the primary control center due to COVID-19.
- CAISO issued an Operating Instruction for all VER resources to not exceed their DOT until further notice at 1245, 1/25/2021.
- CAISO terminates the previous Operating Instruction for all VER resources not to exceed their DOT at 1341, 1/25/2021.



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

- NCPA Pool load during January 2021 was 190,971 MWh, or 96.5% of forecast due to temperature variations and continuing uneven demand resulting from Covid mandates and restrictions. Pool load during February 2021 may continue slightly below normal compared to the same period a year ago, despite weather-related heating demand fairly high during the first week of the month.
- Lodi Energy Center (LEC) produced 4,878 MWh for the pool during January, or about a quarter of the forecasted generation. The unit was committed 12 of the 31 days. Despite the current volatile market pricing structure, LEC was projected to generate 22,875 MWh for the pool during February 2021, though rising gas prices may serve to reduce economic generation from this forecast by again shortening daily run times.
- During January 2021, 12.29" of rain was recorded at the Big Trees gauge. Average January Big Trees precipitation is 10.24".
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been maintained at \$150/MWh.
- NSMR storage as of January 31, 2021 was at 66,755 acre feet. The historical average NSMR storage at the end of January is 76,373 acre feet. As of February 16, 2021 NSMR storage is 65,282 acre feet. The current NCPA Pool share of NSMR storage is 33,518 acre feet.
- Combined Calaveras Project generation for the Pool in January 2021 totaled 3.9 GWh, slightly up from 3.8 GWh in December 2020. The Pool's 3.9 GWh in January 2021 was less than the pre-month forecast of 5.6 GWh.
- Western Base Resource (BR) deliveries for the Pool during January 2021 were well above the forecasted 1,888 MWh at 7,174 MWh, with Displacement program energy still on pause. Western's forecast for the pool's share of February 2021 generation drops back again to 1,888 MWh.
- The PG&E Citygate gas index averaged \$3.785/MMBtu for delivery on February 8, 2021, well above the average PG&E gas price during January of \$3.525/MMBtu. Gas prices have generally increased this month as production lags due to cold temperatures causing well freeze-offs, upstream usage reduces pipe flows, and power burn and LNG feed gas demand have grown. The February 2021 PG&E Citygate Bidweek price is \$3.55/MMBtu, down 12.5 cents from the January 2021 Bidweek price and far different from February 2020's \$2.73 as the era of gas oversupply appears to be over.
- Day-Ahead NP15 electricity prices averaged \$35.46/MWh (HLH) and \$31.46 (LLH) during January 2021, with evening ramp hour prices reaching only as high as \$65.91 on one occasion at TH\_NP15.

| NCPA Pool Loads & Resources Value Summary |                      |                |                           |              |                            |                        |                                 |              |
|---|----------------------|----------------|---------------------------|--------------|----------------------------|------------------------|---------------------------------|--------------|
| Peak and Energy Summary                   |                      |                |                           |              | Estimated Production Costs |                        | Cost of Serving Demand          |              |
| Jan-21                                    |                      |                |                           |              |                            |                        |                                 |              |
| Demand                                    | Coincident Peak (MW) | Total MWh      | Pre-Month Forecast Values | Avg. MW      | NCPA Pool                  |                        | Totals                          | Avg (\$/MWh) |
|   | Jan-26-21 Hour 19    |                |                           |              | Cost/Revenue (Estimate)    | Variable Cost (\$/MWh) |                                 |              |
|   | 329.7                | 190,971        | 197,990                   | 256.7        | N/A                        | N/A                    |                                 |              |
|   |                      |                | 69,152                    |              |                            |                        | <b>at Market Clearing Price</b> |              |
| WAPA                                      | -                    | 7,174          | 1,888                     | 9.6          | \$ 909,162                 | \$ 126.73              | \$ 6,693,112                    | \$ 35.05     |
| Geothermal                                | -                    | 27,075         | 26,172                    | 36.4         | 514,426                    | 19.00                  |                                 |              |
| Hydro                                     | -                    | 3,900          | 5,572                     | 5.2          | 23,400                     | 6.00                   |                                 |              |
| Stig & CTs                                | -                    | -              | -                         | -            | -                          | 14.10                  |                                 |              |
| LEC                                       | -                    | 4,878          | 20,128                    | 6.6          | 157,953                    | 32.38                  |                                 |              |
| Contracts                                 | -                    | 105,039        | 99,059                    | 141.2        | 5,471,441                  | 52.09                  | \$ 9,126,892                    | \$ 47.79     |
| Market - Net (Net Sales = Negative)       | 329.7                | 42,905         | 45,171                    | 57.7         | 1,482,291                  | 34.55                  |                                 |              |
| <b>Net Total</b>                          | <b>329.7</b>         | <b>190,971</b> | <b>197,990</b>            | <b>256.7</b> | <b>\$ 8,558,673</b>        | <b>\$ 47.79</b>        |                                 |              |

| Monthly Market Summary |                   |                      |   |   |          |          |
|------------------------|-------------------|----------------------|---|---|----------|----------|
|                        | Pool Energy (MWh) | HLH Avg MCP (\$/MWh) | Avg Variable Cost of Pool Generation (\$/MWh) | Forward Prices (EOX NP15 HLH Ask Prices) (\$/MWh) |          |          |
|                        |                   |                      |   | NP15 1/4/2021                                     | 2/8/2021 |          |
| Jul-20                 | 203,610           | \$ 27.80             | \$ 37.25                                      | Feb-21  | \$ 40.91 | \$ 46.00 |
| Aug-20                 | 216,986           | \$ 59.74             | \$ 41.08                                      | Mar-21  | 35.37    | 34.49    |
| Sep-20                 | 195,756           | \$ 46.66             | \$ 45.40                                      | Apr-21  | 28.81    | 30.19    |
| Oct-20                 | 216,986           | \$ 59.74             | \$ 45.47                                      | Q2 2021   | \$ 32.81 | \$ 32.62 |
| Nov-20                 | 181,145           | \$ 40.43             | \$ 44.27                                      | Q3 2021   | 60.30    | 62.99    |
| Dec-20                 | 194,203           | \$ 42.06             | \$ 44.17                                      | Q4 2021   | 47.82    | 46.96    |
| Jan-21                 | 190,971           | \$ 35.05             | \$ 47.79                                      | CY2021  | \$ 45.04 | \$ 46.20 |
| Feb-21                 |                   |                      |   | CY2022  | 43.40    | 42.59    |
| Mar-21                 |                   |                      |   | CY2023  | 39.09    | 38.37    |
| Apr-21                 |                   |                      |   | CY2024  | 36.94    | 36.76    |
| May-21                 |                   |                      |   | CY2025  | 35.99    | 35.55    |
| Jun-21                 |                   |                      |   | CY2026  | 35.66    | 34.79    |

NOTES TO SUMMARY TABLE:

**Peak and Energy Summary:**

\* Monthly generation summary of Coincidental Peak (hour in which pool demand peaked), total MWh for the month, and pre-month forecasted values for report period.

\* Generation totals are for POOL SHARE of the projects.

\* Hydro totals include Collierville and Spicer generation.

**Estimated Production Costs:**

\* Fixed project costs not included except for WAPA, where total month's project costs are used to calculate the average unit cost.

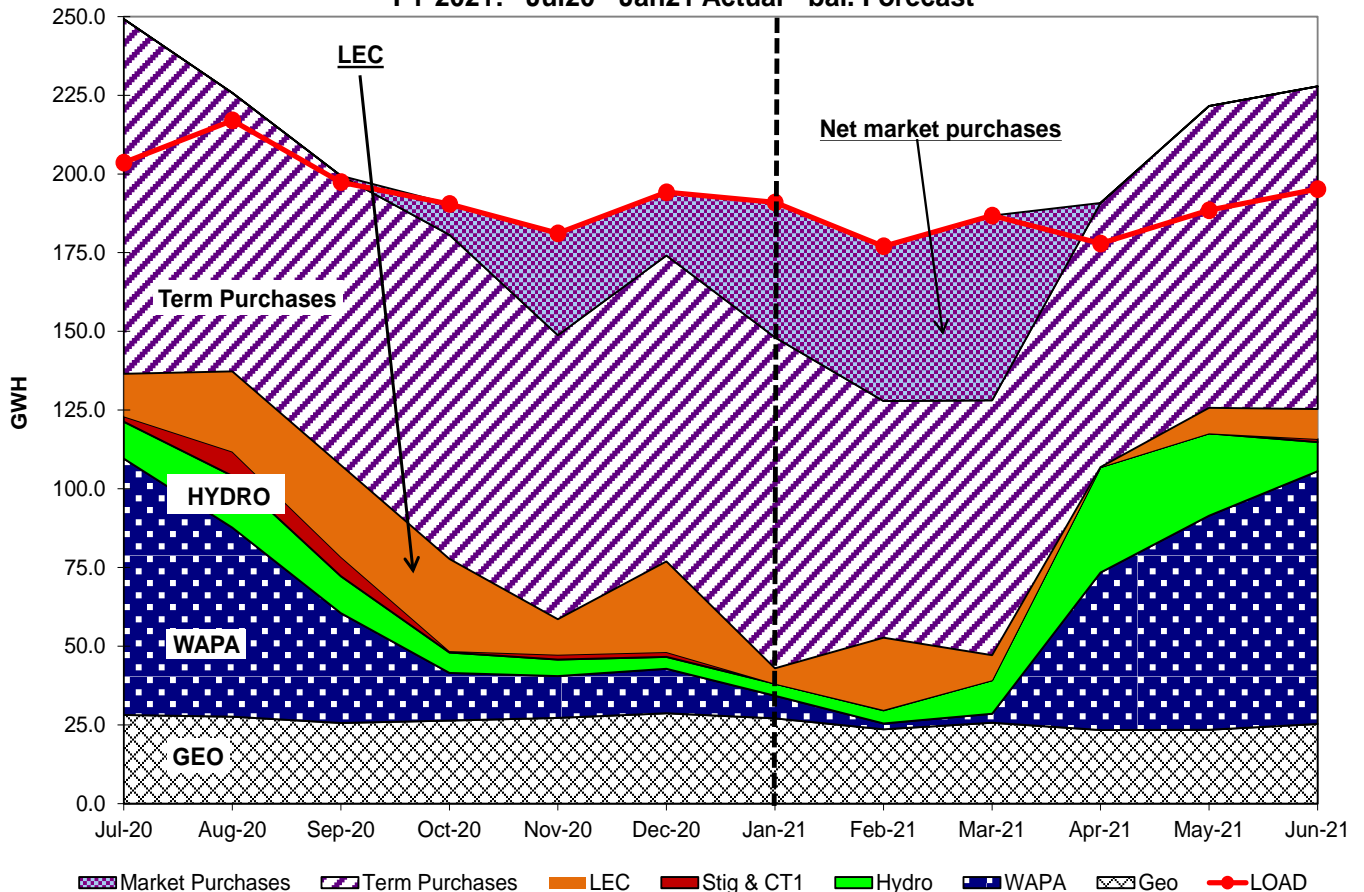
\* STIG and CT costs include forward natural gas and basis hedge transactions.

\* STIG & CT costs reflect \$2.60 and \$1.62/MWh variable O&M costs per 6-12-06 GSCA.

**Cost of Serving Demand:**

Compares price of meeting total monthly demand with (1) Hourly pool market clearing price; (2) Variable cost of pool gen. Pool Gen is sum of estimated costs divided by sum of generation

**NCPA POOL RESOURCES**  
**FY-2021: Jul20 - Jan21 Actual - bal. Forecast**



## **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 April 2021:
  - Monthly System Resource Adequacy Demonstration (filed February 15, 2021)
  - Monthly Supply Plan (filed February 15, 2021)

### **Industry Restructuring**

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

#### **Market Enhancements for Summer 2021 Needs Initiative**

- This continues to be the focus of CAISO efforts. The initiative is rapidly evolving and has been fast tracked for March 2021 Board of Governors' approval. The straw proposal was published on January 29, 2021 in Power Point format. The draft final proposal will be made available on February 17, 2021. The latest updates were presented at the February 11, 2021 Department of Market Surveillance Committee meeting. Key provisions include:
  - Price Taker Exports contracted with non-RA capacity, Wheel Throughs, and internal Load will share top priority in CAISO Day Ahead and Read Time market runs.
  - Provide real-time market imports with a make whole payment during system warnings and alerts
  - Expand Reliability Demand Response Resources bid dispatchable option from 5 minutes to 5, 15, and 60 minutes and incorporate into load forecast.
  - State of charge requirement for storage during to be determined "critical hours".

#### **Extended Day-Ahead Market**

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

(EDAM) will improve market efficiency by integrating renewable resources using Day-Ahead unit commitment and scheduling across a larger area.

### Resource Adequacy Enhancements

- Phase 1 final proposal will be published mid to late February.
- Phase 2A draft final proposal and Phase 2B seventh revised straw proposal will be published in April 2021.
- CAISO held four stakeholder meetings in early January to cover the content.
  - The initiative has been split into two phases. Phase 1 will include planned outage process enhancements, RA Import requirements, operationalizing storage, and backstop capacity procurement focused on CPM for local energy sufficiency. All changes planned outage process enhancement are scheduled to become effective June 2021 while the others are slated to go live in time for the 2022 RA year (Jan. 2022). The primary outage process enhancement is requiring generators to submit substitution up front for all planned outages submitted after T-45 day RA filings. NCPA will object to that change and begrudgingly support status quo. RA Import enhancements focus on determining the source of an RA import. Western is sufficiently covered under the new definition of resource specific since it includes a “system of resources” such as CVP. We are still reviewing the operationalizing storage and CPM proposals.
  - Phase 2 includes unforced capacity evaluations, determining system RA requirements, system RA showing and sufficiency testing individual assessments, must offer obligations and bid insertion modifications, UCAP for local studies, backstop capacity procurement, more planned outage process enhancements, system RA showings and sufficiency testing portfolio assessment. Issues with this phase include counting rules being taken from the LRA and handed to the CPUC or other LRAs. However, CAISO is maintaining MSS exemptions to bid insertion and must offer obligations.

### Day-Ahead Market Enhancements

- This initiative has been delayed due to the Summer 2021 Readiness Initiative taking priority.
- CAISO delayed publication of next straw proposal and announced that it will propose enhancements to RUC. NCPA seeking clarity for if new Reliability Capacity product remains.
- CAISO responded to NCPA’s proposed redlines regarding Load Following Metered Sub-system treatment but we will need to see how they fit in with the next proposal which is due for publication on Dec. 7, 2020.
  - Rejected language exempting LFMSS from reliability cost allocations
  - Accepted IRP Tier 1 proposal to base cost on LFMSS net portfolio deviations
  - Rejected IRP Tier 2 proposal to base cost on LFMSS net portfolio deviations and countered by proposing to base cost on net metered demand
  - Rejected NCPA tariff redlines.
- This initiative will explore new Day-Ahead products that will address ramping needs between intervals and uncertainty that can occur between the Day-Ahead and real-time markets.
- CAISO reviewed the need for new products along with data supporting uncertainty concerns:

- Uncertainty between Day-Ahead and real-time market has increased from 2017 to 2019 and CAISO operators are addressing this development with out of market actions which disrupts market efficiency
- Historically, generators had higher certainty to know if they would be scheduled in real-time
- Due to uncertainty and changing resource fleet, commitment decisions are no longer necessarily known
- Gas, hydro, storage, and imports need to cover costs to be available for dispatch in real-time – this will be accomplished with imbalance reserves
- Two new products:
  - Imbalance Reserve Product (IRP) will be designed to address granularity and uncertainty between Day-Ahead and real-time markets:
    - Hourly product; 15-minute dispatchable; Biddable; Covers granularity difference and uncertainty between DAM and FMM; All awards are co-optimized and settled simultaneously; DAM has no energy price formation issue because the market solves all hours in a single optimization; Stepped relaxation parameters (proposed)
  - Reliability Capacity: replaces RUC process used to address gaps between bid in demand and forecast demand.
- Implementation is set to fall 2022.

#### Transmission Access Charge Structure Enhancements

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

## Western

### Western Base Resource Tracking (NCPA Pool)

| Western Base Resource Tracking - NCPA Pool  |                                   |                       |                     |  |   |   |  |
|---|-----------------------------------|-----------------------|---------------------|--|---|---|--|
|   | Actual                            |                       |                     | Costs & Rates                            |   |   |  |
|   | BR Forecast <sup>1</sup><br>(MWh) | BR Delivered<br>(MWh) | Difference<br>(MWh) | Base Resource & Restoration Fund<br>(\$) | Monthly Cost of BR <sup>2</sup><br>(\$/MWh) | CAISO LMP Differential <sup>3</sup><br>(\$/MWh) | 12-Mo Rolling Avg. Cost of BR <sup>4</sup><br>(\$/MWh) |
| Jul-20  | 83,801                            | 81,392                | (2,409)             | \$1,825,459                              | \$ 22.43                                    | \$ 0.13   | \$ 27.37   |
| Aug-20  | 61,985                            | 59,998                | (1,987)             | \$1,826,020                              | \$ 30.43                                    | \$ (0.23)                                       | \$ 27.68   |
| Sep-20  | 41,023                            | 41,391                | 368                 | \$1,811,655                              | \$ 43.77                                    | \$ 0.60   | \$ 27.62   |
| Oct-20  | 30,317                            | 22,596                | (7,721)             | \$909,162                                | \$ 40.24                                    | \$ 11.76  | \$ 29.62   |
| Nov-20  | 14,598                            | 13,280                | (1,318)             | \$909,162                                | \$ 68.46                                    | \$ 0.10   | \$ 30.44   |
| Dec-20  | 13,128                            | 14,102                | 974                 | \$909,162                                | \$ 64.47                                    | \$ 0.79   | \$ 31.48   |
| Jan-21  | 6,278                             | 7,174                 | 896                 | \$909,162                                | \$ 126.73                                   | \$ 1.02   | \$ 32.15   |
| Feb-21  | 16,372                            | -                     | (16,372)            | \$909,162                                | \$ 55.53                                    | \$ -  | \$ 32.65   |
| Mar-21  | 26,497                            | -                     | (26,497)            | \$909,162                                | \$ 34.31                                    | \$ -  | \$ 33.10   |
| Apr-21  | 41,629                            | -                     | (41,629)            | \$1,982,665                              | \$ 47.63                                    | \$ -  | \$ 34.58   |
| May-21  | 74,036                            | -                     | (74,036)            | \$1,982,665                              | \$ 26.78                                    | \$ -  | \$ 35.36   |
| Jun-21  | 93,177                            | -                     | (93,177)            | \$1,982,665                              | \$ 21.28                                    | \$ -  | \$ 35.44   |
| 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 7,174 MWh Base Resource (BR) energy in January 2021 for an estimated savings of \$7,300. There was zero MWh of Displacement Energy as the program is temporary suspended through March 31, 2021 due to limited base resource availability forecast.
- Pool Members' total savings under Market Efficiency Enhancement Agreement (MEEA) for Pool Members was approximately \$7,300 in January 2021. The cumulative net MEEA savings for NCPA FY 2021 is about \$248,400 for July 2020 through January 2021.

### 2025 Base Resource Contract

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

## Interconnection Affairs

### PG&E Update

#### TO-18 Rate Case

- On October 15, 2020 FERC issued a ruling on the PG&E Transmission Owner Tariff 18 Filing.
- The ruling came over four years after the initial filing and over two years from an initial favorable decision back in 2018.
- The ruling is not the end of TO-18 as FERC has requested further testimony and briefs on ROE matters. The initial decision reduced ROE from 10.40% to 9.13%.
- Once ROE is decided, TO-18 rates will be effective for a 12 month period from March 1, 2017 – Feb 28, 2018.
- TO-19, which was settled at a TRR of 98.85% of TO-18 will be effective for a 14 month period from March 1, 2018 – April 30, 2019.
- TANC estimates (without ROE adjustment) a decrease in the HV TAC of \$0.3494/MWh and a decrease in PG&E's LV access charge of \$1.167/MWh for the period March 1, 2017 through February 28, 2018.
- Next Step: Reply briefs on ROE by Joint Intervenors is due by Feb 12.

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

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

#### TO-20 Rate Case

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

#### Cotenancy Agreement

- PG&E with support from NCPA and SVP filed an amendment that acknowledged CDWR's request for termination. The amendment rejected CDWR's request, pending resolution of the Cost of Removal dispute. All other matters have been delayed until this issue is resolved.



- On September 27, 2019 FERC rejected PG&E's amendment stating PG&E cannot unilaterally extend the term of the Agreement. FERC did not address the cost of removal aspect and the calculation methodology. NCPA has initiated discussions with members as to how much capacity from CDWR's share should NCPA take. Pending the outcome of the capacity discussion, NCPA and SVP will look at next steps. More updates will be provided to members as they become available.

#### Transmission Planning BPM Updated Modeling Data Submittal

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

#### Stakeholder Transmission Asset Review (STAR) Process

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

## **Debt and Financial Management**

- Minutes released from the January Federal Reserve meeting showed that officials see the economy “far from” the central bank’s goals of a strong labor market recovery and inflation up to at least 2%. Their summary also stated it will take some time for substantial further progress to be achieved. As a result, that meant holding benchmark short-term borrowing rates near zero and maintaining the minimum \$120 billion of asset purchases each month.
- The Treasury yield curve showed moderating steepening with the 10- and 30-year finishing the week at 1.20% and 2.01% respectively largely anticipating another round of stimulus. However, short-term rates continue to remain at their historic lows.
- The Finance Committee met in February and one of the agenda items discussed was funding ratios and annual contributions of the Agency’s pension and retiree medical plans. The Committee asked for more time to review and analyze the data presented with a goal of addressing both plans again at the May meeting.

## **Schedule Coordination Goals**

### **Software Development**

- New releases/completed projects
  - PCWA’s transition into NCPA Deal Manager and Risk Manager System. Systems fully rolled out for PCWA
  - RPS Reporting app Phase 1 rolled out. Phase 1 of the RPS app includes the conversion of the Excel RPS Balance report on Member position. The new interface features a dynamic historical, current and forward view. WREGIS data was also integrated to account for retired RECs and carry overs. Phase 2 development is underway to provide the member some interactive capabilities such as entering Retail and Municipal Load.
  - Santa Clara’s Central 40 Solar Resource rolled in production. Start of scheduling pending COD.
- New applications and enhancements under development
  - ABISS (Accounting, Budget, Information and Settlements System) is under development. It is a new Business Intelligence Reporting tool to provide financial information to both NCPA and members.
  - Renewable Portfolio Standard Reporting app to be added as an enhancement to the Risk Management app. The report will provide members an automated RPS Balance Sheet of their RECs in a Compliance Period. RPS Reporting app Phase 2 is underway.
  - LEC MSG development in MIDS and Pre-scheduler underway, projected completion by Q2, 2021.
- IS is working with Accounting and its software consultant to enhance the financial reporting. Assessment report and proposed functional design was delivered by the consultant and is being vetted.

## **Network**

- Progress continues to be made upgrading staff to Windows 10 with over 99% 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.
- The IS SCADA team has completed the point and curtailment logic testing in preparation for the Central 40 go live scheduled for mid-February.
- Operations and Support staff continue working to migrate from the HQ Cisco core switch to a new Aruba stack for better performance and support. Majority of the core server infrastructure has been switched over to the new core and the systems team is wrapping up the final changes to reroute all communications.
- SCADA team is finalizing an updated screen for dispatchers that will alert them of any substantial unexpected load loss. This will help to notify our real time operations desk of any equipment trouble or city outages. Screens are expected to be finalized and available by end of February.
- IS continues working with EBCE and technical contractors to further integration efforts with Altamont Wind. Initial point testing of the Altamont wind project has been completed. Curtailment logic still needs to be tested in preparation for an April go live date.
- Comcast has successfully installed a new Internet fiber circuit at the Headquarter office. This circuit will be used to provide redundancy for NCPA Internet services when the primary ISP Consolidated Communications is degraded or unavailable.

## **NCPA Bills & Settlements**

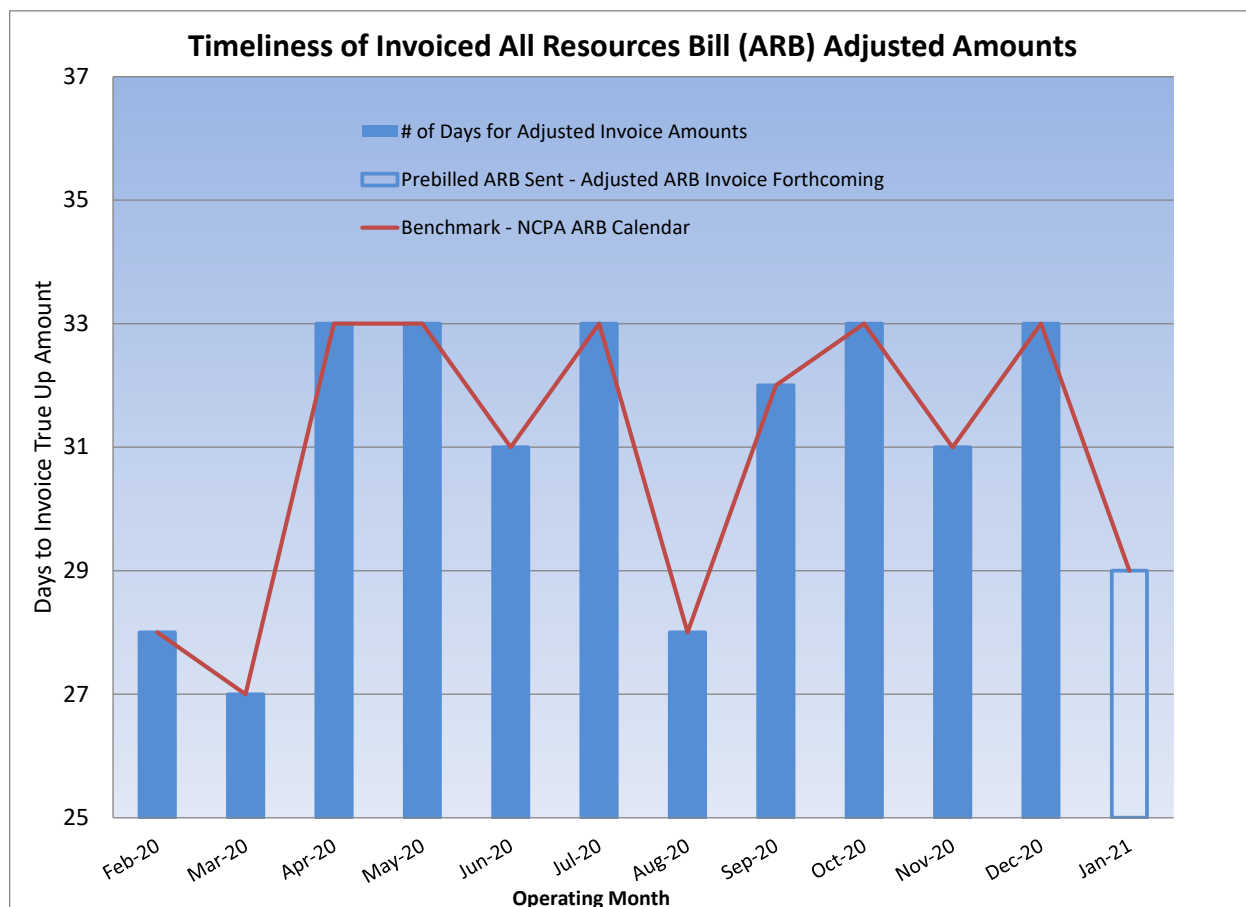
### **Progress Against the Strategic Plan**

*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 January 2021 NCPA All Resources Bill (ARB) monthly invoice sent to members on December 23, 2020 contains:

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

- October 2017 (7th Adjustment) T+36 month CAISO settlement true-up;



## **Legislative & Regulatory**

### **Political Arena State/Federal/Western Programs**

- NCPA staff continue to review new bill introductions as the State Legislature pushes toward the February 19 bill introduction deadline. Bill topics of interest include broadband deployment, renewable energy planning and procurement, transportation decarbonization, and wildfire issues, among other policy areas. NCPA will provide an overview of introduced bills during the February 24 Legislative and Regulatory Committee meeting.
- NCPA members participated in a round of virtual Capitol Day meetings with state legislators and regulatory agency leadership. Topics covered included energy affordability, reliability and resiliency, decarbonization, and wildfires, as well as discussion of NCPA member programs/activity in these areas. As the Legislature delves into potential COVID-19 relief efforts early in the year, NCPA members also shared the financial impacts of COVID-19 on their utilities and highlighted support for targeted relief for utility arrearages.

## **Human Resources**

### **Hires:**

Jonathan Ashcraft joined the NCPA team on February 8, 2021 as our new Supervisor I, General Services. Jonathan comes with over 20 years of experience in facilities and operations management including directing and coordinating facilities planning, maintenance, construction project management, information technology, procurement, and environmental health and safety. Prior to joining our team, he worked for Arcadia Biosciences as their Facilities and Operations Manager and was responsible for facility planning of leases and fixed assets, budgets, and maintenance of mechanical, electrical and plumbing systems.

### **Intern Hires:**

None

### **Promotions/Position Changes:**

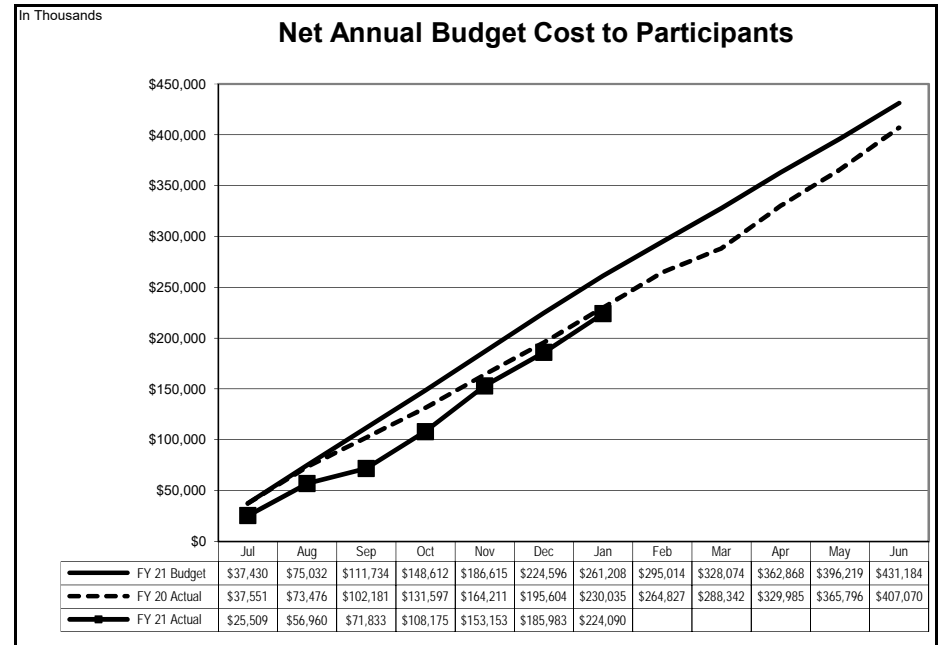
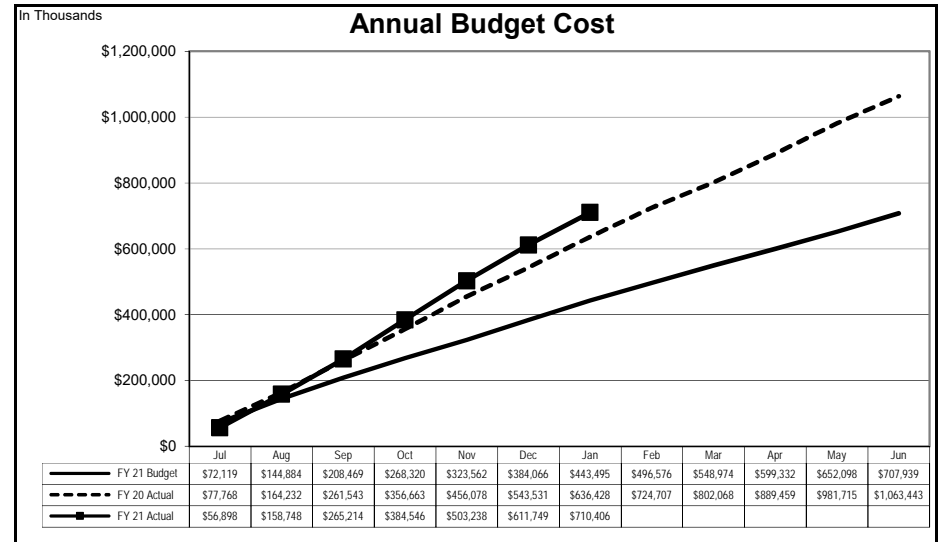
None

### **Separations:**

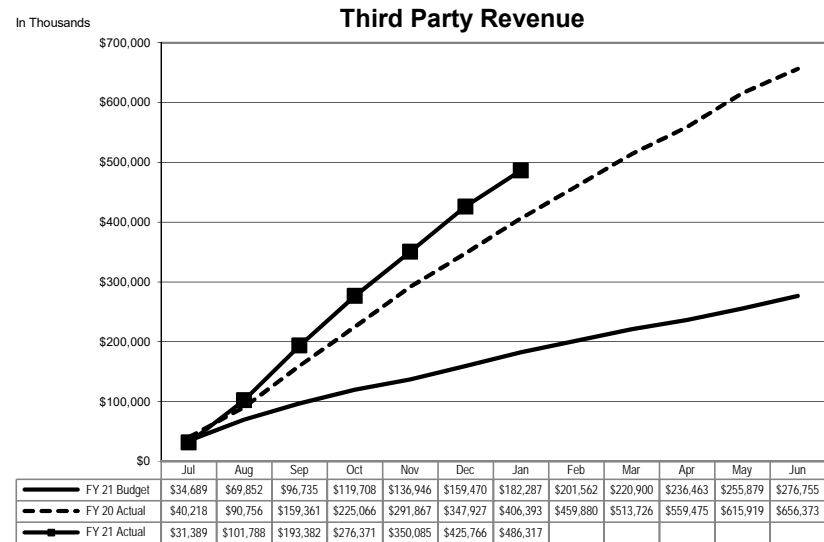
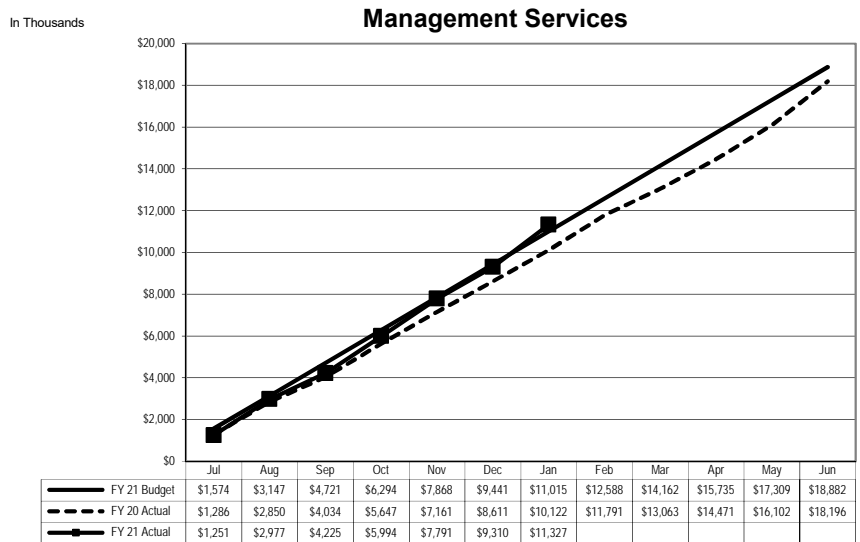
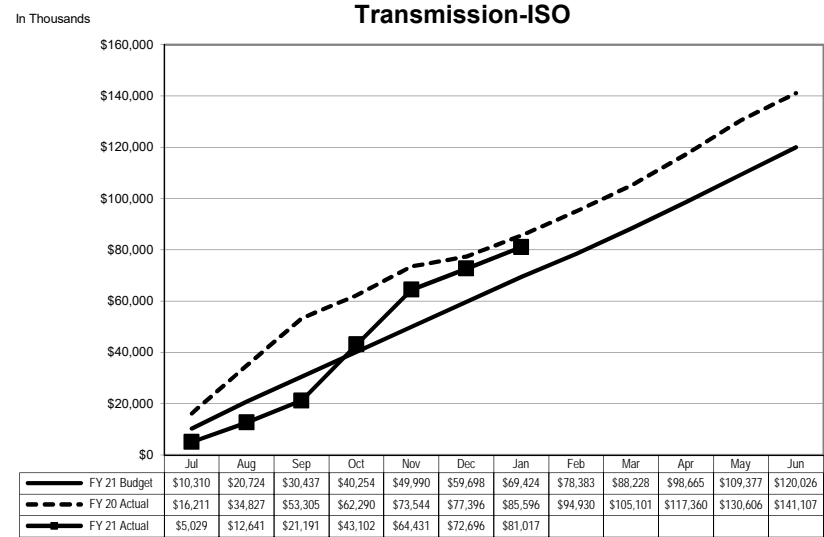
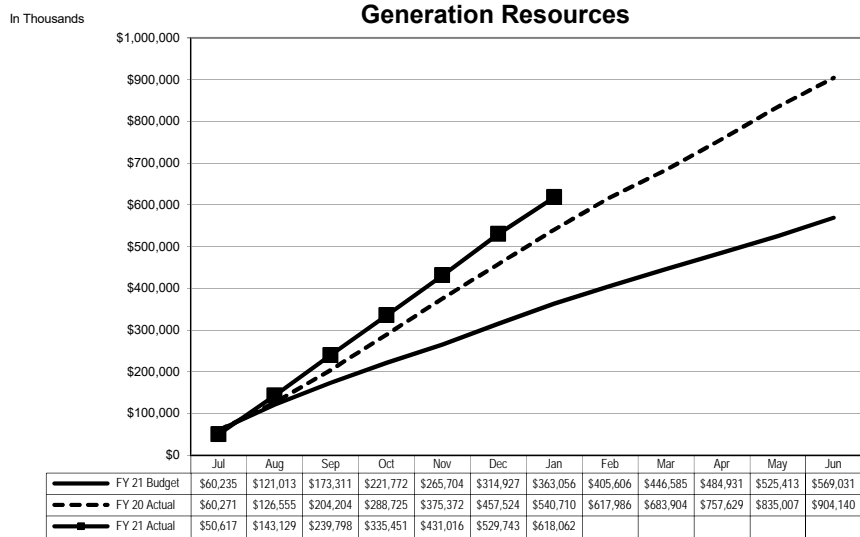
Knat Holben, Supervisor I, General Services, retired from our Headquarters office on February 5, 2021 after over 14 years of service with NCPA.

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

| In Thousands  | Program       |         |                   |                 |
|---|---------------|---------|-------------------|-----------------|
|   | Annual Budget | Actual  | Under(Ovr) Budget | YTD % Remaining |
| <b>GENERATION RESOURCES</b>                         |               |         |                   |                 |
| <b>NCPA Plants</b>                                  |               |         |                   |                 |
| Hydroelectric                                       | 54,260        | 30,361  | \$ 23,899         | 44%             |
| Geothermal Plant                                    | 35,561        | 20,781  | 14,781            | 42%             |
| Combustion Turbine No. 1                            | 7,884         | 3,662   | 4,222             | 54%             |
| Combustion Turbine No. 2 (STIG)                     | 7,989         | 5,925   | 2,065             | 26%             |
| Lodi Energy Center                                  | 92,551        | 44,476  | 48,076            | 52%             |
|   | 198,246       | 105,204 | 93,042            | 47%             |
| <b>Member Resources - Energy</b>                    | 60,056        | 35,133  | 24,922            | 41%             |
| <b>Member Resources - Natural Gas</b>               | 2,442         | 2,202   | 240               | 10%             |
| <b>Western Resource</b>                             | 29,870        | 15,926  | 13,944            | 47%             |
| <b>Market Power Purchases</b>                       | 27,423        | 20,646  | 6,777             | 25%             |
| <b>Load Aggregation Costs - ISO</b>                 | 250,995       | 438,117 | (187,122)         | -75%            |
| <b>Net GHG Obligations</b>                          | -             | 834     | (834)             |                 |
|   | 569,031       | 618,062 | (49,031)          | -9%             |
| <b>TRANSMISSION</b>                                 |               |         |                   |                 |
| <b>Independent System Operator</b>                  | 120,026       | 81,017  | 39,009            | 33%             |
| <b>MANAGEMENT SERVICES</b>                          |               |         |                   |                 |
| <b>Legislative &amp; Regulatory</b>                 |               |         |                   |                 |
| Legislative Representation                          | 2,180         | 928     | 1,252             | 57%             |
| Regulatory Representation                           | 715           | 426     | 289               | 40%             |
| Western Representation                              | 716           | 337     | 379               | 53%             |
| Customer Programs                                   | 477           | 247     | 230               | 48%             |
|   | 4,088         | 1,938   | 2,150             | 53%             |
| <b>Judicial Action</b>                              | 460           | 380     | 80                | 17%             |
| <b>Power Management</b>                             |               |         |                   |                 |
| System Control & Load Dispatch                      | 6,766         | 3,664   | 3,101             | 46%             |
| Forecasting & Prescheduling                         | 2,934         | 1,617   | 1,317             | 45%             |
| Industry Restructuring                              | 425           | 239     | 186               | 44%             |
| Contract Admin, Interconnection Svcs & Ext. Affairs | 1,000         | 574     | 426               | 43%             |
| Gas Purchase Program                                | 82            | 37      | 45                | 55%             |
| Market Purchase Project                             | 117           | 53      | 64                | 55%             |
|   | 11,324        | 6,185   | 5,139             | 45%             |
| <b>Energy Risk Management</b>                       | 230           | 99      | 131               | 57%             |
| <b>Settlements</b>                                  | 924           | 413     | 510               | 55%             |
| <b>Integrated System Support</b>                    | 266           | 119     | 147               | 55%             |
| <b>Participant Pass Through Costs</b>               | 1,591         | 812     | 779               | 49%             |
| <b>Support Services</b>                             | -             | 1,381   | (1,381)           |                 |
|   | 18,882        | 11,327  | 7,556             | 40%             |
| <b>TOTAL ANNUAL BUDGET COST</b>                     | 707,939       | 710,406 | (2,467)           | 0%              |
| <b>LESS: THIRD PARTY REVENUE</b>                    |               |         |                   |                 |
| Plant ISO Energy Sales                              | 105,258       | 68,228  | 37,030            | 35%             |
| Member Resource ISO Energy Sales                    | 26,422        | 20,154  | 6,267             | 24%             |
| Member Owned Generation ISO Energy Sales            | 69,679        | 50,673  | 19,006            | 27%             |
| Customer Owned Generation ISO Energy Sales          | -             | 37      | (37)              |                 |
| NCPA Contracts ISO Energy Sales                     | 18,915        | 13,035  | 5,880             | 31%             |
| Western Resource ISO Energy Sales                   | 17,481        | 17,250  | 230               | 1%              |
| Load Aggregation Energy Sales                       | -             | 201,367 | (201,367)         |                 |
| Ancillary Services Sales                            | 3,988         | 4,496   | (507)             | -13%            |
| Transmission Sales                                  | 110           | 64      | 46                | 42%             |
| Western Credits, Interest & Other Income            | 34,902        | 111,011 | (76,109)          | -218%           |
|   | 276,755       | 486,317 | (209,562)         | -76%            |
| <b>NET ANNUAL BUDGET COST TO PARTICIPANTS</b>       | 431,185       | 224,090 | \$ 207,095        | 48%             |



**Annual Budget  
Budget vs. Actual By Major Area  
As of January 31, 2021**

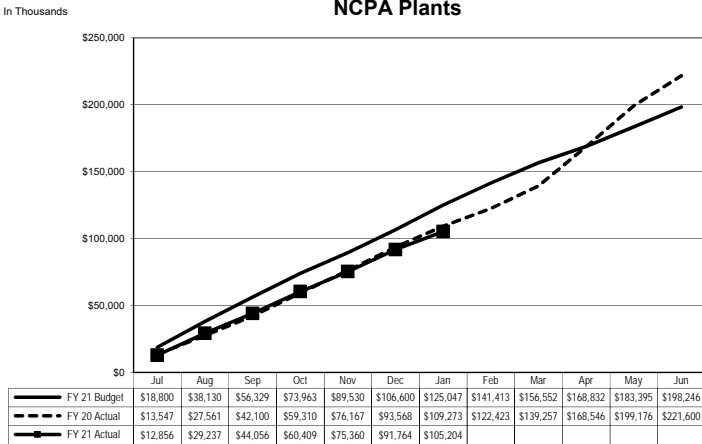


Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

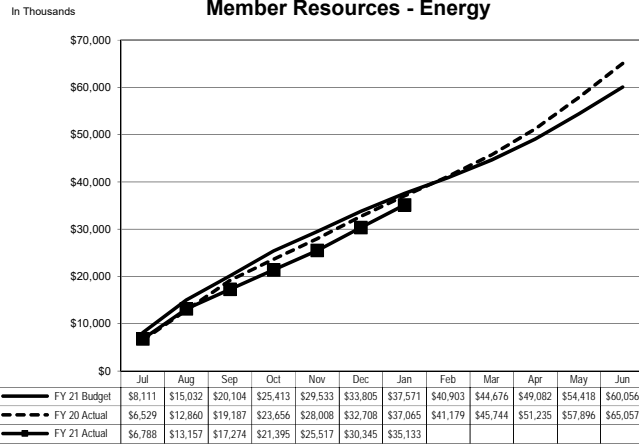


## Annual Budget Cost Generation Resources Analysis By Source As of January 31, 2021

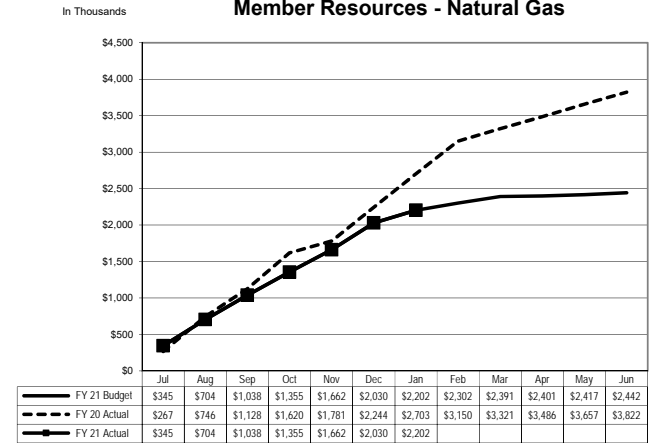
### NCPA Plants



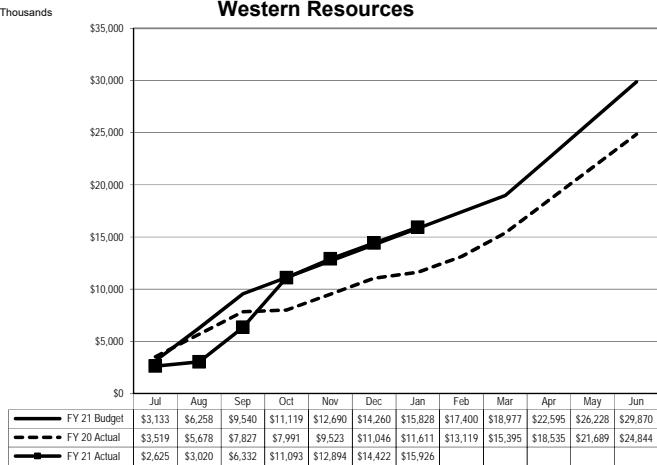
### Member Resources - Energy



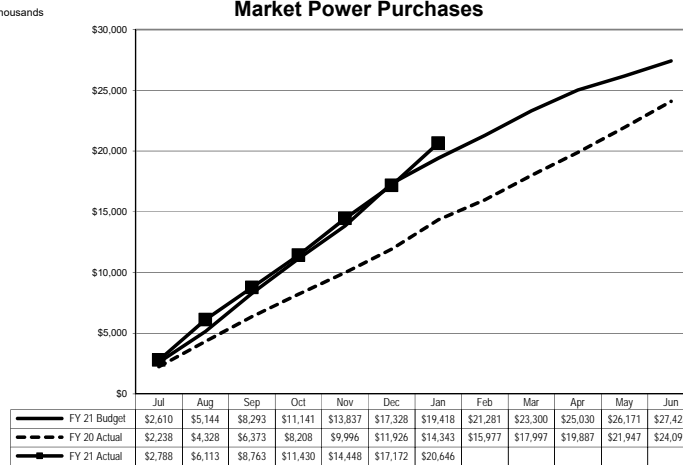
### Member Resources - Natural Gas



### Western Resources

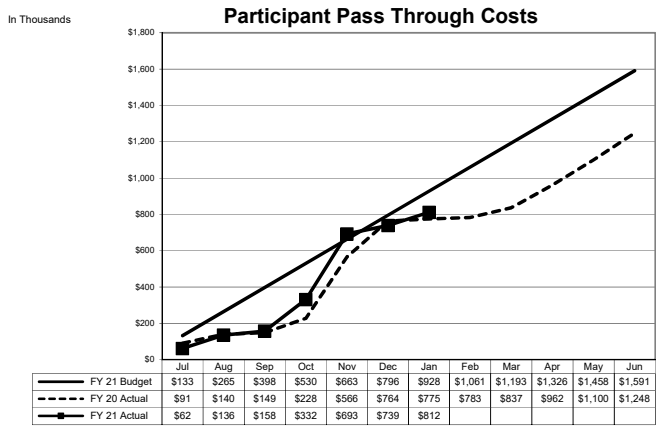
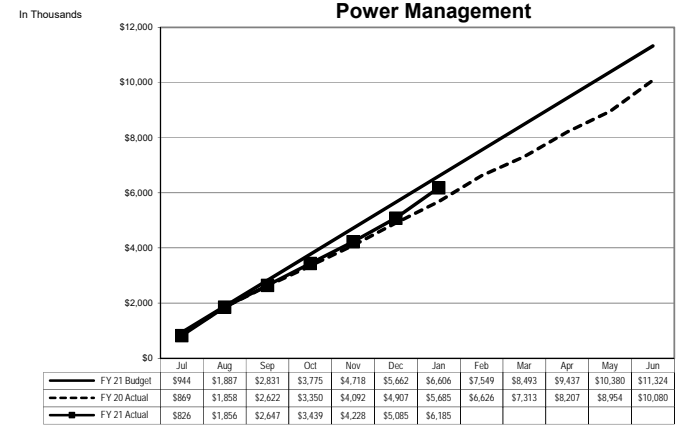
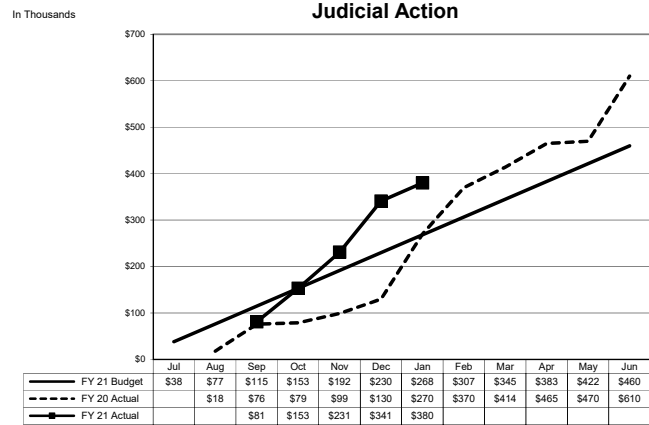
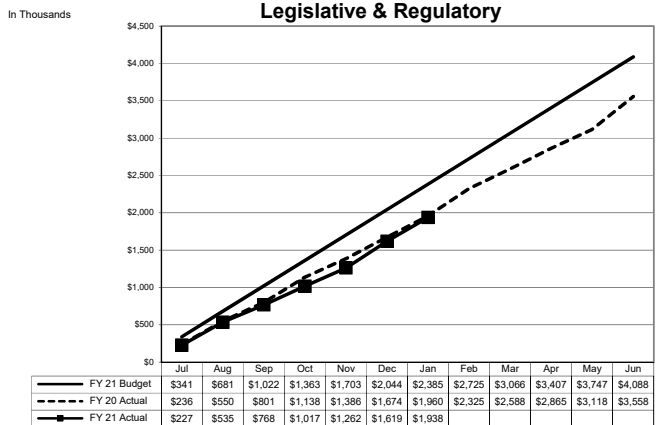


### Market Power Purchases



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

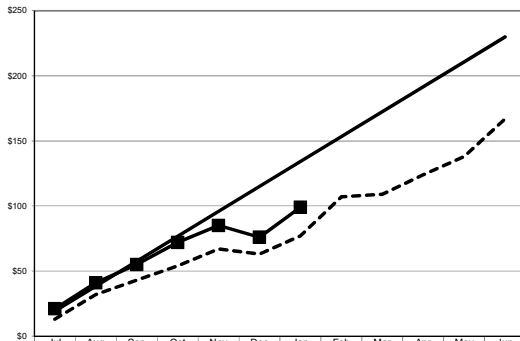
## Annual Budget Cost Management Services Analysis By Source As of January 31, 2021



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

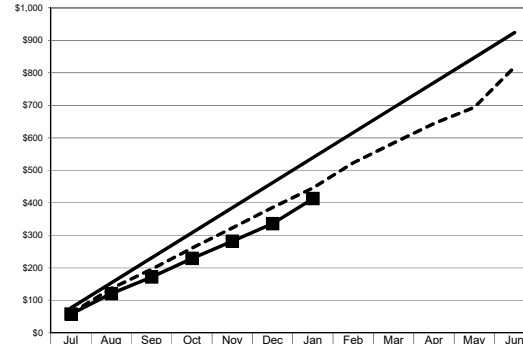
In Thousands

**Energy Risk Management**



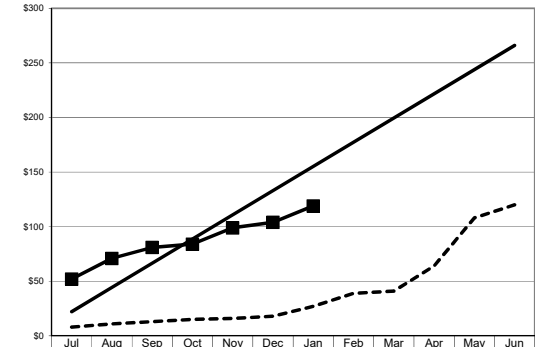
In Thousands

**Settlements**



In Thousands

**Integrated Systems Support**



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

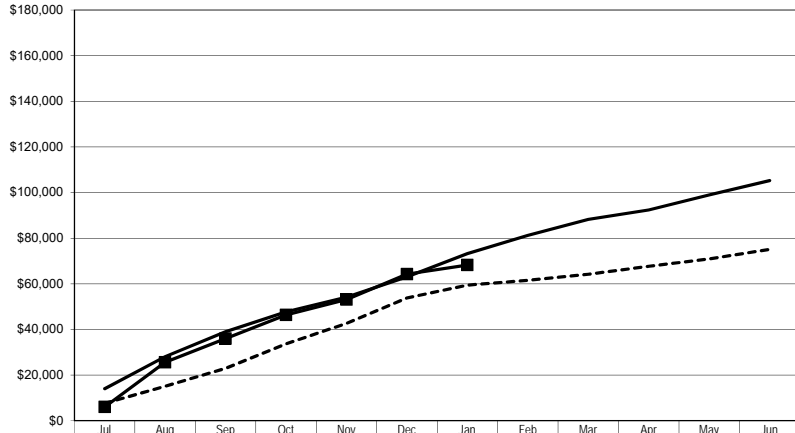
|              | Jul  | Aug   | Sep   | Oct   | Nov   | Dec   | Jan   | Feb   | Mar   | Apr   | May   | Jun   |
|--------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| FY 21 Budget | \$77 | \$154 | \$231 | \$308 | \$385 | \$462 | \$539 | \$616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

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

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

**Plant ISO Energy Sales**

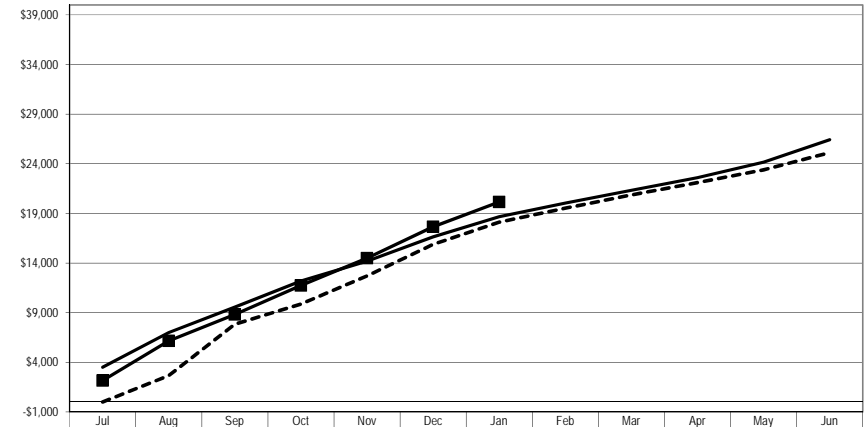
In Thousands



|              |         |          |          |          |          |          |          |          |          |          |          |          |
|--------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| FY 21 Budget | 14,049  | 28,118   | 39,000   | 47,746   | 54,194   | 63,039   | 73,238   | 81,223   | 88,250   | 92,412   | 98,993   | 105,258  |
| FY 20 Actual | \$7,599 | \$15,146 | \$22,997 | \$33,715 | \$42,684 | \$53,819 | \$59,408 | \$61,524 | \$64,221 | \$67,718 | \$70,907 | \$75,115 |
| FY 21 Actual | \$6,038 | \$25,666 | \$36,007 | \$46,364 | \$53,097 | \$64,251 | \$68,228 |          |          |          |          |          |

**Member Resource ISO Energy Sales**

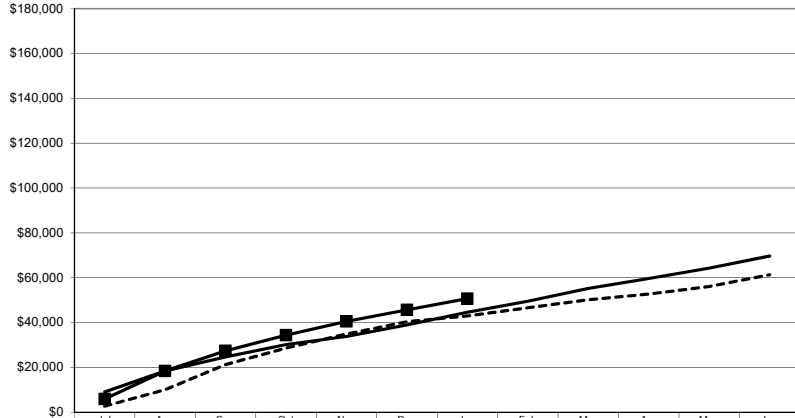
In Thousands



|              |         |         |         |          |          |          |          |          |          |          |          |          |
|--------------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| FY 21 Budget | \$3,504 | \$6,992 | \$9,559 | \$12,187 | \$14,190 | \$16,641 | \$18,673 | \$20,039 | \$21,326 | \$22,608 | \$24,163 | \$26,422 |
| FY 20 Actual | \$-     | \$2,659 | \$7,838 | \$9,868  | \$12,697 | \$15,882 | \$18,117 | \$19,528 | \$20,853 | \$22,098 | \$23,384 | \$25,125 |
| FY 21 Actual | \$2,155 | \$6,160 | \$8,826 | \$11,744 | \$14,491 | \$17,658 | \$20,154 |          |          |          |          |          |

**Member Owned Generation ISO Energy Sales**

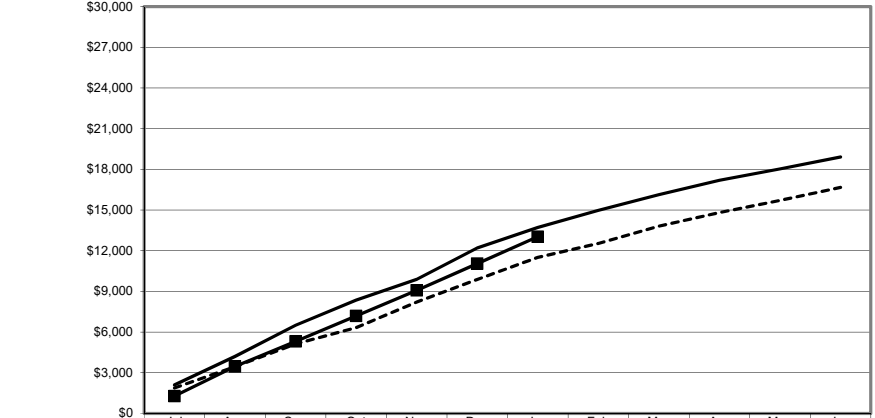
In Thousands



|              |         |          |          |          |          |          |          |          |          |          |          |          |
|--------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| FY 21 Budget | \$9,055 | \$18,365 | \$24,673 | \$30,168 | \$33,813 | \$38,968 | \$44,566 | \$49,498 | \$55,184 | \$59,652 | \$64,255 | \$69,679 |
| FY 20 Actual | \$2,693 | \$9,993  | \$21,258 | \$28,586 | \$34,870 | \$40,375 | \$42,960 | \$46,606 | \$50,111 | \$52,701 | \$56,078 | \$61,307 |
| FY 21 Actual | \$5,896 | \$18,375 | \$27,381 | \$34,347 | \$40,522 | \$45,628 | \$50,673 |          |          |          |          |          |

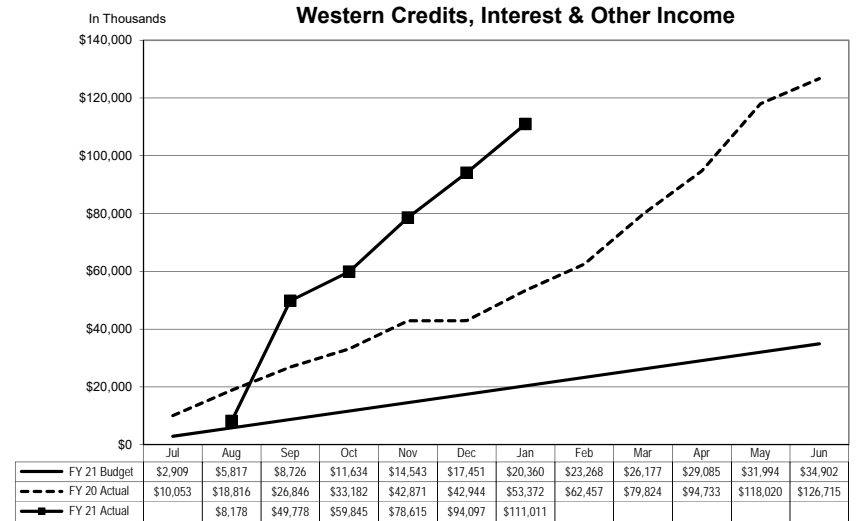
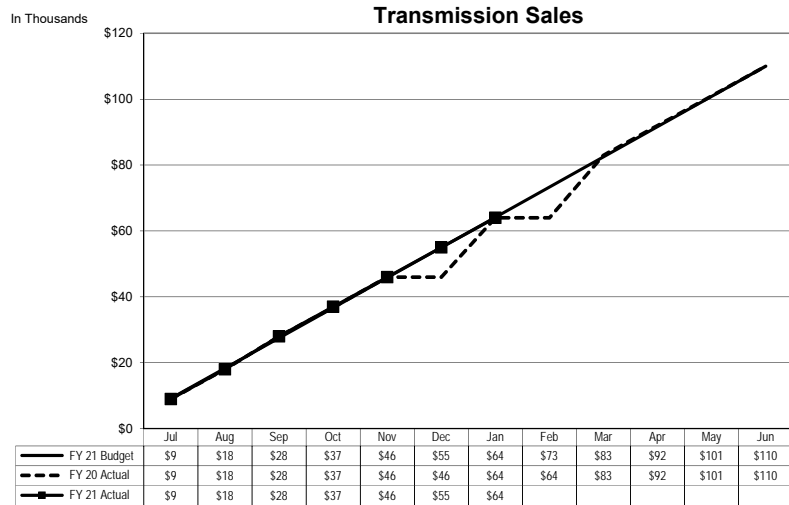
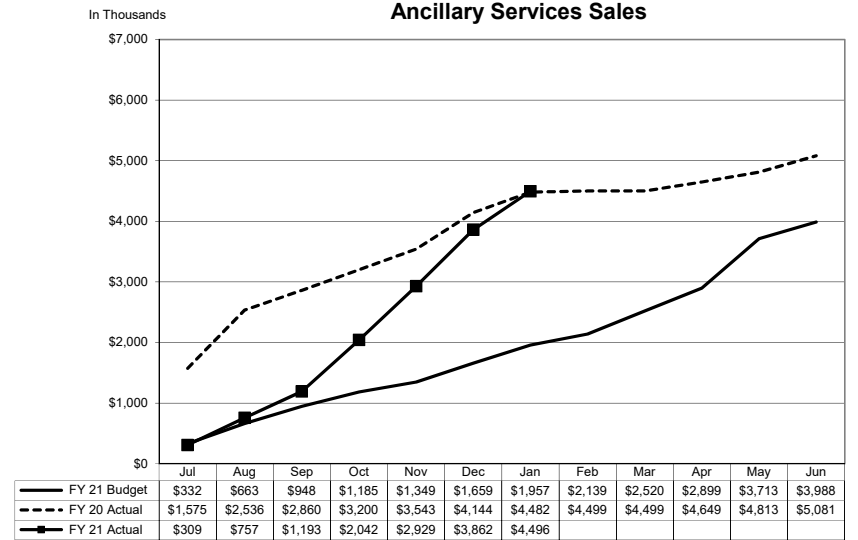
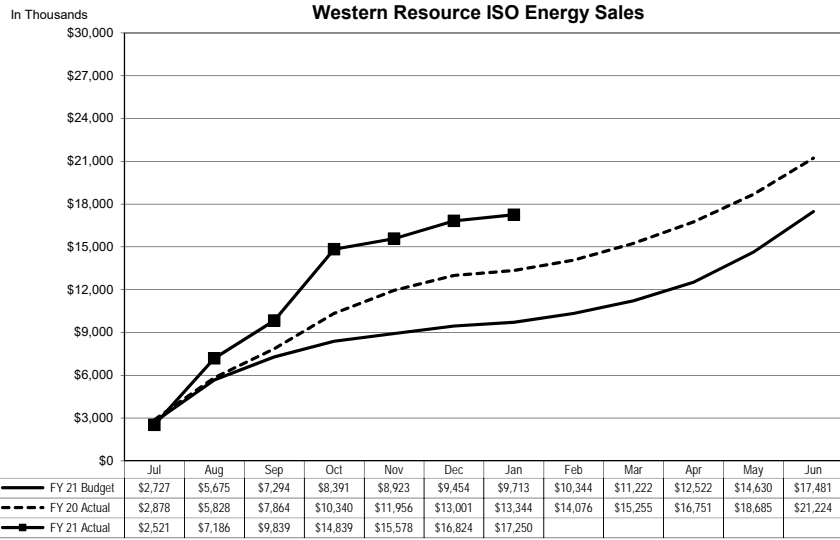
**NCPA Contracts ISO Energy Sales**

In Thousands



|              |         |         |         |         |         |          |          |          |          |          |          |          |
|--------------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|
| FY 21 Budget | \$2,104 | \$4,203 | \$6,507 | \$8,360 | \$9,890 | \$12,204 | \$13,716 | \$14,978 | \$16,138 | \$17,194 | \$18,031 | \$18,915 |
| FY 20 Actual | \$1,880 | \$3,451 | \$5,120 | \$6,331 | \$8,214 | \$9,875  | \$11,512 | \$12,530 | \$13,806 | \$14,810 | \$15,714 | \$16,669 |
| FY 21 Actual | \$1,279 | \$3,464 | \$5,317 | \$7,185 | \$9,078 | \$11,043 | \$13,035 |          |          |          |          |          |

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



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

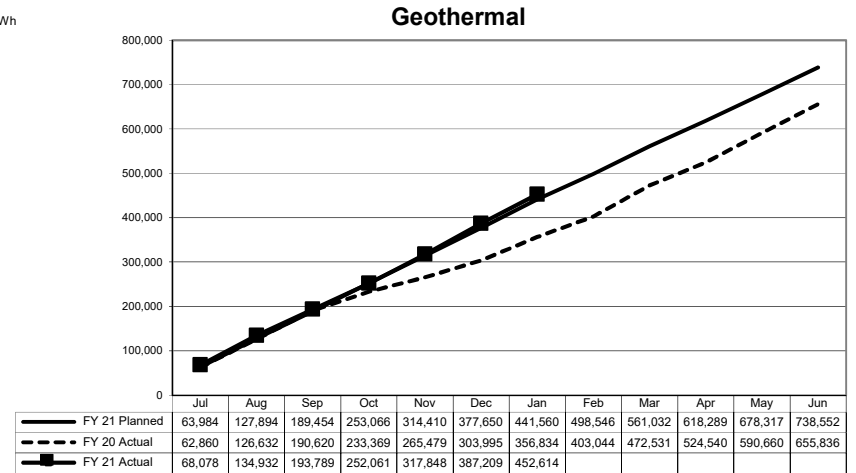
**Generation Cost Analysis**

\$ in thousands

|  | Geothermal    |           |               |                    |                 |
|--|---------------|-----------|---------------|--------------------|-----------------|
|  | Budget        | Actual    | \$/MWh Actual | Under(Over) Budget | YTD % Remaining |
|  | Routine O & M | \$ 19,252 | \$ 11,104     | \$ 24.53           | \$ 8,148        |
| Capital Assets/Spare Parts Inventories | 2,585         | 1,510     | 3.34          | 1,075              | 42%             |
| Other Costs                            | 8,239         | 4,389     | 9.70          | 3,850              | 47%             |
| CA ISO Charges                         | 534           | 890       | 1.97          | (356)              | -67%            |
| Debt Service                           | 4,950         | 2,888     | 6.38          | 2,063              | 42%             |
| Annual Budget                          | 35,561        | 20,781    | 45.91         | 14,781             | 42%             |
| Less: Third Party Revenue              |               |           |               |                    |                 |
| Interest Income                        | 382           | 87        | 0.19          | 295                | 77%             |
| ISO Energy Sales                       | 25,811        | 18,618    | 41.13         | 7,193              | 28%             |
| Ancillary Services Sales               | -             | -         | -             | -                  | -               |
| Effluent Revenues                      | 750           | 648       | 1.43          | 102                | 14%             |
| Misc                                   | 113           | 66        | 0.15          | 47                 | 41%             |
|  | 27,056        | 19,419    | 42.90         | 7,637              | 28%             |
| Net Annual Budget Cost to Participants | \$ 8,506      | \$ 1,361  | \$ 3.01       | \$ 7,144           | 84%             |
| Net Generation--MWh @ Meter            | 738,552       | 452,614   |               |                    |                 |
| \$/MWh (A)                             | \$ 4.81       | \$ (3.37) |               |                    |                 |

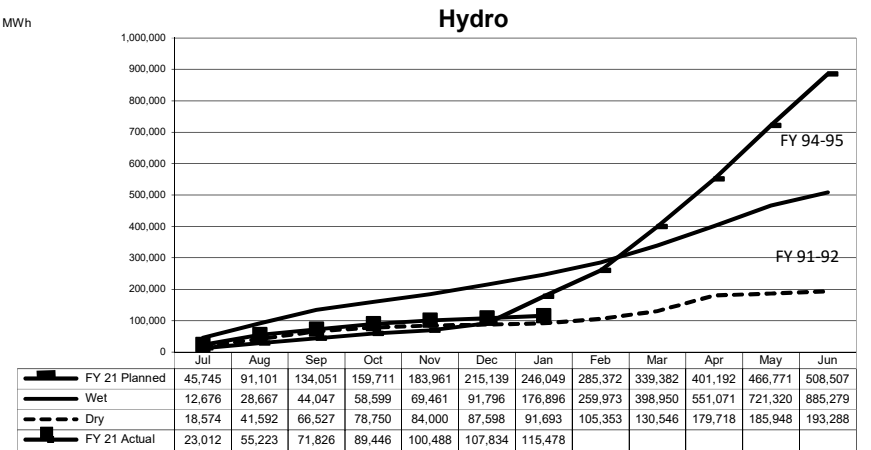
**MWhs Generated**

In MWh



|  | Hydroelectric |            |               |                    |                 |
|--|---------------|------------|---------------|--------------------|-----------------|
|  | Budget        | Actual     | \$/MWh Actual | Under(Over) Budget | YTD % Remaining |
|  | Routine O & M | \$ 9,570   | \$ 4,465      | \$ 38.67           | \$ 5,104        |
| Capital Assets/Spare Parts Inventories | 365           | 2,774      | 24.02         | (2,409)            | -661%           |
| Other Costs                            | 8,323         | 1,921      | 16.64         | 6,401              | 77%             |
| CA ISO Charges                         | 2,615         | 1,725      | 14.94         | 890                | 34%             |
| Debt Service                           | 33,388        | 19,476     | 168.66        | 13,912             | 42%             |
| Annual Budget                          | 54,260        | 30,361     | 262.92        | 23,899             | 44%             |
| Less: Third Party Revenue              |               |            |               |                    |                 |
| Interest Income                        | 670           | 115        | 1.00          | 555                | 83%             |
| ISO Energy Sales                       | 22,147        | 11,178     | 96.80         | 10,969             | 50%             |
| Ancillary Services Sales               | 2,276         | 2,606      | 22.57         | (330)              | -14%            |
| Misc                                   | 25,094        | 13,899     | 120.36        | 11,194             | 45%             |
| Net Annual Budget Cost to Participants | \$ 29,167     | \$ 16,462  | \$ 142.56     | \$ 12,705          |                 |
| Net Generation--MWh @ Meter            | 508,507       | 115,478    |               |                    |                 |
| \$/MWh (A)                             | \$ (8.30)     | \$ (26.10) |               |                    |                 |

In MWh



Footnotes:

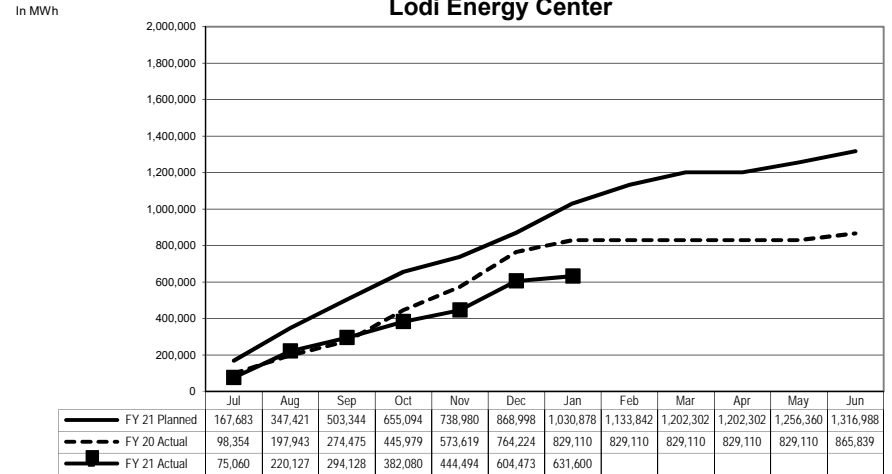
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

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

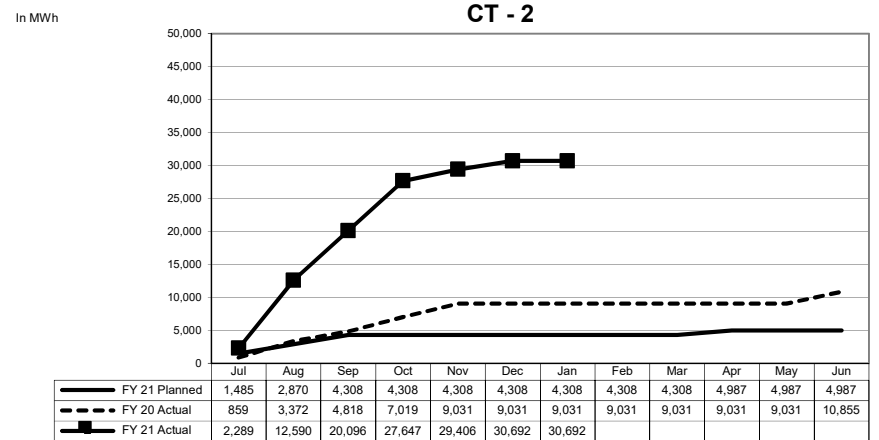
**Generation Cost Analysis**

|  | Lodi Energy Center |           |               |                    |                 |
|--|--------------------|-----------|---------------|--------------------|-----------------|
|  | Budget             | Actual    | \$/MWh Actual | Under(Over) Budget | YTD % Remaining |
| Routine O & M                          | \$ 14,463          | \$ 7,616  | \$ 12.06      | \$ 6,848           | 47%             |
| Fuel                                   | 32,956             | 16,735    | 26.50         | 16,221             | 49%             |
| CA ISO Charges and Energy Purchases    | 3,831              | 1,648     | 2.61          | 2,183              | 57%             |
| Capital Assets/Spare Parts Inventories | 2,906              | 1,413     | 2.24          | 1,493              | 51%             |
| Other Costs                            | 12,372             | 1,884     | 2.98          | 10,488             | 85%             |
| Debt Service                           | 26,024             | 15,181    | 24.04         | 10,843             | 42%             |
| Annual Budget                          | 92,551             | 44,476    | 70.42         | 48,076             | 52%             |
| Less: Third Party Revenue              |                    |           |               |                    |                 |
| Interest Income                        | 386                | 165       | 0.26          | 221                | 57%             |
| ISO Energy Sales                       | 55,590             | 33,136    | 52.46         | 22,454             | 40%             |
| Ancillary Services Sales               | 1,712              | 1,203     | 1.90          | 509                | 30%             |
| Transfer Gas Credit                    | -                  | -         | -             | -                  | 0%              |
| GHG Allowance Credits                  | 8,463              | -         | -             | 8,463              | 100%            |
| Misc                                   | -                  | 35        | 0.06          | (35)               | 0%              |
|  | 66,151             | 34,539    | 54.68         | 31,613             | 48%             |
| Net Annual Budget Cost to Participants | \$ 26,400          | \$ 9,937  | \$ 15.73      | \$ 16,463          | 62%             |
| Net Generation--MWh @ Meter            | 1,316,988          | 631,600   |               |                    |                 |
| \$/MWh (A)                             | \$ 0.29            | \$ (8.30) |               |                    |                 |

**MWhs Generated**



|  | Combustion Turbine No. 2 (STIG) |            |               |                    |                 |
|--|---------------------------------|------------|---------------|--------------------|-----------------|
|  | Budget                          | Actual     | \$/MWh Actual | Under(Over) Budget | YTD % Remaining |
| Routine O & M                          | \$ 1,584                        | \$ 1,070   | \$ 34.86      | \$ 514             | 32%             |
| Fuel and Pipeline Transport Charges    | 910                             | 1,450      | 47.26         | (540)              | -59%            |
| Capital Assets/Spare Parts Inventories | 37                              | 4          | 0.12          | 33                 | 90%             |
| Other Costs                            | 593                             | 272        | 8.87          | 320                | 54%             |
| CA ISO Charges                         | 40                              | 313        | 10.20         | (273)              | -675%           |
| Debt Service                           | 4,826                           | 2,815      | 91.73         | 2,011              | 42%             |
| Annual Budget                          | 7,989                           | 5,925      | 193.03        | 2,065              | 26%             |
| Less: Third Party Revenue              |                                 |            |               |                    |                 |
| Interest Income                        | 109                             | 25         | 0.81          | 84                 | 77%             |
| ISO Energy Sales                       | 399                             | 2,685      | 87.47         | (2,286)            | -573%           |
| Ancillary Service Sales                | -                               | -          | -             | -                  | 0%              |
| Fuel and Pipeline Transport Credits    | 1,821                           | 747        | 24.35         | 1,073              | 59%             |
| GHG Allowance Credits                  | 43                              | -          | -             | 43                 | 100%            |
| Misc                                   | -                               | -          | -             | -                  | 0%              |
|  | 2,371                           | 3,457      | 112.63        | (1,086)            | -46%            |
| Net Annual Budget Cost to Participants | \$ 5,618                        | \$ 2,468   | \$ 80.40      | \$ 3,150           | 56%             |
| Net Generation--MWh @ Meter            | 4,987                           | 30,692     |               |                    |                 |
| \$/MWh (A)                             | \$ 158.75                       | \$ (11.33) |               |                    |                 |



**Footnotes:**

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



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

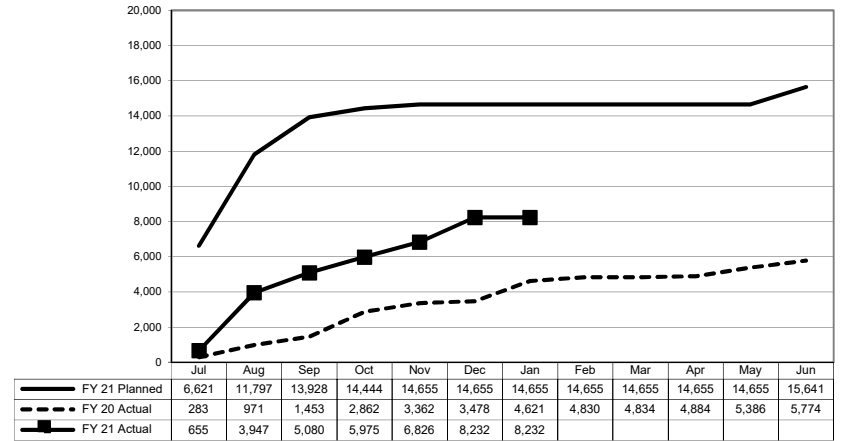
**Generation Cost Analysis**

|  | Combustion Turbine No. 1 |           |               |                    |                 |
|--|--------------------------|-----------|---------------|--------------------|-----------------|
|  | Budget                   | Actual    | \$/MWh Actual | Under(Over) Budget | YTD % Remaining |
| Routine O & M                          | \$ 2,320                 | \$ 1,417  | \$ 172.15     | \$ 903             | 39%             |
| Fuel and Pipeline Transport Charges    | 937                      | 637       | 77.43         | 299                | 32%             |
| Capital Assets/Spare Parts Inventories | 3,667                    | 829       | 100.65        | 2,838              | 77%             |
| Other Costs                            | 866                      | 413       | 50.11         | 453                | 52%             |
| CA ISO Charges                         | 94                       | 366       | 44.50         | (272)              | -290%           |
| Debt Service                           | -                        | -         | -             | -                  | -               |
| Annual Budget                          | 7,884                    | 3,662     | 444.84        | 4,222              | 54%             |
| Less: Third Party Revenue              |                          |           |               |                    |                 |
| Interest Income                        | -                        | 26        |               | (26)               |                 |
| ISO Energy Sales                       | 1,311                    | 2,611     | 317.23        | (1,300)            | -99%            |
| Ancillary Services Sales               | -                        | -         | -             | -                  | 0%              |
| Misc                                   | -                        | 16        | 1.90          | (16)               | 0%              |
|  | 1,311                    | 2,653     | 319.13        | (1,342)            | -102%           |
| Net Annual Budget Cost to Participants | \$ 6,572                 | \$ 1,009  | \$ 122.52     | \$ 5,564           | 85%             |
| Net Generation--MWh @ Meter            | 15,641                   | 8,232     |               |                    |                 |
| \$/MWh (A)                             | \$ 420.19                | \$ 122.52 |               |                    |                 |

**MWhs Generated**

In MWh

**CT - 1**



Footnotes:

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