



651 Commerce Drive
Roseville, California 95678
(916) 781-3636
www.ncpa.com



BUSINESS PROGRESS REPORT

August 2017

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Generation Costs & Reliability

Combustion Turbine Project

Unit Operation for July

Unit	Availability		Production		Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	570.0	CAISO / CAISO
	99.64%	99.57%	Unit 2	475.7	
Curtailments, Outages, and Comments.			18-Jul-17, 11:17-14:00 Preparation for black start testing - measuring fuel flow orifice / 18-Jul-17, 11:17-14:00 Preparation for black start testing - measuring fuel flow orifice		
CT1 Lodi	79.81%		717.4 MWhr		CAISO
Curtailments, Outages, and Comments.			07-Jul-17, 18:10-23:59 - Gas compressor trouble - compressor piston 08Jul-13Jul, 0:00-23:59 - Gas compressor trouble - compressor piston 15-Jul-17, 18:00-18:24 - Unit failed to parallel - field breaker		
CT2 STIG	85.65%		833.7 MWhr		CAISO
Curtailments, Outages, and Comments.			20Jul-23Jul, 0:00-23:59 - Unit unavailable - loss of make up water supply 24-Jul-17, 0:00-10:47 - Unit unavailable - loss of make up water supply		
LEC	90.86%		52,294.5 MWhr		CAISO
Curtailments, Outages, and Comments.			19-Jul-17, 21:00-23:59 - Unit unavailable - loss of make up water supply 20-Jul-17, 0:00-23:59 - Unit unavailable - loss of make up water supply 21-Jul-17, 0:00-23:59 - Unit unavailable - loss of make up water supply 22-Jul-17, 0:00-10:00 - Unit unavailable - loss of make up water supply 29-Jul-17, 17:46-19:25 - Unit trip - IGV servo 29-Jul-17, 19:38-22:00 - Unit trip - High superheater outlet temp 30-Jul-17, 15:42-18:36 - Unit trip - IGV servo		

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for July

Unit	Availability	Net Electricity Generated/Water Delivered	Out-of-Service/Descriptors
Unit 1	100 %	19,741 MWh	Unit 1 had no outages for the month.
Unit 2	100 %	*17,031 MWh	Unit 2 had one outage for the month. The Unit was forced out of service on 7/21 at 0350 because of low vacuum due to the vacuum pump separator outlet line was plugged. A temporary line was put in place to return the Unit to service while the outlet line was cleaned out then placed back into service later the same day at 0600. The Unit was off line for a total of 2.25 hours
Unit 3	N/A %	N/A	Unit 3 remains out of service for the month.
Unit 4	100 %	30,896 MWh	Unit 1 had no outages for the month.
Southeast Geysers Effluent Pipeline	99.9 %	249.3 mgallons	Average flow rate: 5,696 gpm
Southeast Solar Plant	N/A	77,545 KWh	Year-to-date KWh: 590,586
Bear Canyon Pump Station Zero Solar	N/A	299,612 KWh	Year-to-date KWh: 1,341,151

* Accounts for an additional 2,457 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for July

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	100.00 %	42,098 MWh	CV #1 unit no reportable outages.
Collierville Unit 2	100.00 %	43,421 MWh	CV #2 unit.no reportable outages. Derate to 110mw due to stator ground fault repair.
Spicer Unit 1	100.00 %	1,784 MWh	NSM #1 unit no reportable outages.
Spicer Unit 2	100.00 %	1,799 MWh	NSM #2 unit no reportable outages.
Spicer Unit 3	100.00 %	322 MWh	NSM #3 unit no reportable outages.

Operations & Maintenance Activities:

- Monthly CMMS work orders
- Adit 4 Slide repair
- Beaver Creek Diversion Reservoir debris clean out in (phase1) completed
- Murphys Micro-wave project
- FERC Project 11563 noxious weed survey
- Project Stream Gaging station solar upgrades

Environmental, Health & Safety (EH&S) Projects

Incident Reports

- There were no vehicle accidents, no recordable incidents, and no lost time accidents that occurred in July.
- 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 as updated through the payroll period ended June 24, 2017.
- The “CT Group” column reflects the combined safety numbers of all CT employees. Beginning with the November 2009 report, the CT Group Column also includes Lodi Energy Center staff.

June Generation Services Safety Report

	Hydro	GEO	CT Group *	NCPA HQ **
CalOSHA Recordable (this month)	0	0	0	0
CalOSHA Recordable (calendar year)	0	1	0	0
Days since Recordable	948	195	838	5,906
Work Hours Since Last Recordable	80,978	37,762	123,125	2,126,413
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	1	0	0
Days without LTA	3,564	179	8,742	4,835
Work Hours without LTA	326,543	34,857	564,489	1,748,433
Vehicle Incident (month)	0	0	0	0
Vehicle Incident (calendar year)	0	0	1	1

* 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 July 22, 2017.

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 2017 Data

	July 2017		Calendar Year 2017	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	439.29 7/179 @1700	221,239	463.98 6/19 @1600	1,379,322
SVP	537.3 67/1722 @1500	329,644	570.18 6/22 @1500	2,134,876
MSSA	968.08 7/1722 @ 1700	550,883	1025.83 6/22 @ 1500	3,514,198

Last Year 2016 Data*

	July 2016		Calendar Year 2016	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	449.75 7/27 @1700	216,061	449.75 7/27 @1700	1,369,990
SVP	522.46 7/27 @ 1600	306,326	534.21 9/26 @ 1700	2,042,357
MSSA	968.73 7/27 @ 1600	522,387	968.73 7/27 @ 1600	3,412,347

*Last year's data added for comparison purposes only

System Peak Data

	All Time Peak Demand	2017 Peak Demand
NCPA Pool	517.83 MW on 7/24/06 @ 1500	463.98 6/19 @ 1600
SVP	570.18 MW on 6/22/17 @ 1500	570.18 6/22 @ 1500
MSSA	1025.83 MW on 6/22/17 @ 1500	1025.83 6/22 @ 1500

- 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		
	July 2017	Calendar Year 2017
MSSA % Within the Band	98.88%	97.35%

- Spicer Meadows:
 - No curtailments
- Geothermal Units:
 - July 21 @ 0353 - 0552, Unit 2 off line to vacuum pump trouble.
- Lodi Energy Center:
 - July 19 – July 22, plant unavailable due to loss of makeup water supply from White Slough water treatment plant
 - July 29 @ 1746 – 2200, CTG trip due to failed inlet guide vanes servo. Plant trip on restart due to high superheater outlet temp.
 - July 30 @ 1542 – 1836, CTG trip due to failed inlet guide vanes servo. Servo replaced.
- Alameda CTs:
 - July 8 @ 1600 - 1630, Unit 2 trip on high EGT average.
 - July 18 @ 1117 - 1400, Unit 1 and 2 unavailable for measurement of fuel flow orifice as part of preparation for black start capability bid.
- Lodi CT:
 - July 7 – July 13, Unit o/s due gas compressor piston failure.
 - July 15 @ 11800 - 1824, Unit failed start due to field breaker trouble.
- Collierville Units:
 - July 1 – 31, Unit 2 remains derated due stator ground fault repair.
- STIG:
 - July 20 – July 24, unit unavailable due to loss of makeup water supply from White Slough water treatment plant

Pooling & Portfolio Planning & Forecasting

- Actual NCPA Pool load of 221.2 GWh in July equaled 103% of the pre-month forecast of 216.6 GWh due to an unusually warm month with associated high demand. Pool load, running 94 GWh through August 13, is likely to reach the forecast of 218.5 GWh with continuing above-normal temperatures forecasted.
- The Lodi Energy Center (LEC) generated 9,713 MWh for the pool in July, well above the 5,379 MWh forecast. Again, sustained high temperatures in July kept implied heat rates well above the norm. For August, LEC generation was forecasted at 8,187 MWh and had reached 6,753 MWh by August 13.
- For the month of July, no rain was recorded at Big Trees gage. With the rainy season concluded, total precipitation for the year at 99.4 inches was 180% of the historic October-to-July average.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) was recently raised to \$35/MWh.

- NSMR storage as of July 31 was at 153,165 acre feet. The historical average NSMR storage at the end of July is 134,562 acre feet. As of August 14, NSMR storage is 140,089 acre feet. The NCPA Pool share of NSMR storage is 71,265 acre feet.
- Combined Calaveras Project generation for the Pool in July totaled 46.0 GWh, down from 112.6 GWh in June. Through August 14, Calaveras generation for the Pool (14.0 GWh) is running close to the month's forecast for 29.0 GWh.
- Western Base Resource (BR) Pool delivery in July 2017 was 82.8 GWh compared to the forecast of 88.4 GWh. Through August 13, BR pool allocations of 39.8 GWh (15 GWh Displacement) have a way to go to meet the August forecast of 87.1 GWh.
- PG&E City-Gate gas index traded at \$3.29/MMBtu for August 15 delivery - compared to an average of \$3.23/MMBtu (with a high of \$3.37/MMBtu) during the month of July. Despite high temperatures, prices in July remained relatively flat. The PG&E Bidweek price for August gas was \$3.28, and daily Platt's prices have been running just above that, due to above-normal temperatures and upstream demand.
- Day-ahead HLH (on-peak) NP15 electricity remains low on average with spikes occurring on days with highest load and least wind. The HLH and LLH day-ahead average LMPs for Monday, August 14 delivery were \$32.34 and \$26.66/MWh, respectively.

NCPA Pool Loads & Resources Value Summary								
Peak and Energy Summary Jul-17					Estimated Production Costs		Cost of Serving Demand	
	Coincident		Forecast		NCPA Pool		Totals	Avg (\$/MWh)
	Peak (MW)	Total MWh	Values	Avg. MW	Cost/Revenue (Estimate)	Variable Cost (\$/MWh)		
Demand	439.3	221,169	216,554	297.3	N/A	N/A		
WAPA	29.0	82,819	88,448	111.3	\$ 2,334,679	\$ 28.19	\$ 8,717,849	\$ 39.42
Geothermal	-	27,978	28,674	37.6	531,574	19.00		
Hydro	-	46,000	55,185	61.8	276,000	6.00		
Stig & CTs	-	1,518	1,503	2.0	99,198	65.34		
LEC	-	9,713	5,379	13.1	372,588	38.36		
Contracts	372.3	92,296	113,667	124.1	5,830,444	63.17	\$ 8,023,961	\$ 36.28
Market - Net (Net Sales = Negative)	38.0	(39,155)	(76,302)	(52.6)				
Net Total	439.3	221,169	216,554	297.3	\$ 9,444,484	\$ 36.28		

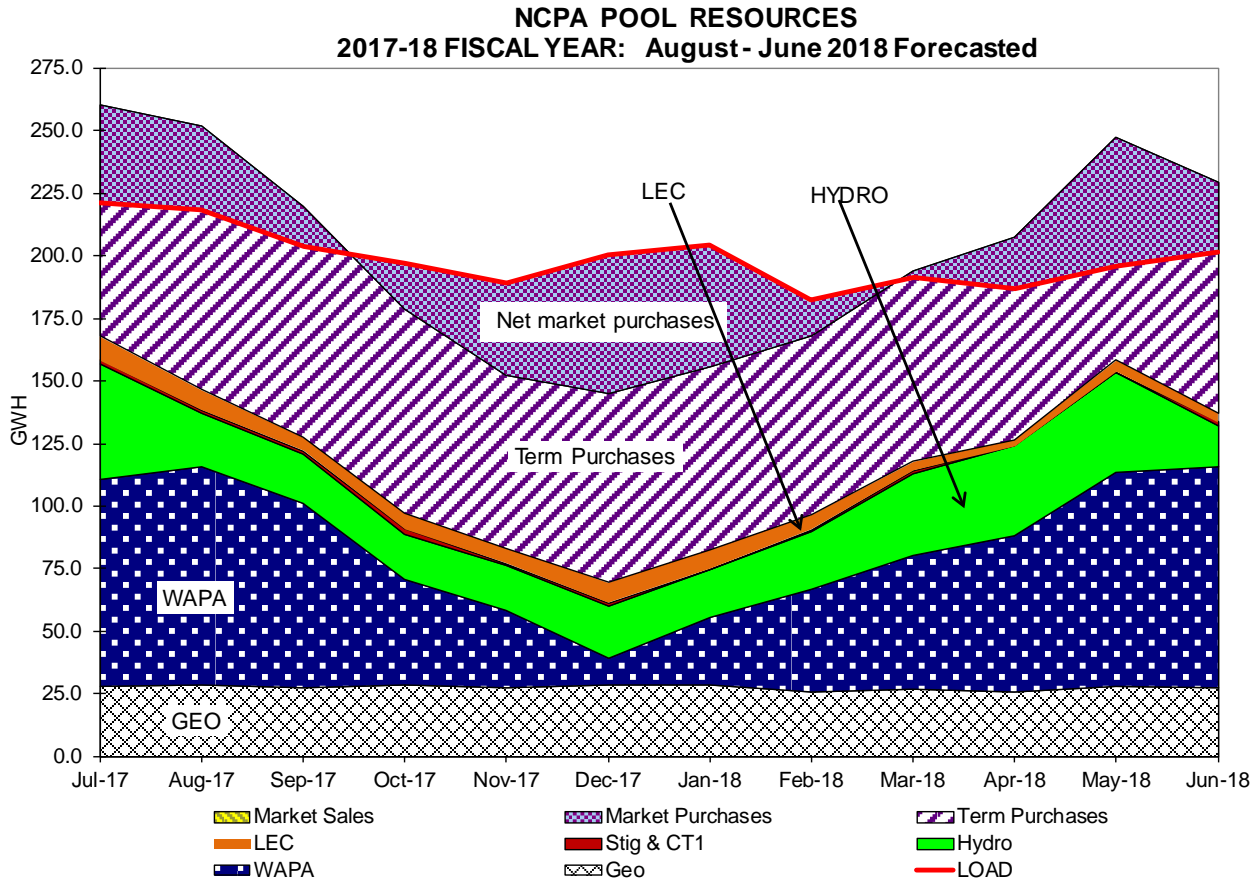
Monthly Market Summary						
	Pool Energy (MWh)	HLH Avg MCP (\$/MWh)	Avg Variable Cost of Pool Generation (\$/MWh)	Forward Prices (EOX NP15 HLH Ask Prices)		
				NP15 7/3/2017 (\$/MWh)	8/14/2017 (\$/MWh)	
Jan-17	205,675	\$ 36.58	\$ 23.70	Aug-17	\$ 38.53	\$ 46.53
Feb-17	178,642	\$ 30.61	\$ 24.41	Sep-17	36.75	39.17
Mar-17	192,408	\$ 23.37	\$ 25.43	Oct-17	36.40	38.61
Apr-17	179,239	\$ 23.39	\$ 31.47	Q4 2017	\$ 37.14	\$ 38.52
May-17	195,573	\$ 31.70	\$ 26.86	Q1 2018	36.00	37.00
Jun-17	206,429	\$ 38.62	\$ 34.25	Q2 2018	28.48	30.46
Jul-17	221,169	\$ 39.42	\$ 36.28	CY2018	\$ 34.22	\$ 36.09
Aug-17				CY2019	34.05	36.18
Sep-17				CY2020	35.67	37.53
Oct-17				CY2021	37.86	39.21
Nov-17				CY2022	40.00	41.17
Dec-17				CY2023	41.64	42.76

NOTES TO SUMMARY TABLE:

Peak and Energy Summary:
 * Monthly generation summary of Coincidental Peak (hour in which pool demand peaked), total MWh for the month, and pre-month forecasted values for report period.
 * Generation totals are for POOL SHARE of the projects.
 * Hydro totals include Collierville and Spicer generation.

Estimated Production Costs:
 * Fixed project costs not included except for WAPA, where total month's project costs are used to calculate the average unit cost.
 * STIG and CT costs include forward natural gas and basis hedge transactions.
 * STIG & CT costs reflect \$2.60 and \$1.62/MWh variable O&M costs per 6-12-06 GSCA.

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



Industry Restructuring, Contracts and Interconnection Affairs

Resource Adequacy Compliance Filings

- NCPA made the following Resource Adequacy compliance filings with the CAISO for the compliance period October 2017:
 - Monthly System Resource Adequacy Demonstration (filed August 17, 2017)
 - Monthly Supply Plan (filed August 17, 2017)

Industry Restructuring

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

Commitment Costs and Bidding Enhancements

- Through this initiative the CAISO will evaluate the following two topics: (1) if commitment proxy costs, generated bids, and default energy bids allow scheduling coordinators to accurately reflect and recover their generators' unit-specific costs; and (2) if changes to the economic bidding of commitment costs and associated market power mitigation methodology could increase market benefits when bidding under competitive market dynamics.

Bid Cost Recovery Enhancements

- In this initiative CAISO is evaluating changes to the way IFM and Real-Time Market Bid Cost Recovery (BCR) costs are allocated to market participants. More specifically, CAISO is evaluating if the Self-Scheduling offset currently incorporated into the IFM BCR should be removed, and if Real-Time Market BCR costs should be allocated using a two (2) tier mechanism. As a market participant who is exposed to BCR costs, NCPA has an interest in this stakeholder process; therefore, NCPA will closely monitor the development of this initiative.

Review of TAC Structure

- As described in the CAISO 2017 Stakeholder Initiative Catalog, during calendar year 2017 the CAISO will conduct a stakeholder initiative process to consider possible changes to the structure of the Transmission Access Charge (TAC). The CAISO currently charges the TAC to each MWh of metered internal end-use load (i.e., Gross Load) and exports, to recover participating transmission owners' costs of owning, operating and maintaining transmission facilities under CAISO operational control. Included in the initiative scope will be questions such as: (1) whether the current purely volumetric TAC rate structure should be retained, or should be changed to include other factors such as peak demand; and (2) whether the billing determinant for internal load should be modified to account for the load that is offset by the energy output of Distributed Energy Resources (DER).

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-17	71,656	82,819	11,163	\$2,334,679	\$ 28.19	\$ 1.60	\$ 27.59
Aug-17	55,736	-	(55,736)	\$2,334,679	\$ 41.89	\$ 0.74	\$ 28.05
Sep-17	56,044	-	(56,044)	\$1,979,032	\$ 35.31	\$ 0.22	\$ 27.17
Oct-17	33,604	-	(33,604)	\$833,923	\$ 24.82	\$ 0.19	\$ 26.28
Nov-17	19,601	-	(19,601)	\$833,923	\$ 42.55	\$ 0.33	\$ 25.51
Dec-17	15,404	-	(15,404)	\$833,923	\$ 54.14	\$ 0.12	\$ 25.33
Jan-18	7,358	-	(7,358)	\$833,923	\$ 113.34	\$ 0.10	\$ 27.21
Feb-18	13,359	-	(13,359)	\$833,923	\$ 62.42	\$ 0.14	\$ 29.66
Mar-18	30,216	-	(30,216)	\$833,923	\$ 27.60	\$ 0.03	\$ 31.39
Apr-18	50,443	-	(50,443)	\$2,035,038	\$ 40.34	\$ 1.11	\$ 32.55
May-18	66,832	-	(66,832)	\$2,035,038	\$ 30.45	\$ 0.19	\$ 35.18
Jun-18	74,030	-	(74,030)	\$2,035,038	\$ 27.49	\$ 0.22	\$ 35.70
1/ As forecasted in NCPA 17/18 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.							

- By letter dated August 10, 2017, Reclamation published the expected CVPIA (Restoration) Funding requirement for Federal FY18. The allocated share to all Power customers is approximately \$13.25 million, a 55% decrease compared to budget assumptions. The change appears to be driven by revised assumptions of water deliveries to Irrigation and Municipal & Industrial use customers (i.e. higher than their original assumptions).
- The Pool's revised expected costs for CVPIA in NCPA FY18 is \$3,212,574, a decrease of \$2,502,928 from the original budget amount of \$5,715,502.

Debt and Financial Management

- The Federal Open Market Committee (FOMC) left rates unchanged in July, as expected. The committee expects one more rate hike this year before Yellen's current term on the Federal Reserve Board expires at the end of January 2018, although the market-implied probability for another hike in 2017 has fallen to around 40%. The Fed is expected to formally announce a tapering of its balance sheet, perhaps as early as September, and this could put upward pressure on long-term rates.
- Most U.S. Treasury yields were little changed in July as investors awaited clarity on economic conditions, expected Fed actions, and tax spending policies. The yield on two-year Treasury notes fell 3 basis points (bps) in July to 1.35%, while the yield on 10-year Treasury notes fell 1 basis point to 2.29%. The 30-year Treasury yield rose 6 bps to 2.90%.
- The U.K. Financial Conduct Authority (FCA) recently announced its intention to phase-out LIBOR (London Interbank Offered Rate) by the end of 2021 but there will be ongoing support for LIBOR through this deadline to allow for an orderly transition to alternative reference rates. The International Swaps and Derivatives Association (ISDA) has yet to make a formal announcement regarding any alternative reference rates. However, there is some speculation an alternative rate to LIBOR could be based on the U.S. Treasury repurchase ("repo") market, called the "Broad Treasuries Repo Financing Rate" which would be based on the borrowing of short-term cash (overnight) with U.S. Treasury bonds serving as collateral, and would be published by the U.S. Federal Reserve. However, any speculation regarding alternative reference rates are merely preliminary and it remains unclear whether current swap and loan contracts that utilize LIBOR as the reference rate will be amended or allowed to mature. Both NCPA swaps use the LIBOR reference rate as part of the net payment calculation but one thing is clear at the moment, the only known fact is that nothing is definitive. NCPA staff will continue to monitor this and report any updates as they become available.
- At the August 9th Finance Committee, NCPA staff was given direction to start putting together 'the team' for refunding the 2008 Hydroelectric Bonds, Series C. At today's rates, the bonds have a projected net present value (NPV) savings around 10% or over \$1 million per year in debt service savings, assuming the surety reserve can be replaced. The next steps are completing the Financial Advisory contract and then issuing as RFP for Underwriting (UW) services. The bonds are not callable until July 2018 but NCPA staff anticipates working on the refunding in late 2017 with an expected close after April 2018.

Schedule Coordination Goals

Software Development

- Planning and Configuration of the Scheduling Software Suite for 'PCWA' SCID portfolio are underway. The Scheduling Software Suite includes MARS (Member and Resource System) database, Deal Manager application, Prescheduler application, PAGES (Power Agency Grid Energy Scheduler) application and TABS (Trading and Bidding System) application.
- IS staff continues to work on the new Interval Reading schema to replace the legacy Meter schema. This project will last several months to complete the migration of the existing data and to redirect the applications to use the new model. The target is to finish by the end of 2017.
- Various other Software Development is underway. The NERC-WECC Compliance Matrix is a tool to aid the Compliance Working Group to track standards compliance. The Risk Management App is a tool for the Risk Manager to maintain counterparty credits and ratings and provides Mark-to-Market report to the business users. The Green House Gas Accounting App is a tool for the business user to track GHG transactions by Member. The Shared Services App has three modules about Training, Support Service, and Vendor Contract. It calculates the billable amount for the Member's portion of the Shared Services.
- NCPA Information Services successfully deployed a new "NCPA Pool Allocator" as part of a technology upgrade to its in-house developed SAVEE settlements application. This upgrade provides an integrated solution to standardize further and automate settlement system processes related to the multiple daily, and monthly CAISO settlement statement files received each day by the CAISO. This year-long project, which included extensive parallel system and user acceptance testing, will produce productivity gains to the settlements team as NCPA expands its business to new customers.

Network

- IS has nearly completed a project to migrate all NCPA e-mail mailboxes to Office 365.
- Additional collaboration sites are being created to expand the functionality of the Agency's new extranet, "NCPA Connect." This will provide further capabilities to share and edit documents for specific working groups and committees.
- Information Services hosted a Cyber Security Incident Response exercise on August 8. The tabletop exercise included participation among 25 individuals who represented nine NCPA members and business partners, including: Alameda Municipal Power, CDWR, Lodi Electric, Lompoc, NCPA, Redding, Roseville Electric, Shasta Lake, and Silicon Valley Power. The exercise provided participants an opportunity to practice and refine their response plans under a simulated cyber threat to their respective utility. Members shared in a collective lessons learned session following the event.

- The ECN AT&T 56k circuits at HQ was upgraded to a T1 at the end of June. This provided additional bandwidth and enhanced reliability to the load meter telemetry from our Dispatch Control Center.

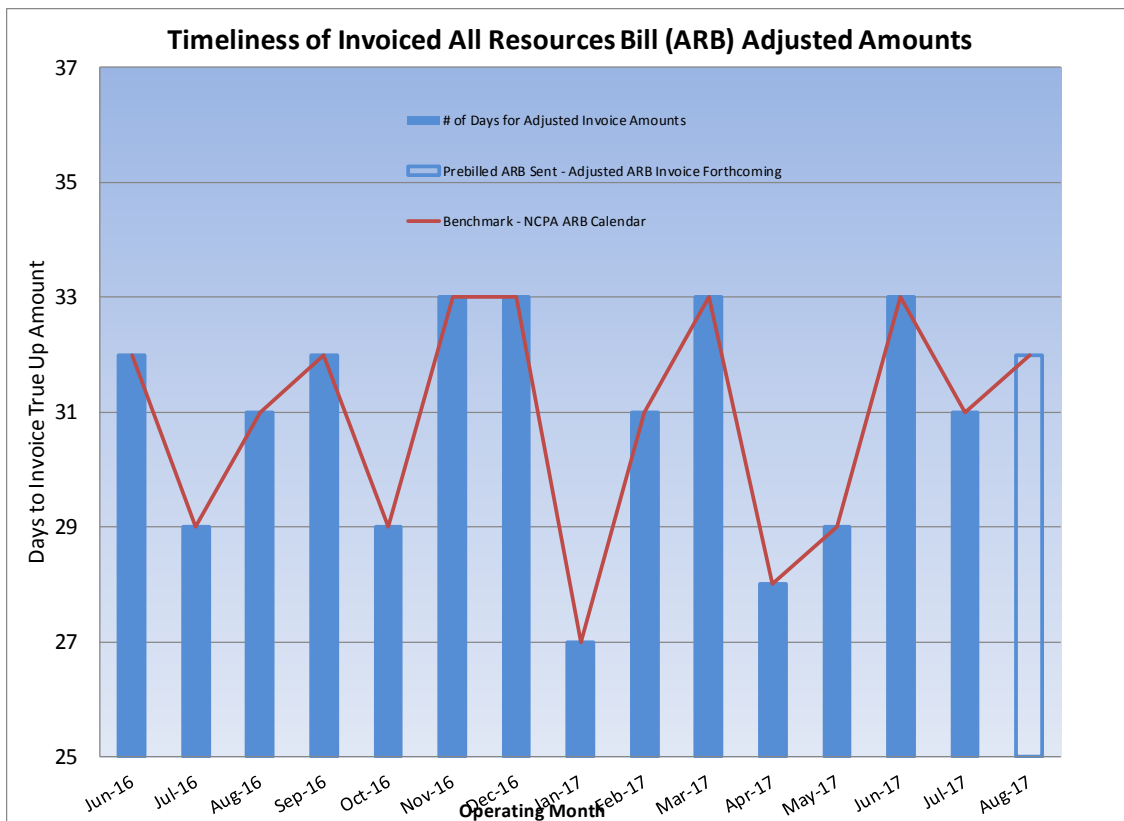
NCPA Bills & Settlements

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 August 2017 NCPA All Resources Bill (ARB) monthly invoice sent to members on July 25, 2017 contains:

- ✓ August 2017 monthly pre-billed budget/forecast amounts;
- ✓ June 2017 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- ✓ May 2017 (2nd Adjustment) NCPA Project settlement true-up and T+12 business day recalculated CAISO settlement true-up allocations;
- ✓ March 2017 (3rd Adjustment) T+55 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- ✓ September 2016 (4th Adjustment) T+9 month recalculated CAISO settlement true-up allocations;
- ✓ November 2015 (5th Adjustment) T+18 month recalculated CAISO settlement true-up allocations;
- ✓ June 2014 (6th Adjustment) T+35 month CAISO settlement true-up



Legislative & Regulatory

Political Arena State/Federal/Western Programs

- The CVP Corporation reported record financial savings for NCPA members through its displacement program. The program, jointly conducted with Central Valley Project (CVP) preference customers and Western Area Power Administration (WAPA), exceeded \$4.7 million – About \$2.6 million for NCPA members. The displacement program enables the participants located in the California Independent System Operator (CAISO) transmission grid to make power exchanges with those in the Balancing Authority of Northern California (BANC). This year’s abundant CVP hydro generation, the extreme hot weather, and increased power purchases by participants located in BANC have combined to achieve these record shared savings.
- NCPA provided comments to the U.S. Army Corps of Engineers on its Draft Supplemental Environmental Assessment/Environmental Impact Report for the Folsom Dam Modification. NCPA expressed support for the Corps’ recommendation for Alternative 2—Forecast Informed Operations with Variable Folsom Flood Control Space as the best operating plan for Folsom Dam. Alternative 2 provides for the increased use of weather forecasting information, substantially improved reservoir operations, and slightly increased power generation.
- NCPA submitted comments to the Bureau of Reclamation (Reclamation) on its Draft Environmental Impact Statement (DEIS) for the Shasta Dam Fish Passage Evaluation (SDFPE). NCPA urged Reclamation to provide the likely annual costs

and total multiyear costs for the proposed Long-term Fish Passage Program (Program), including how they will fund and allocate these costs. NCPA also requested that Reclamation include the impacts on power and water rates that will result from implementation of the Program. As well, NCPA recommended that the DEIS describe and establish how Reclamation will measure “feasibility”—an analysis of the number of adult winter-run Chinook that return as a result of the Program compared to other reasonable alternatives.

- NCPA participated in the Reclamation’s technical meeting on the Central Valley Project Cost Allocation Study. Part of the agenda included discussion of Reclamation’s efforts to require all participants in this technical group of stakeholders to sign a Memorandum of Understanding (MOU) that included, among other things, a prohibition on information sharing about the work being done as part of this process. Given these are public facilities and the discussion relates to the allocation of costs among largely public entities, NCPA and others strongly objected to the non-disclosure provisions that were proposed. Due to the strong concerns expressed, Reclamation announced that the proposal would be scaled back significantly to outline terms under which groups would engage in this process—but it would not include any language restricting information sharing, and would not require signatures from participating entities. NCPA also urged Reclamation to extend its year-end 2017 deadline to assure the process produces a workable and fair result rather than an arbitrary outcome driven by time constraints.
- NCPA has been active at the State Capitol advocating on behalf of the Agency and its member utilities. Major legislative issues include SB 100, which would establish a 60% Renewables Portfolio Standard by 2030 and a 100% clean energy goal by 2045. NCPA is coordinating with its members and other public power groups to negotiate amendments to SB 100 that provide more flexibility and protections for public power.
- Culminating several months of intense negotiation between NCPA, legislative leaders, industry stakeholders, and the governor’s office during much of this year, CARB approved an updated set of cap-and-trade regulations in late June, the final piece needed to extend the state’s cap-and-trade program to 2030. The cap-and-trade amendments include the critically important post-2020 allowance allocation to electric utilities based on the methodology that NCPA, in collaboration with the Joint Utility Group, worked hard to secure. For NCPA members alone, CARB’s action will bring a minimum of \$400 million in auction revenues to NCPA members from 2021-2030 to invest in clean generation on behalf of the communities they serve. NCPA worked closely with Joint Utility Group and its public power partners throughout this process to ensure that a significant portion of proceeds stemming from the state’s quarterly greenhouse gas auctions can be spent locally.

Human Resources

Hires:

Eric Bostelman joined NCPA on August 11, 2017 as a Hydro Tech at our Hydroelectric Operations in Murphys, CA. Eric has over 10 years of experience in the Hydro Power Industry.

Brooklyn Saylor joined NCPA on August 14, 2017 as an Environmental Health and Safety Specialist at our Lodi Energy Center in Lodi, CA. Brooklyn has over 6 years of Environmental Health Experience as a Marine Science Technician with the United States Coast Guard. Brooklyn has a Bachelor's in Environmental Management and a Master's in Environmental Policy and Management Sustainability.

Intern Hires:

Richard Ruan was hired at NCPA on July 24, 2017 as Student Intern III with the City of Lodi. Richard is pursuing an Engineering degree at California State University Sacramento.

Promotions/Position Changes:

None.

Separations:

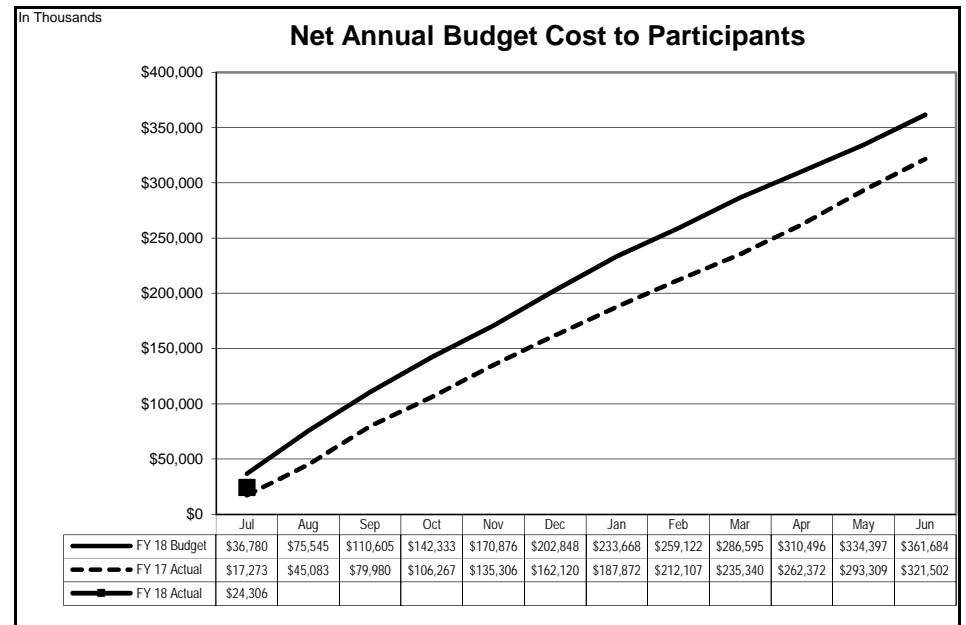
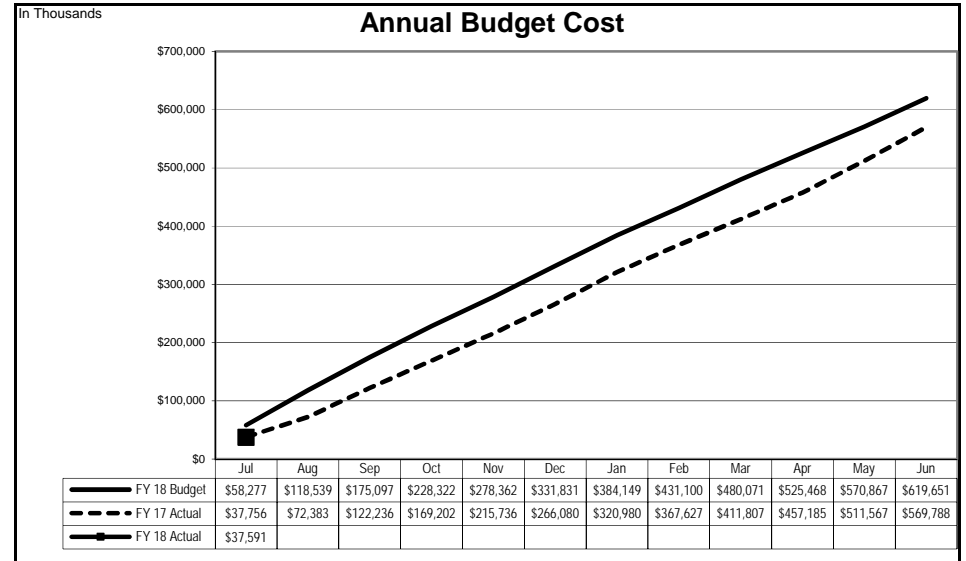
William Finn, Hydro Tech Operator, retired from his position at our Hydroelectric Operations after 33 years of service.

Greg Dub, Computer Technology Analyst, resigned from his position at our Headquarters office after nine years of service.

Mary Prosser, Administrative Assistant/Office Administrator, resigned from her position at our Geothermal office to pursue other opportunities.

**Annual Budget
2017-2018 Fiscal Year To Date
As of July 31, 2017**

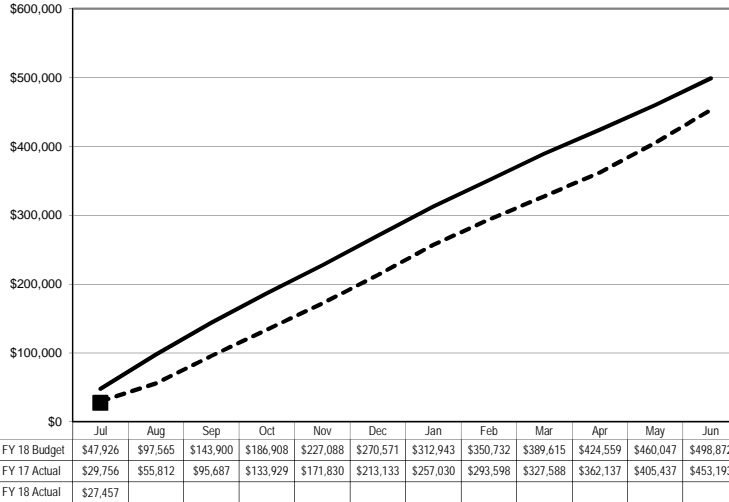
In Thousands	Program			
	Annual Budget	Actual	Under(Ovr) Budget	YTD % Remaining
GENERATION RESOURCES				
NCPA Plants				
Hydroelectric	53,862	4,517	\$ 49,346	92%
Geothermal Plant	32,120	2,182	29,938	93%
Combustion Turbine No. 1	2,627	255	2,372	90%
Combustion Turbine No. 2 (STIG)	8,623	655	7,968	92%
Lodi Energy Center	61,088	4,990	56,098	92%
	158,320	12,598	145,722	92%
Member Resources - Energy	53,389	5,551	47,838	90%
Member Resources - Natural Gas	3,457	303	3,155	91%
Western Resource	30,120	2,330	27,790	92%
Market Power Purchases	19,318	1,497	17,821	92%
Load Aggregation Costs - ISO	233,822	5,180	228,643	98%
Net GHG Obligations	446	-	446	100%
	498,872	27,457	471,415	94%
TRANSMISSION				
Independent System Operator	102,925	9,126	93,799	91%
MANAGEMENT SERVICES				
Legislative & Regulatory				
Legislative Representation	1,976	111	1,865	94%
Regulatory Representation	838	17	820	98%
Western Representation	830	17	813	98%
Member Services	436	26	410	94%
	4,079	171	3,908	96%
Judicial Action	625	-	625	100%
Power Management				
System Control & Load Dispatch	5,864	410	5,454	93%
Forecasting & Prescheduling	2,647	167	2,480	94%
Industry Restructuring	424	27	397	94%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,152	55	1,097	95%
Green Power Project	18	0	18	99%
Gas Purchase Program	88	4	84	95%
Market Purchase Project	130	6	124	95%
	10,323	670	9,653	94%
Energy Risk Management	207	6	201	97%
Settlements	774	40	734	95%
Integrated System Support	319	33	286	90%
Participant Pass Through Costs	1,526	86	1,440	94%
Support Services	-	2	(2)	
	17,854	1,008	16,846	94%
TOTAL ANNUAL BUDGET COST	619,651	37,591	582,060	94%
LESS: THIRD PARTY REVENUE				
Plant ISO Energy Sales	70,367	9,485	60,883	87%
Load Aggregation Energy Sales	151,019	1,833	149,186	99%
Ancillary Services Sales	2,731	280	2,451	90%
Western Resource Energy Sales	18,026	-	-	
Other ISO Revenue	-	-	-	
Transmission Sales	110	9	101	92%
Western Credits, Interest & Other Income	15,713	1,678	14,035	89%
	257,967	13,285	226,656	88%
NET ANNUAL BUDGET COST TO PARTICIPANTS	361,684	24,306	\$ 355,404	98%



**Annual Budget
Budget vs. Actual By Major Area
2017-2018 Fiscal Year To Date
As of July 31, 2017**

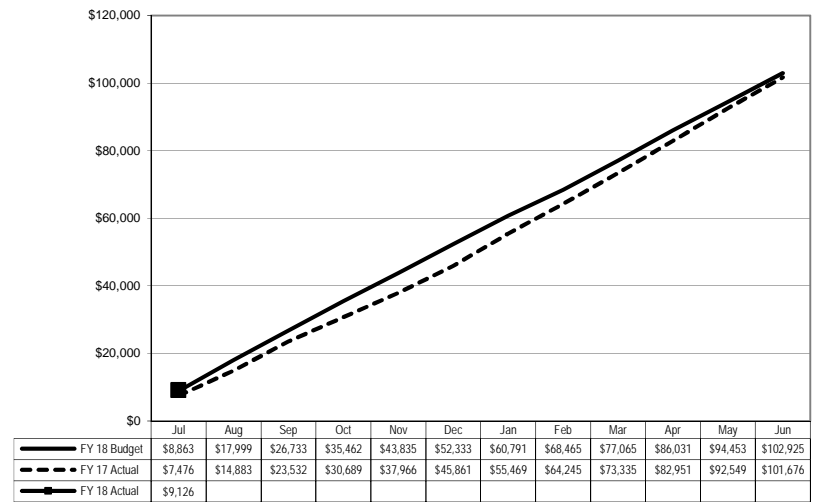
In Thousands

Generation Resources



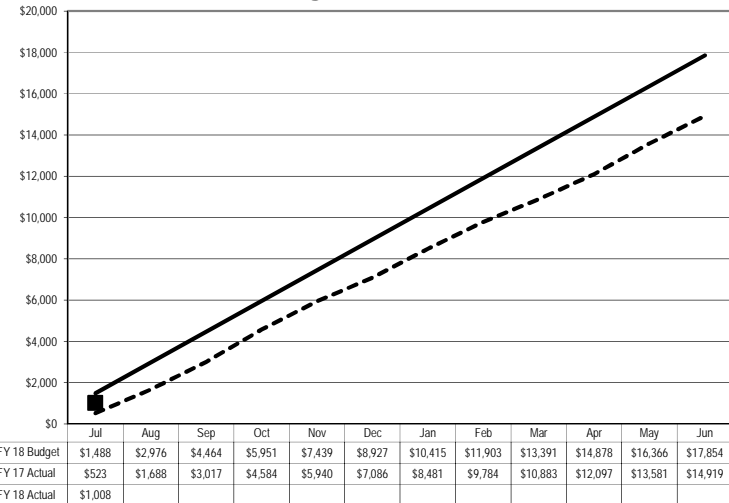
In Thousands

Transmission-ISO



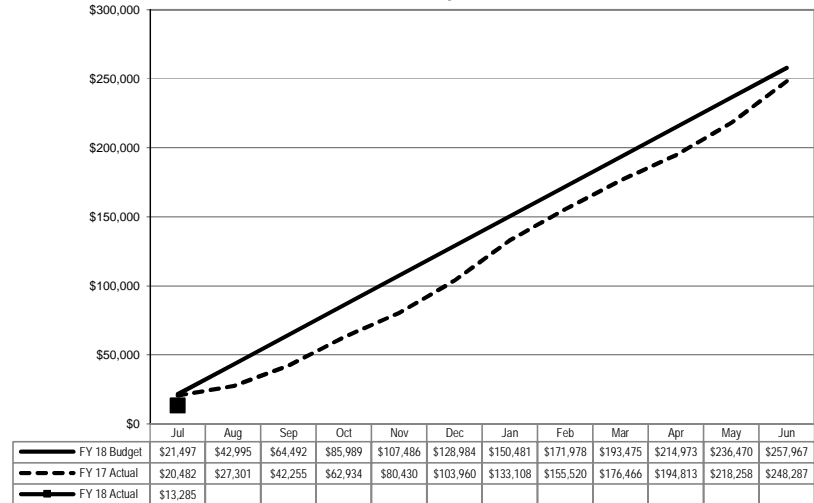
In Thousands

Management Services



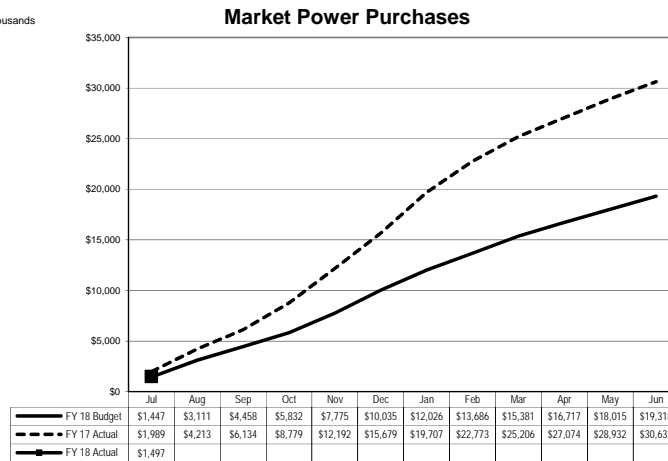
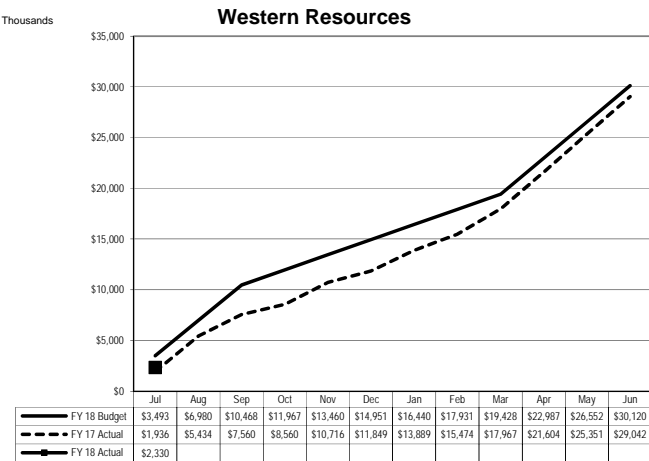
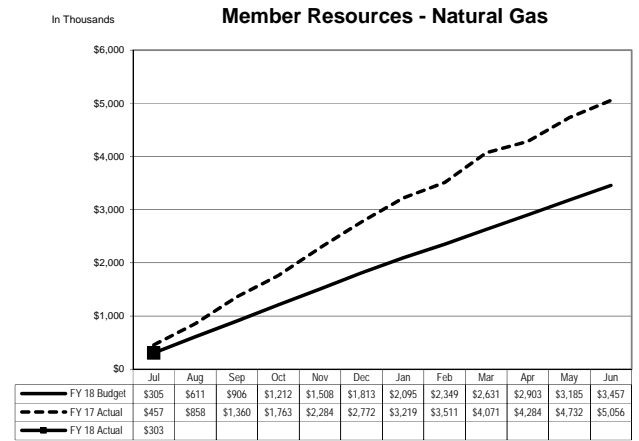
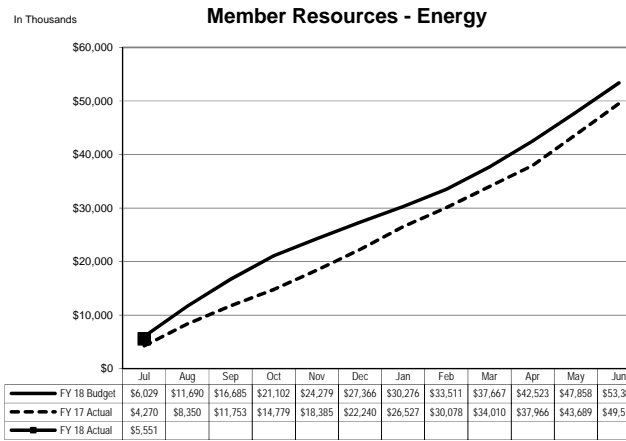
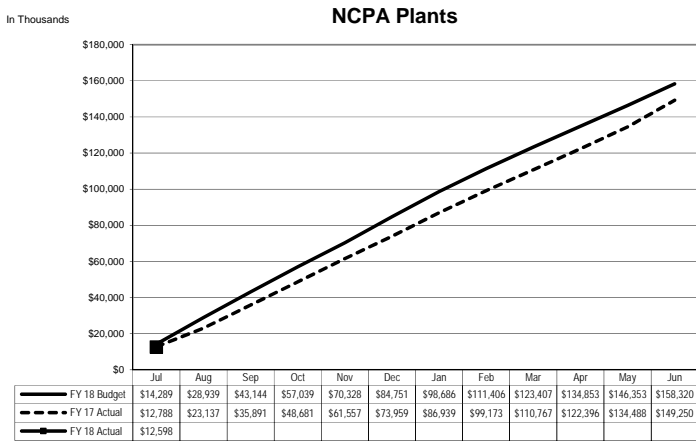
In Thousands

Third Party Revenue



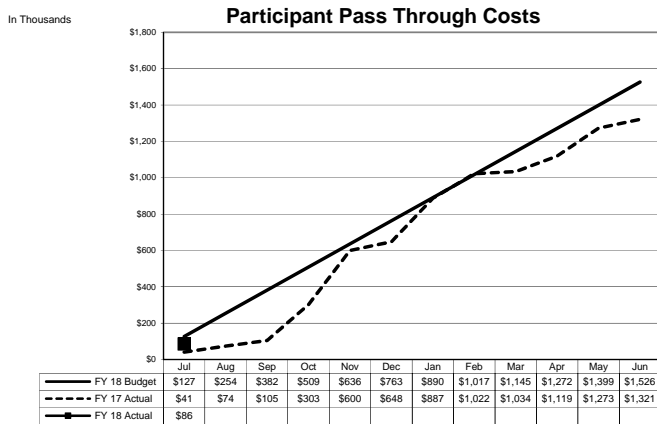
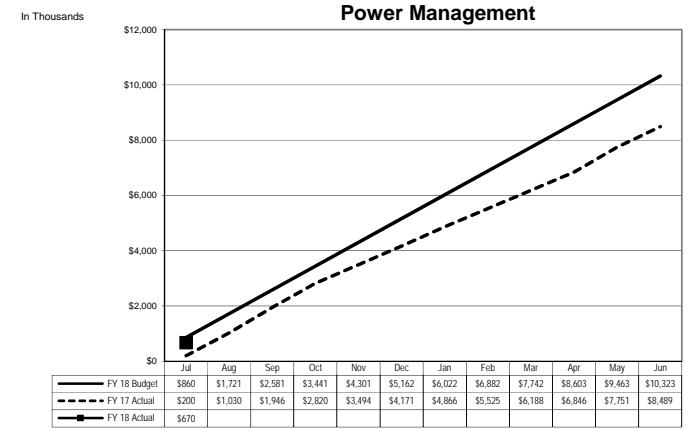
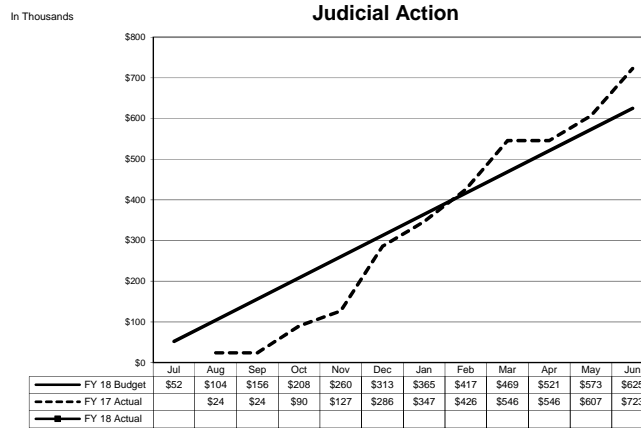
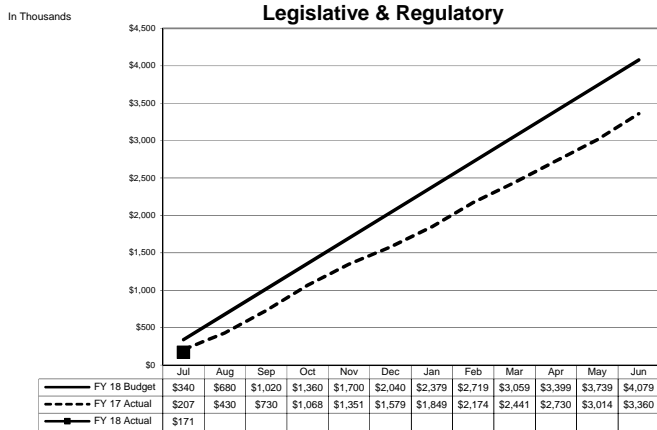
Footnote: Transmission is solely reflective of Independent System Operator (ISO) costs

**Annual Budget Cost
Generation Resources Analysis By Source
2017-2018 Fiscal Year To Date
As of July 31, 2017**



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

**Annual Budget Cost
Management Services Analysis By Source
2017-2018 Fiscal Year To Date
As of July 31, 2017**



**Annual Budget Cost
Management Services Analysis By Source
2017-2018 Fiscal Year To Date
As of July 31, 2017**

In Thousands

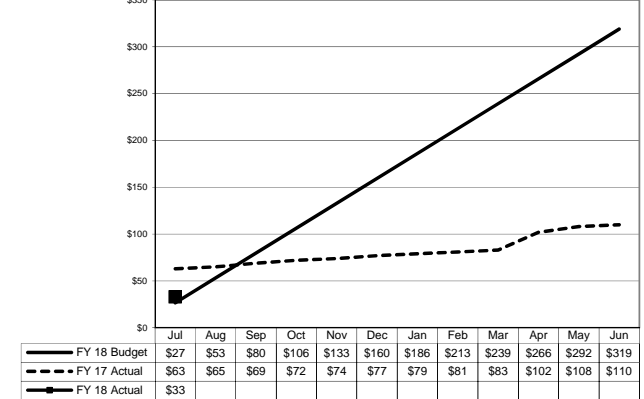
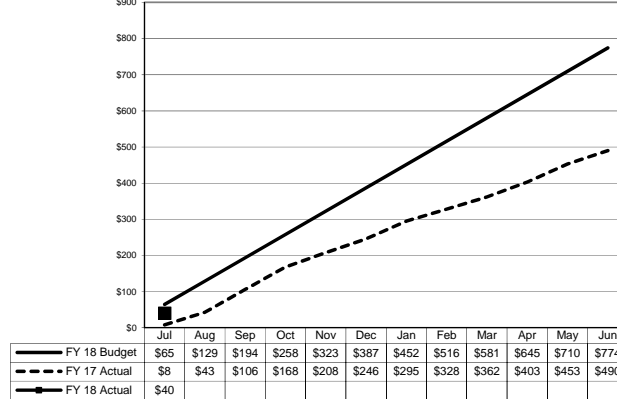
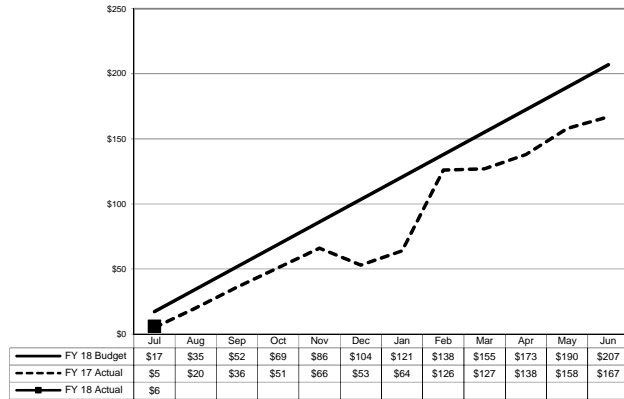
Energy Risk Management

In Thousands

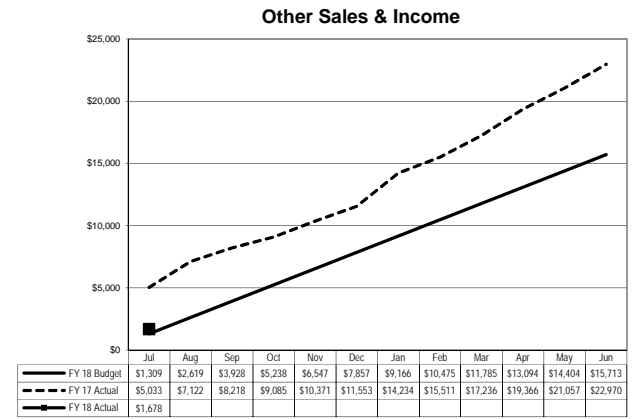
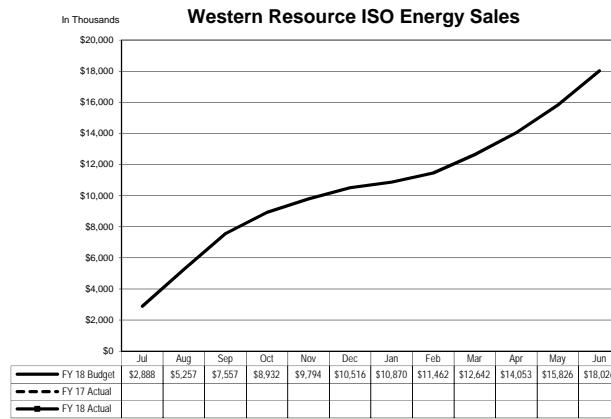
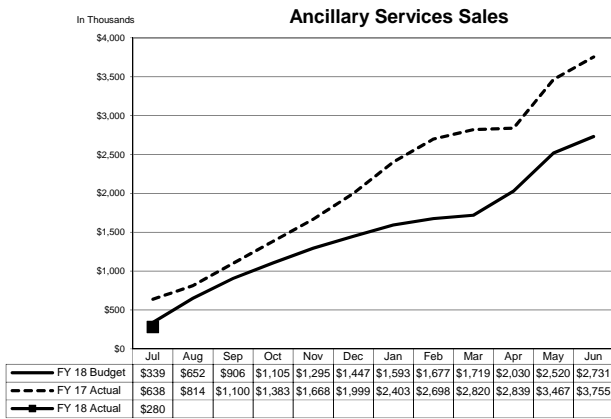
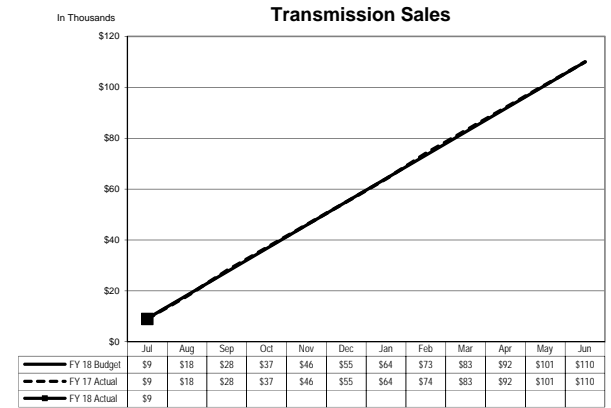
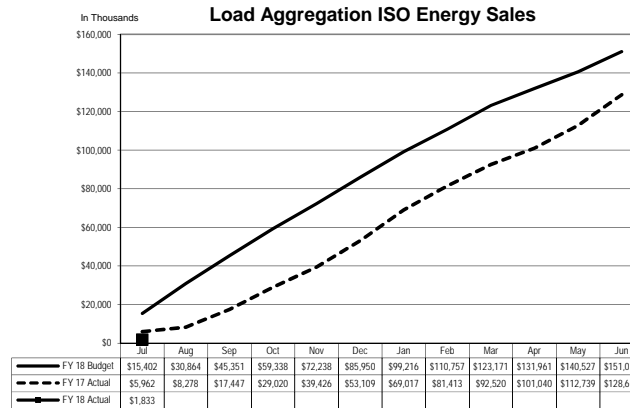
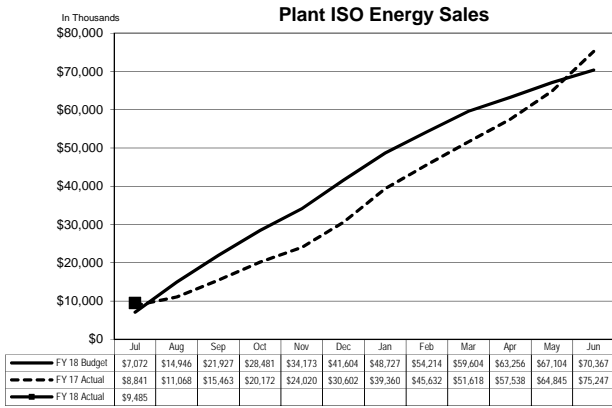
Settlements

In Thousands

Integrated Systems Support



**Annual Budget Cost
Third Party Revenue Analysis By Source
2017-2018 Fiscal Year To Date
As of July 31, 2017**



**Annual Budget
NCPA Generation Detail Analysis By Plant
2017-2018 Fiscal Year To Date
As of July 31, 2017**

Generation Cost Analysis

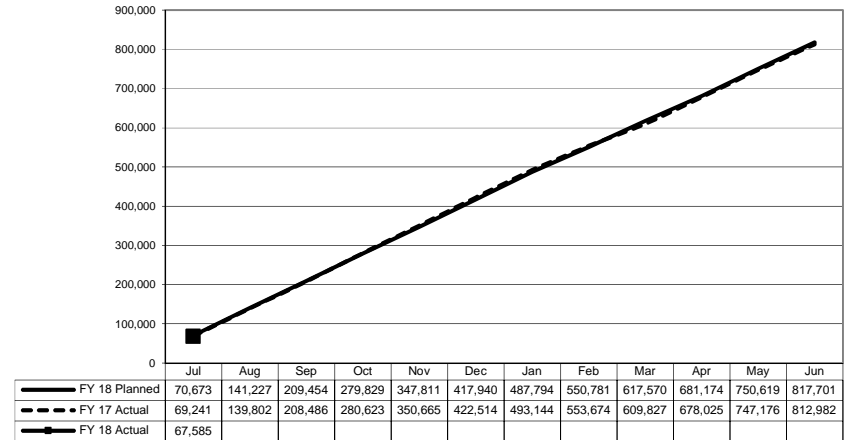
\$ in thousands

	Geothermal				
			\$/MWh	Under(Ovr)	YTD %
	Budget	Actual	Actual	Budget	Remaining
Routine O & M	\$ 17,564	\$ 1,133	\$ 16.76	\$ 16,432	94%
Capital Assets/Spare Parts Inventories	1,440	8	0.11	1,432	99%
Other Costs	7,863	594	8.78	7,269	92%
CA ISO Charges	317	36	0.54	281	89%
Debt Service	4,936	411	6.09	4,524	92%
Annual Budget	32,120	2,182	32.28	29,938	93%
Less: Third Party Revenue					
Interest Income	148	15	0.23	132	90%
ISO Energy Sales	28,349	2,505	37.06	25,844	91%
Ancillary Services Sales	-	(4)	(0.07)	4	
Effluent Revenues	700	-	-	700	100%
Misc	110	9	0.14	101	
	29,307	2,525	37.36	26,782	91%
Net Annual Budget Cost to Participants	\$ 2,813	\$ (343)	\$ (5.08)	\$ 3,156	112%
Net Generation--MWh @ Meter	817,701	67,585			
\$/MWh (A)	\$ (2.60)	\$ (11.17)			

MWhs Generated

In MWh

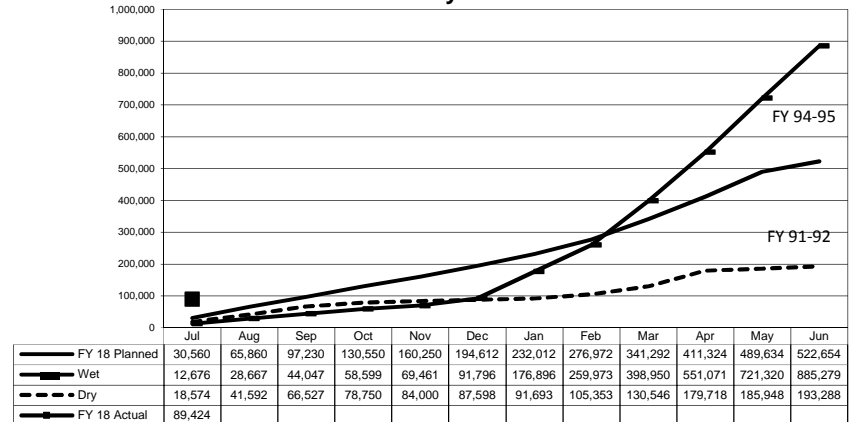
Geothermal



	Hydroelectric				
			\$/MWh	Under(Ovr)	YTD %
	Budget	Actual	Actual	Budget	Remaining
Routine O & M	\$ 8,465	\$ 704	\$ 7.87	\$ 7,762	92%
Capital Assets/Spare Parts Inventories	2,365	220	2.46	2,145	91%
Other Costs	3,093	193	2.15	2,901	94%
CA ISO Charges	1,680	212	2.37	1,468	87%
Debt Service	38,258	3,188	35.65	35,070	92%
Annual Budget	53,862	4,517	50.51	49,346	92%
Less: Third Party Revenue					
Interest Income	244	24	0.27	220	90%
ISO Energy Sales	22,050	3,783	42.30	18,267	83%
Ancillary Services Sales	2,222	203	2.27	2,019	91%
Misc	-	1	0.01	(1)	
	24,516	4,011	44.85	20,505	84%
Net Annual Budget Cost to Participants	\$ 29,346	\$ 505	\$ 5.65	\$ 28,840	98%
Net Generation--MWh @ Meter	522,654	89,424			
\$/MWh (A)	\$ (17.05)	\$ (30.00)			

In MWh

Hydro



Footnotes:

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

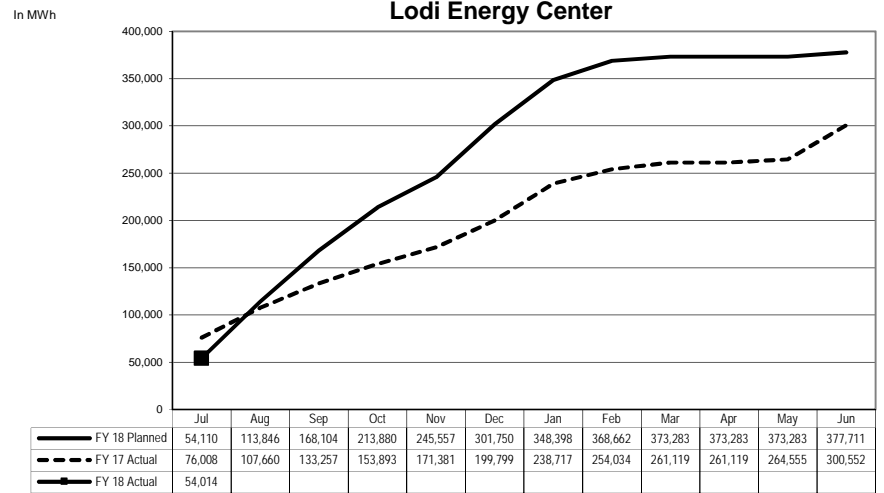
**Annual Budget
NCPA Generation Detail Analysis By Plant
2017-2018 Fiscal Year To Date
As of July 31, 2017**

Generation Cost Analysis

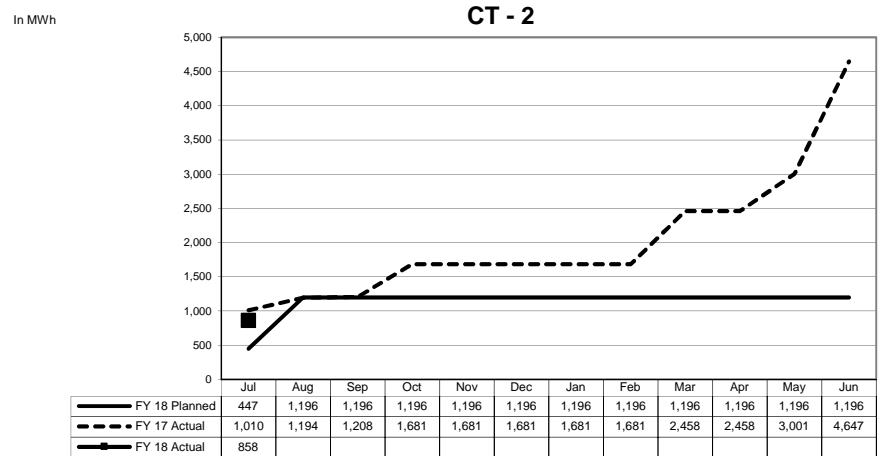
Wet year not updated

	Lodi Energy Center				
	Budget	Actual	\$/MWh Actual	Under(Ovr) Budget	YTD % Remaining
Routine O & M	\$ 10,174	\$ 631	\$ 11.68	\$ 9,543	94%
Fuel	14,877	1,493	27.63	13,385	90%
AB 32 GHG Offset	-	-	-	-	-
CA ISO Charges and Energy Purchases	3,921	343	6.35	3,578	91%
Capital Assets/Spare Parts Inventories	2,636	168	3.11	2,469	94%
Other Costs	3,063	154	2.86	2,909	95%
Debt Service	26,417	2,201	40.76	24,215	92%
Annual Budget	61,088	4,990	92.38	56,098	92%
Less: Third Party Revenue					
Interest Income	172	17	0.32	155	90%
ISO Energy Sales	19,760	2,973	55.05	16,787	85%
Ancillary Services Sales	397	82	1.52	315	79%
Transfer Gas Credit	-	-	-	-	0%
Misc	-	-	-	-	0%
	20,329	3,073	56.89	17,256	85%
Net Annual Budget Cost to Participants	\$ 40,759	\$ 1,917	\$ 35.50	\$ 38,842	95%
Net Generation--MWh @ Meter	377,711	54,014			
\$/MWh (A)	\$ 37.97	\$ (5.26)			

MWhs Generated



	Combustion Turbine No. 2 (STIG)				
	Budget	Actual	\$/MWh Actual	Under(Ovr) Budget	YTD % Remaining
Routine O & M	\$ 1,471	\$ 86	\$ 99.71	\$ 1,385	94%
Fuel and Pipeline Transport Charges	835	57	66.66	777	93%
Capital Assets/Spare Parts Inventories	121	-	-	121	100%
Other Costs	502	33	38.78	469	93%
CA ISO Charges	0	5	5.49	(4)	-917%
Debt Service	5,693	474	553.20	5,219	92%
Annual Budget	8,623	655	763.84	7,968	92%
Less: Third Party Revenue					
Interest Income	43	7	7.85	36	84%
ISO Energy Sales	89	68	79.58	21	23%
Ancillary Service Sales	-	-	-	-	0%
Fuel and Pipeline Transport Credits	864	87	101.26	777	90%
Misc	-	-	-	-	0%
	996	162	188.69	834	84%
Net Annual Budget Cost to Participants	\$ 7,627	\$ 493	\$ 575.15	\$ 7,133	94%
Net Generation--MWh @ Meter	1,196	858			
\$/MWh (A)	\$ 1,616.78	\$ 21.96			



Footnotes:

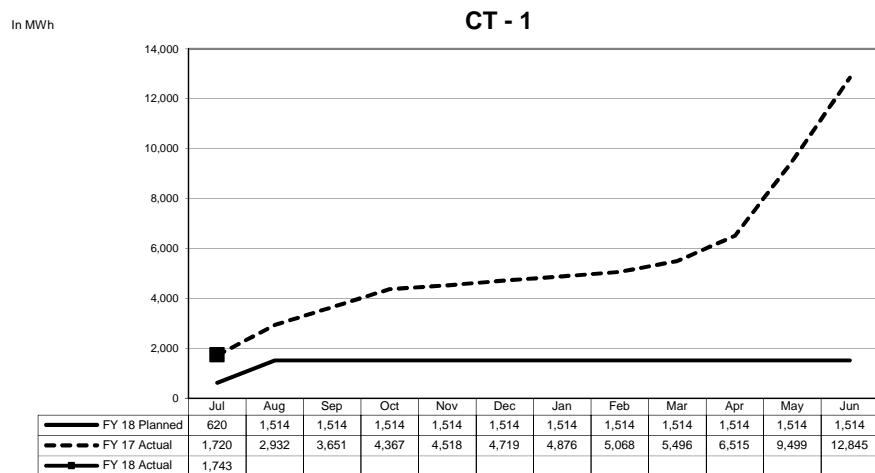
(A) Aggregate fiscal year generation in \$/MWh (excluding debt service)

**Annual Budget
NCPA Generation Detail Analysis By Plant
2017-2018 Fiscal Year To Date
As of July 31, 2017**

Generation Cost Analysis

	Combustion Turbine No. 1				
	Budget	Actual	\$/MWh Actual	Under(Ovr) Budget	YTD % Remaining
Routine O & M	\$ 1,520	\$ 157	\$ 89.97	\$ 1,363	90%
Fuel and Pipeline Transport Charges	172	-	-	172	100%
Capital Assets/Spare Parts Inventories	420	33	19.13	387	92%
Other Costs	514	34	19.57	480	93%
CA ISO Charges	1	30	17.43	(30)	-5075%
Debt Service	-	-	-	-	
Annual Budget	2,627	255	146.10	2,372	90%
Less: Third Party Revenue					
Interest Income	-	-	-	-	
ISO Energy Sales	119	155	89.00	(36)	0%
Ancillary Services Sales	-	-	-	-	0%
Misc	-	-	-	-	0%
	119	155	89.00	(36)	-30%
Net Annual Budget Cost to Participants	\$ 2,508	\$ 100	\$ 57.10	\$ 2,408	96%
Net Generation--MWh @ Meter	1,514	1,743			
\$/MWh (A)	\$ 1,656.50	\$ 57.10			

MWhs Generated



Footnotes:

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