

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

BUSINESS PROGRESS REPORT

JULY 2017

Table of Contents

1
4
5
11
11
12
13
15
16
17
18
19
21
22

Generation Costs & Reliability

Combustion Turbine Project

Availability/Production for June

Unit	Avai	lability	F	Production	1	Reason for Run	
CT1 Alameda	Unit 1 99.38%	Unit 2 100.00%	Unit 1 Unit 2	1,157.5 1,063.2	MWHr	CAISO / CAISO	
Curtailments,	Outages, an	d Comments.	6/4/2017	7 1923-23-5	59 EGT T	rip. / None.	
CT1 Lodi	100	0.00%		1,163.9	MWHr	CAISO	
Curtailments,	Outages, an	d Comments.	Exceptional Dispatch on 6/20/17 from 1315 to 2217. Extended run using exceptional Dispatch on 6/21/17 from 2200 to 2317. Extended run using exceptional Dispatch on 6/22/17 from 2100 to 2144.				
			Γ				
CT2 STIG	100	0.00%		1,607.7	MWHr	CAISO	
Curtailments,	Outages, an	d Comments.	None.				
LEC	100	0.00%		34,707.9	MWHr	CAISO	
Curtailments,	Outages, an	d Comments.	None.				

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for June

Unit	Availability	Net Electricity Generated/Water Delivered	Out-of-Service/Descriptors
Unit 1	100 %	18,766 MWh	Unit 1 had no outages for the month.
Unit 2	100 %	*16,1925 MWh	Unit 2 had no outages for the month.
Unit 3	N/A %	N/A	Unit 3 remains out of service for the month.
Unit 4	100 %	30,203 MWh	Unit 1 had no outages for the month.
Southeast Geysers Effluent Pipeline	96.8 %	243.9 mgallons	Average flow rate: 5,573 gpm
Southeast Solar Plant	N/A	94,496 KWh	Year-to-date KWh: 513,041
Bear Canyon Pump Station Zero Solar	N/A	273,193 KWh	Year-to-date KWh: 1,041,539

* Accounts for an additional 2,429 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for June

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	99.28 %	67,422 MWh	CV #1 unit was out of service on 06/13/17 at 1004 through 1428 due to unit and auxiliary system maintenance. CV #1 unit was out of service on 06/19/17 at 0949 through 1039 due to Turbine Runner interference.
Collierville Unit 2	61.38 %	41,128 MWh	CV #2 unit was out of service on 06/01/17 at 0000 through 06/12/17 at 1404 due to generator stator ground fault.
Spicer Unit 1	100.00 %	1,757 MWh	NSM #1 unit no reportable outages.
Spicer Unit 2	100.00 %	1,739 MWh	NSM #2 unit no reportable outages.
Spicer Unit 3	100.00 %	312 MWh	NSM #3 unit no reportable outages.

Operations & Maintenance Activities:

- Monthly CMMS work orders
- NCPA/Campground hazard tree removal and campground opening
- Adit 4 Slide repair
- Beaver Creek Diversion Reservoir debris clean out in (phase1)
- Murphys Microwave project
- Collierville Unit 2 Stator Ground Fault trouble shooting and repair
- Collierville footbridge painting
- FERC Project 2409 Dam Instrumentation Report (FERC and DSOD)

Environmental, Health & Safety (EH&S) Projects

Incident Reports

- There was one Headquarters vehicle accident that occurred on June 9, 2017, no recordable incidents, and no lost time accidents that occurred in June.
- 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.

	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	920	167	810	5,878
Work Hours Since Last Recordable	78,812	32,905	119,433	2,115,876
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	1	0	0
Days without LTA	3,536	151	8,714	4,807
Work Hours without LTA	324,377	30,000	560,797	1,737,896
Vehicle Incident (month)	0	0	0	1
Vehicle Incident (calendar year)	0	0	1	1

June Generation Services Safety Report

* 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 June 24, 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:

	June 2017		Calendar Year 2017								
	Peak MW	MWh	Peak MW	MWh							
NCPA Pool	463.98 6/19 @1600	206,460	463.98 6/19 @1600	1,158,091							
SVP	570.18 6/22 @1500	315,170	570.18 6/22 @1500	1,805,756							
MSSA	1025.83 6/22 @ 1500	521,630	1025.83 6/22 @ 1500	2,963,847							

Current Year 2017 Data

Last Year 2016 Data*

	June 2016		Calendar Year 2016								
	Peak MW	MWh	Peak MW	MWh							
NCPA Pool	429.74 6/27 @ 1700	206,691	449.75 7/27 @1700	1,153,929							
SVP	526.56 6/3 @ 1700	298,255	534.21 9/26 @ 1700	1,736,031							
MSSA	955.76 6/3 @ 1700	504,946	968.73 7/27 @ 1600	2,889,960							

*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								
	June 2017	Calendar Year 2017						
MSSA % Within the Band	98.19%	97.08%						

- Spicer ceased spilling on or about June 28.
- McKay's ceased spilling on June 24.
- Spicer Meadows:
 - No curtailments
- Geothermal Units:
 - June 1 @ 0650 1500, Unit 1 derated due to vacuum pump trouble
 - June 1 @ 1126 1150, Unit 1 off line due to vacuum pump trouble
- Lodi Energy Center:
 - No curtailments
- Alameda CTs:
 - June 4 @ 1923 2359, Unit 1 unavailable due to EGT spread.
 - June 17 @ 1800 2359, Unit 2 failed start due to IGV trouble.
 - June 18 @ 0000 1036, Unit 2 unavailable due to diesel cranking motor trouble.
- Lodi CT:
 - June 18 @ 1802 June 19 @ 1430, Unit o/s due to fire suppression system trouble.
 - June 26 @ 1900 1925, Unit failed start due to field breaker trouble.
 - June 29 @ 1700 1710, Unit failed start due to a/c lube oil pump trouble.
- Collierville Units:
 - June 1 27, Unit 1 derated due to high tailwater
 - June 13 @ 1004 1428, Unit 1 o/s for routine maintenance
 - June 19 @ 0949 1039, Unit 1 tripped off line due to high tailwater, runner interference
 - June 12 @ 1404, Unit 2 returned to service from stator ground fault repairs. Unit remains derated.
- STIG:
 - June 19 @ 1300 1415, Unit late to start due to hydraulic system leak.

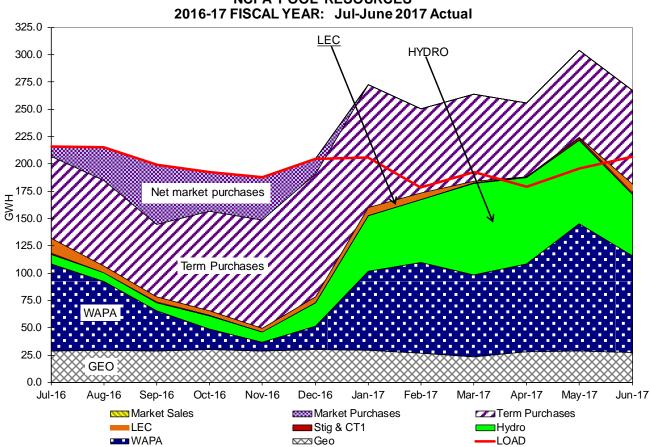
Pooling & Portfolio Planning & Forecasting

- Actual NCPA Pool load of 206.5 GWh in June equaled 103% of the pre-month forecast of 201.2 GWh due to an unusually hot finish to the month. Pool load, running 116.2 GWh through July 16 is likely to reach the forecast of 216.6 GWh assuming above-normal temperatures continue as forecasted.
- The Lodi Energy Center (LEC) generated 6,473 MWh for the pool in June, while the forecast was 5,365 MWh. Strong hydro and renewable generation kept implied heat rates relatively low at the start of June but have increased since then. For July LEC generation was forecasted at 5,379 MWh but was already at 5,372 Mwh by July 16
- For the month of June, 0.6 inches of rain was recorded at Big Trees gage. With the rainy season concluded, total precipitation for the year at 99.4 inches was 185% of the historic October-to-June average.
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) was recently raised to \$30/MWh (seeking net positive value between energy and A/S revenues).
- NSMR storage as of June 30 was at 185,695-acre feet. The historical average NSMR storage at the end of June is 136,446-acre feet. As of July 16, NSMR storage is 169,548-acre feet. The NCPA Pool share of NSMR storage is 88,578-acre feet.
- Combined Calaveras Project generation for the Pool in June totaled 112.6 GWh, down from 79.0 GWh in May. The Pool's 55.9 MWh in June was less than the premonth forecast of 85.4 GWh, due to the Collierville Unit 2 forced outage. Through Jul 16, Calaveras generation for the Pool (26.9 GWh) is running close to the month's forecast for 55.2 GWh.
- Western Base Resource (BR) Pool delivery in June 2017 was 88.6 GWh compared to the forecast of 94.6 GWh. Through July 16, BR pool allocations of 45 GWh (16 GWh Displacement) are on the way to meet the July forecast of 88.4 GWh.
- PG&E City-Gate gas index traded at \$3.225/MMBtu for July 17 delivery compared to an average of \$3.125/MMBtu (with a high of \$3.22/MMBtu) for the month of June. Despite high temperatures, prices in June were relatively flat. The PG&E Bidweek price for July gas was \$3.25, and daily Platt's prices have been running close to that, due to high 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, July 17 delivery were \$41.78 and \$27.40/MWh, respectively.

NCPA Pool Loads & Resources Value Summary												
	Pea	ak and Energ Jun-1			Estimated Pro	Estimated Production Costs			Cost of Serving Demand			
	Coincident Peak (MW)	Total MWh	Forecast Values	Avg. MW	NCP/							
	Jun-19-17 Hour 16				Cost/Revenue (Estimate)	Variable Cost (\$/MWh)	Totals		Avg (\$/MWh)			
Demand	464.0	206,429	201,176	286.7	N/A	N/A	at Mar	ket Cl	earing Price			
WAPA Geothermal	-	88,649 27,241	94,572 27,778	123.1 37.8	\$ 2,229,080 517,581	\$ 25.15 19.00	\$ 7,971,	964	\$ 38.62			
Hydro Stig & CTs	-	55,900 2,914	83,065	77.6 4.0	335,400 185,151	6.00 63.53	at Variable	Cost o	f Pool Generation			
LEC Contracts Market - Net	- 346.6 117.4	6,473 86,126 (60,875)	5,365 98,349 (107,953)	9.0 119.6 (84.5)	243,706 5,674,992	37.65 65.89	\$ 7,093,	952	\$ 34.37			
(Net Sales = Negative) Net Total	464.0	206,429	201,176		\$ 9,185,910	\$ 34.37						

Monthly Market Cu

Monthly Market Summary									
				Avg Variabl Cost of Po		ard Prices (EOX NP1	5 H	ILH Ask Prices)	NOTES TO SUMMARY TABLE:
	Pool Energy	HLI	H Avg MCP	Generation	n	NP15 6/1/2017	7	7/14/2017 (\$/MWh)	
	(MWh)		(\$/MWh)	(\$/MWh)		(\$/MWh)			Peak and Energy Summary:
Jul-16	216,062	\$	36.40	\$ 38.1	5 Jul-17	\$ 33.48	\$	38.64	* Monthly generation summary of Coincidental Peak (hour in which pool demand peaked),
Aug-16	215,007	\$	37.71	\$ 41.2	7 Aug-17	36.07		38.70	total MWH for the month, and pre-month forecasted values for report period.
Sep-16	199,228	\$	36.67	\$ 45.6	9 Sep-17	34.92		36.69	* Generation totals are for POOL SHARE of the projects.
Oct-16	192,514	\$	35.69	\$ 39.0	8 Q3 2017	\$ 34.83	\$	\$ 38.01	* Hydro totals include Collierville and Spicer generation.
Nov-16	187,997	\$	31.67	\$ 39.0	8 Q4 2017	36.19		37.29	Estimated Production Costs:
Dec-16	204,678	\$	38.29	\$ 39.0	8 Q1 2018	35.65		36.35	* Fixed project costs not included except for WAPA, where total month's project costs
Jan-17	205,675	\$	36.58	\$ 23.7	0 CY2018	\$ 33.39	\$	\$ 34.41	are used to calculate the average unit cost.
Feb-17	178,642	\$	30.61	\$ 24.4	1 CY2019	33.01		33.73	* STIG and CT costs include forward natural gas and basis hedge transactions.
Mar-17	192,408	\$	23.37	\$ 25.4	3 CY2020	34.39		35.41	* STIG & CT costs reflect \$2.60 and \$1.62/MWH variable O&M costs per 6-12-06 GSCA.
Apr-17	179,239	\$	23.39	\$ 31.4	7 CY2021	36.21		37.30	Cost of Serving Demand:
May-17	195,573	\$	31.70	\$ 26.8	6 CY2022	36.96		39.24	Compares price of meeting total monthly demand with (1) Hourly pool market clearing price;
Jun-17	206,429	\$	38.62	\$ 34.3	7 CY2023	38.53		40.87	(2) Variable cost of pool gen. Pool Gen is sum of estimated costs divided by sum of generation.



NCPA POOL RESOURCES

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 September 2017:
 - Monthly System Resource Adequacy Demonstration (filed July 18, 2017)
 - Monthly Supply Plan (filed July 18, 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												
		Actual		Costs & Rates										
	BR			Base Resource &	Monthly Cost	CAISO LMP	12-Mo Rolling							
	Forecast ¹	BR Delivered	Difference	Restoration Fund	of BR ²	Differential ³	Avg. Cost of BR ⁴							
	(MWh)	(MWh)	(MWh)	(\$)	(\$/MWh)	(\$/MWh)	(\$/MWh)							
Jul-16	59,229	79,774	20,545	\$2,185,609	\$ 27.40	\$ 1.60	\$ 52.56							
Aug-16	45,311	62,933	17,622	\$2,185,609	\$ 34.73	\$ 0.74	\$ 50.43							
Sep-16	26,431	37,235	10,804	\$2,125,890	\$ 57.09	\$ 0.22	\$ 50.14							
Oct-16	19,823	19,056	(767)	\$1,135,901	\$ 59.61	\$ 0.19	\$ 50.53							
Nov-16	13,184	8,026	(5,158)	\$1,135,901	\$ 141.53	\$ 0.33	\$ 50.58							
Dec-16	16,048	21,742	5,694	\$1,135,901	\$ 52.24	\$ 0.12	\$ 48.62							
Jan-17	-	72,578	72,578	\$1,135,901	\$ 15.65	\$ 0.10	\$ 41.38							
Feb-17	13,801	82,955	69,154	\$1,135,901	\$ 13.69	\$ 0.14	\$ 35.46							
Mar-17	47,259	75,363	28,104	\$1,135,901	\$ 15.07	\$ 0.03	\$ 32.62							
Apr-17	52,011	80,464	28,453	\$2,279,529	\$ 28.33	\$ 1.11	\$ 30.68							
May-17	76,515	116,552	40,037	\$2,279,529	\$ 19.56	\$ 0.19	\$ 28.29							
Jun-17	76,360	88,649	12,289	\$2,279,529	\$ 25.71	\$ 0.22	\$ 27.50							
1/	As forecasted	d in NCPA 16/1	7 Budget											
2/	= (Western C	ost + Restorati	on Fund)/BR [Delivered, for Pool I	Participants onl	у.								
3/	= (MEEA LMF	P - PG&E LAP LI	MP) using publ	ic market informati	on (i.e. not set	tlement quality).							

Western Base Resource Tracking (NCPA Pool)

4/ Based on BR Delivered (Actual) when available and BR Forecast in all other cases. Includes CAISO LMP impact.

- FY17 WAPA Base Resource energy deliveries totaled 745,327 MWh for the NCPA Pool, exceeded the budgeted values of 445,972 MWh by nearly 300,000 MWh, or by 67%.
- The Pool share of the Displacement Program was 81,201 MWh and produced an estimated savings of approximately \$670,000, or \$8.25/MWh.
- MEEA pricing saved the Pool nearly \$300,000. Combined savings between Displacement and the MEEA was nearly \$1 million for NCPA Fiscal Year 2017.

Debt and Financial Management

- The initial market reaction to the Fed's June interest rate increase was surprisingly modest, initially moving only short-term rates higher. In recent days, longer-term yields have adjusted well. The muted reaction is an indication of uncertainty about the pace of U.S. economic growth and future Fed policy. Although the Fed's "dot plot" points to one more rate increase in 2017, market probabilities show only a 50% chance of a hike by year-end.
- Weaker economic data and low inflation kept interest rates in check during June. Despite a quarter-point Fed rate increase, U.S. Treasury yields rose only modestly during the month. The yield on two- and 10-year Treasury notes rose 10 basis points (bps) ending the month at 1.38% and 2.30%, respectively. The 30-year Treasury fell 3 bps to 2.84%.
- On June 26, 2017, S&P Global Ratings lowered its financial strength rating on National Public Finance Guarantee Corp. (National) to 'A' from 'AA-' and its long-term counterparty credit rating on MBIA Inc. to 'BBB' from 'A-'. The significance of this downgrade raised concerns about continuing disclosure requirements for the 1992 Hydro bonds (MBIA insured) and credit thresholds for the 2008 Hydro swaps with Citi (NCPA payments insured by MBIA). However, bond counsel confirmed that the 1992 bonds were not subject to the continuing disclosure provisions of Rule 15c2-12 because of their issuance date was prior to the effective date of such provisions (1995). As for the swaps, an Additional Termination Event (ATE) under the ISDA Agreement occurs if the Insurer does not have a rating of at least A3/A- <u>AND</u> NCPA's underlying credit rating is A1/A+, no collateral posting is required.
- Staff continues to work on drafting modifications to NCPA's Investment Policy to more closely align with the State code. The amendments will be vetted at the August 9th Finance Committee and August 14th LEC PPC meeting. If the amendments receive committee recommendations, staff plans to bring the updated policy forward to the Commission for final approval in August.

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.

<u>Network</u>

- IS has begun migrating e-mail mailboxes to Office 365. Estimated completion date for the project is mid-August to have all Agency staff and resources moved over.
- 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 will be hosting a Cyber Security Incident Response exercise on August 8th. This exercise will allow NCPA members to exercise their response plans in the event a cyber attack causes service disruptions. Announcements and flyers have been sent out members, and those interested can sign up through our student intern Chatan Konda (<u>Chatan.Konda@ncpa.com</u>)
- Work continued throughout June in preparation for onboarding the Merced Irrigation District MEID scheduling coordination portfolio into the Agency's bidding, scheduling, and metering systems. Network communications have been configured, point-to-point testing has been completed, and dispatch SCADA screens have been created. Successfully deployed MID's Merced Falls hydro resource into the new MEID scheduling coordination portfolio effective on March 24, 2017, with operational SCADA telemetry and metering.
- The ECN AT&T 56k circuit at Healdsburg 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

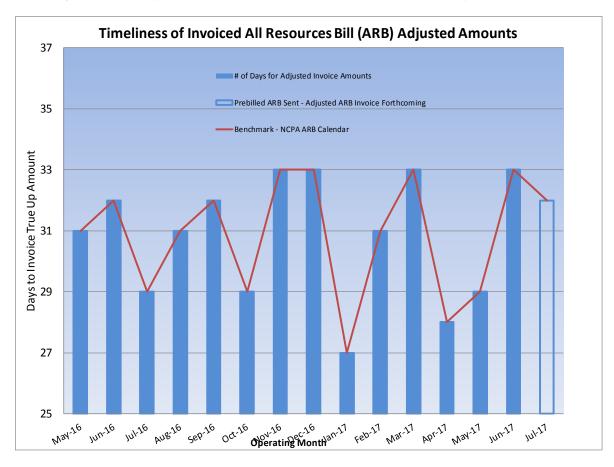
Progress Against the Strategic Plan

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

- July 2017 monthly pre-billed budget/forecast amounts;
- May 2017 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- April 2017 (2nd Adjustment) NCPA Project settlement true-up and T+12 business day recalculated CAISO settlement true-up allocations;

- February 2017 (3rd Adjustment) T+55 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- August 2016 (4th Adjustment) T+9 month recalculated CAISO settlement true-up allocations;
- October 2015 (5th Adjustment) T+18 month recalculated CAISO settlement true-up allocations;
- May 2014 (6th Adjustment) T+35 month CAISO settlement true-up



Legislative & Regulatory

Political Arena State/Federal/Western Programs

 NCPA and a delegation of members joined more than 1,500 representatives from the public power community to be part of the American Public Power Association's National Conference. The event, held this year in Orlando, Florida, included officials from Alameda, Lompoc, Redding, Roseville, Santa Clara, and Truckee-Donner Public Utility District. The program featured speakers who addressed key issues impacting utilities, energy independence, and a global and geopolitical perspective on major forces impacting climate change and energy supply. Thank you to all who took time out of their busy schedules to be part of NCPA's delegation to the national conference.

- NCPA submitted comments to the Western Area Power Administration (WAPA) on their proposed new Creditworthiness Procedures presented last month to preference power customers. NCPA urged WAPA to provide additional background information on the reasons for developing these new procedures and raised a number of questions for WAPA to consider during their initial creditworthiness evaluation and determination of collateral security. As well, NCPA requested that WAPA include a dispute review process or arbitration provision if a customer continues to contest their creditworthiness determination.
- NCPA provided comments to the Bureau of Reclamation (Reclamation) on its draft Project Use Directive and Standard (FAC 04-06). As Project Use power directly reduces the amount of base resource power made available for preference power customers, NCPA urged Reclamation to adhere to the congressionally authorized purposes for Project Use power, and to not expand its use beyond its authorized purposes—delivery of Central Valley Project (CVP) water through CVP facilities.
- In response to the Bureau of Reclamation's (Reclamation's) last public meeting on its final Cost Allocation Study (CAS) for the Central Valley Project (CVP), NCPA submitted comments raising concerns with a number of serious problems with Reclamation's current approach for completing the CAS. Omitted from the CAS are numerous key factors that would more accurately capture the power benefits; these include the State Water Resources Board proposal for new unimpaired flow requirements on the Sacramento River, the impact of the California WaterFix project on CVP water and power costs, and the financial contributions of water and power customers into the Central Valley Project Improvement Act (CVPIA) Restoration Fund. NCPA has requested that Reclamation officials meet in person with power customers to discuss these issues, and to frame an approach that can better assure transparency and accuracy in the CAS process.
- NCPA has been active at the State Capitol advocating on behalf of the Agency and its member utilities on the Cap and Trade extension bill (AB 398, E. Garcia). NCPA successfully negotiated with the Governor's office and Assembly Natural Resources Committee's staff to include language in the bill that recognizes the continuation of allowance allocations to electric utilities. Moreover, in consultation with the chiefs of staff for the Governor, Speaker pro Tem, and Assembly Speaker, NCPA coordinated with NCPA member utilities to lobby swing-vote Legislators to support AB 398. AB 398 ultimately passed on July 17th with a bipartisan two-thirds vote, with most NCPA legislators voting for the bill. Sincere thanks to all of our members who weighed in with their legislators on this very important measure.
- NCPA has been advocating on behalf of the Agency and its member utilities on SB 100 (de León), which would establish a 60% Renewables Portfolio Standard (RPS) in 2030, and a 100% clean energy goal by 2045. In July, NCPA was successful in negotiating amendments to the bill that 1) would make the 100% clean energy goal a utility planning goal with no prescriptive rules, and; 2) with regard to the 60% RPS, would provide more flexibility for utilities in the first post-2020 compliance period. NCPA continues to negotiate with the author's office and stakeholders to add provisions that guard against stranded investments, help eliminate burdens for small publicly owned electric utilities, promote more efficient natural gas plants over dirtier plants, and reform the transmission access charge.

- NCPA has been lobbying to make important local control improvements SB 649 (Hueso), which establishes a streamlined local permitting process for small cell facilities. NCPA has successfully negotiated amendments in the bill that preserve a publicly owned electric utility's enforcement of safety, reliability, and engineering policies over small cell permits.
- NCPA has been planning for its 2017 Legislative Staff Tour, which is scheduled for July 24 to 26. The tour will bring approximately 35 legislative staffers (mostly from NCPA's legislative offices and energy related committees) to the Oroville Dam, Biggs, Gridley, the Geysers, and Healdsburg. The tour will feature several of NCPA's member utilities, their key customers, NCPA's geothermal plants, a presentation on NCPA's hydroelectric infrastructure (which will be juxtaposed with the Oroville Dam), and an energy policy summit focused on SB 100 issues and featuring NCPA Utility Director presentations. Our member hosts have done a tremendous job in planning local tours and meetings that are sure to make this year's tour very impactful and productive. Thank you to all for your hard work in anticipation of the tour and for your hospitality as this year's hosts. We are also very appreciative of the involvement of NCPA Utility Directors as presenters during our annual policy summit.

Human Resources

<u>Hires:</u>

Charles Mantei joined NCPA on July 17, 2017 as a Hydro Tech at our Hydroelectric Facility in Murphys, CA. Charles has over 17 years of experience as the Owner/Operator of his own machining and welding business, CAM Precision & Welding.

Intern Hires:

Chelsea Hamner joined NCPA on June 26, 2017 as Student Intern II at our Headquarters office in Roseville, CA. Chelsea is pursuing a Communications degree at California State University Sacramento.

Promotions/Position Changes:

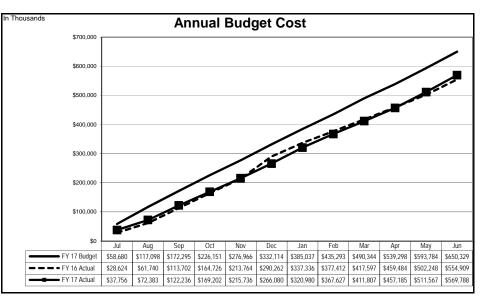
None.

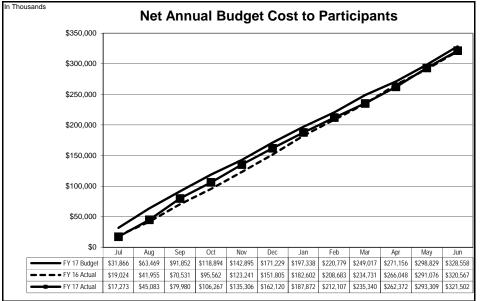
Separations:

Richard Hayes, Mechanic Operator V, retired from his position at our Geothermal Facilities after 33 years of service.

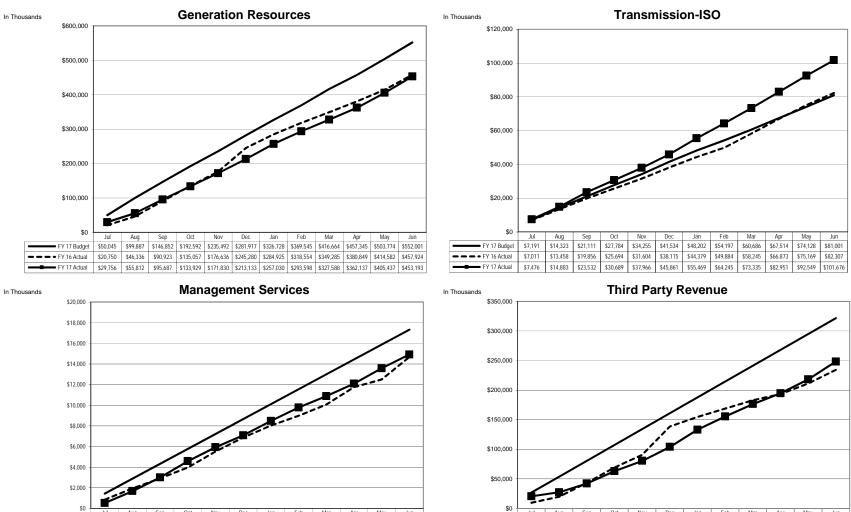
Annual Budget 2016-2017 Fiscal Year To Date As of June 30, 2017

In Thousands		Progra	m	
	Annual		Under(Ovr)	YTD %
GENERATION RESOURCES	Budget	Actual	Budget	Remaining
NCPA Plants				
Hydroelectric	51,854	53,131	\$ (1,277)	-2%
Geothermal Plant	33,145	29,941	3,205	10%
Combustion Turbine No. 1	2,648	3,634	(986)	-37%
Combustion Turbine No. 2 (STIG)	8,587	8,370	217	3%
Lodi Energy Center	92,991	54,174	38,818	42%
	189,227	149,250	39,976	21%
Member Resources - Energy	45,638	49,518	(3,880)	-9%
Member Resources - Natural Gas	4,878	5,056	(178)	-4%
Western Resource	30,288	29,042	1,246	4%
Market Power Purchases	39,302	30,633	8,669	22%
Load Aggregation Costs - ISO	240,129	189,091	51,038	21%
Net GHG Obligations	2,540	603	1,937	76%
TRANSMISSION	552,001	453,193	98,808	18%
Independent System Operator	81,001	101,676	(20,675)	-26%
MANAGEMENT SERVICES				
Legislative & Regulatory				
Legislative Representation	1.897	1,651	246	13%
Regulatory Representation	794	774	240	3%
Western Representation	817	588	228	28%
Member Services	432	347	85	20%
Weinber Gervices	3.940	3.360	580	15%
Judicial Action	5,940 625	723	(98)	-16%
Power Management	025	123	(90)	-10 /6
System Control & Load Dispatch	E 600	E 09E	537	109/
Forecasting & Prescheduling	5,622 2,555	5,085 2,115	537 440	10% 17%
Industry Restructuring	2,555	305	109	26%
Contract Admin, Interconnection Svcs & Ext. Affairs	1,137	838	298	26%
Green Power Project	18	2	16	89%
Gas Purchase Program	87	62	25	29%
Market Purchase Project	128	82	45	35%
	9,960	8,489	1,470	15%
Energy Risk Management	212	167	45	21%
Settlements	862	490	371	43%
Integrated System Support	311	430	200	64%
Participant Pass Through Costs	1.417	1.321	96	7%
Support Services	-	258	(258)	170
	17,326	14,919	2,407	14%
TOTAL ANNUAL BUDGET COST	650,328	569,788	80,540	12%
LESS: THIRD PARTY REVENUE				
Plant ISO Energy Sales	118,943	75,247	43.696	37%
Load Aggregation Energy Sales	184,117	128,661	55,456	30%
Ancillary Services Sales	3,790	3,755	35	1%
Other ISO Revenue	-	17,543	(17,543)	
Transmission Sales	110	110	-	0%
Western Credits, Interest & Other Income	14,811	22,970	(8,160)	-55%
	321,770	248,287	73,484	23%
NET ANNUAL BUDGET COST TO PARTICIPANTS	328,558	321,502	\$ 7.056	2%
NET ANNUAL BUDGET CUST TO PARTICIPANTS	320,338	321,302	φ 1,000	270





Annual Budget Budget vs. Actual By Major Area 2016-2017 Fiscal Year To Date As of June 30, 2017

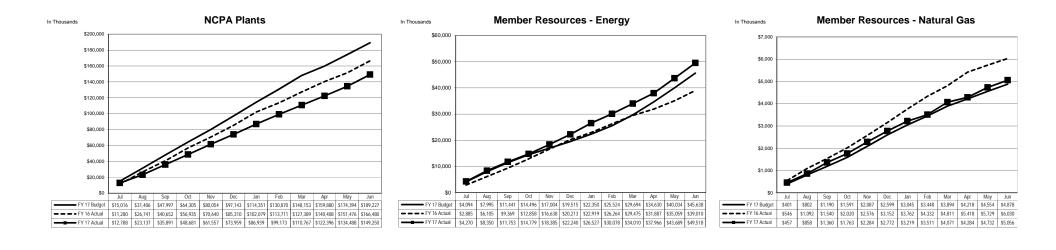


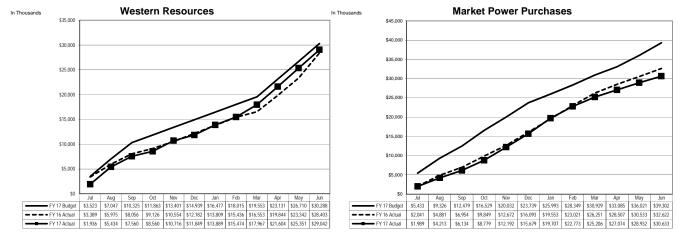
Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun \$14,438 \$15,882 \$17,326 FY 17 Budget \$1.444 \$2,888 \$4,332 \$5,775 \$7,219 \$8.663 \$10,107 \$11,551 \$12,995 FY 16 Actual \$3,974 \$8,031 \$8,974 \$10,068 \$11,761 \$12,497 \$14,678 \$862 \$1,946 \$2,923 \$5,524 \$6,867 \$523 \$4,584 \$5,940 \$7,086 \$8,481 \$9,784 \$10,883 \$12,097 \$13,581 \$14,919 FY 17 Actual \$1,688 \$3,017

Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun \$26,814 \$53,628 \$80,443 \$107,257 \$134,071 \$160,885 \$187,699 \$214,513 \$241,328 \$268,142 \$294,956 \$321,770 FY 17 Budget - FY 16 Actual \$9,599 \$19,785 \$43,171 \$69,164 \$90,523 \$138,457 \$154,734 \$168,729 \$182,867 \$193,436 \$211,172 \$234,342 - -FY 17 Actual \$20,482 \$27,301 \$42,255 \$62,934 \$80,430 \$103,960 \$133,108 \$155,520 \$176,466 \$194,813 \$218,258 \$248,287

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

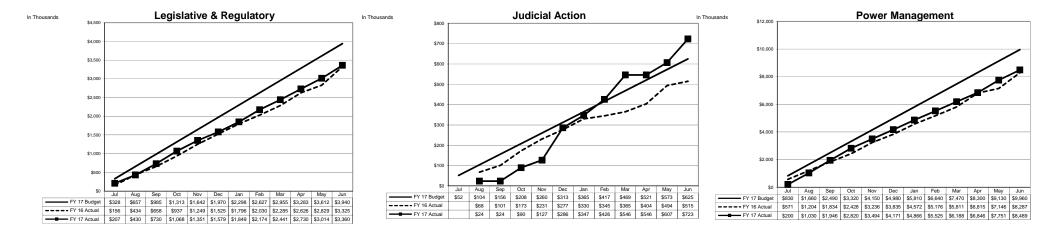
Annual Budget Cost Generation Resources Analysis By Source 2016-2017 Fiscal Year To Date As of June 30, 2017

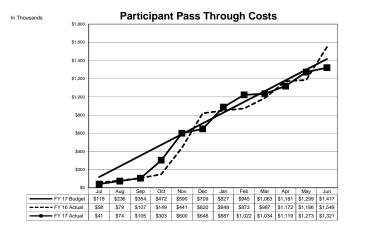




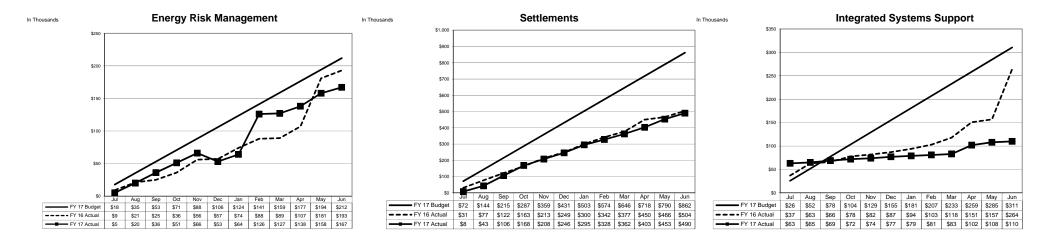
Footnote: Other Resources (Graeagle, BART PV, Gridley PV) are included in Market Power Purchases

Annual Budget Cost Management Services Analysis By Source 2016-2017 Fiscal Year To Date As of June 30, 2017

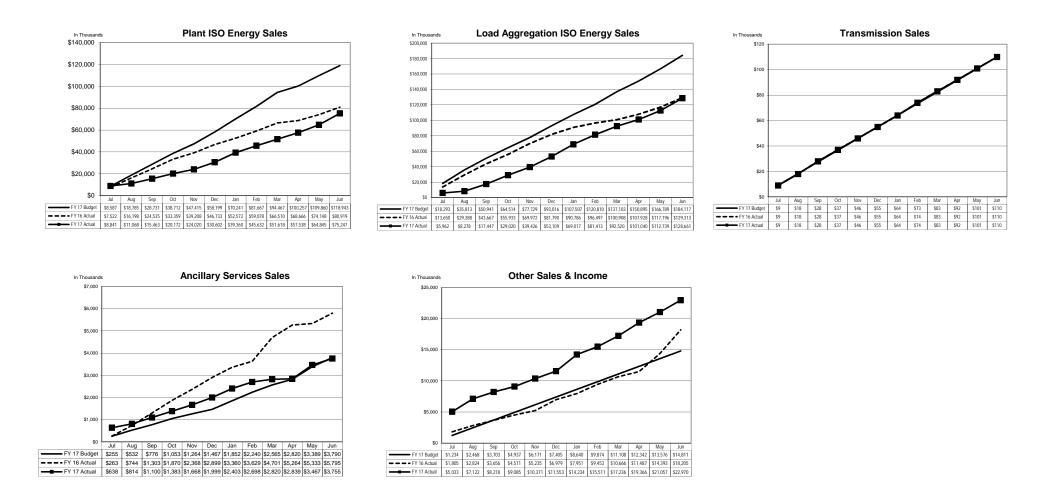




Annual Budget Cost Management Services Analysis By Source 2016-2017 Fiscal Year To Date As of June 30, 2017



Annual Budget Cost Third Party Revenue Analysis By Source 2016-2017 Fiscal Year To Date As of June 30, 2017



Annual Budget NCPA Generation Detail Analysis By Plant 2016-2017 Fiscal Year To Date As of June 30, 2017

Generation Cost Analysis

\$ in thousands

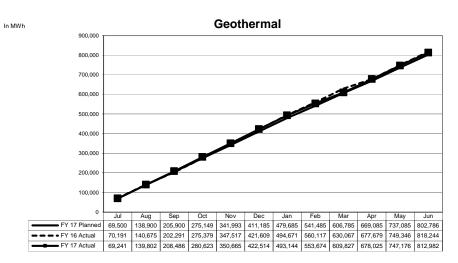
			Geothermal		
			\$/MWh	Under(Ovr)	YTD %
	Budget	Actual	Actual	Budget	Remaining
Routine O & M	\$ 17,159	\$ 16,092	\$ 19.79	\$ 1,067	6%
Capital Assets/Spare Parts Inventories	2,575	1,557	1.92	1,018	40%
Other Costs	7,994	6,775	8.33	1,219	15%
CA ISO Charges	308	758	0.93	(450)	-146%
Debt Service	5,110	4,759	5.85	351	7%
Annual Budget	33,145	29,941	36.83	3,205	10%
Less: Third Party Revenue					
Interest Income	32	207	0.25	(174)	-537%
ISO Energy Sales	30,113	26,582	32.70	3,531	12%
Ancillary Services Sales	-	5	0.01	(5)	
Effluent Revenues	700	744	0.92	(44)	-6%
Misc	110	946	1.16	(835)	
	30,955	28,484	35.04	2,471	8%
Net Annual Budget Cost to Participants	\$ 2,190	\$ 1,456	\$ 1.79	\$ 734	33%
Net GenerationMWh @ Meter	802,786	812,982			
\$/MWh (A)	\$ (3.64)	\$ (4.06)			

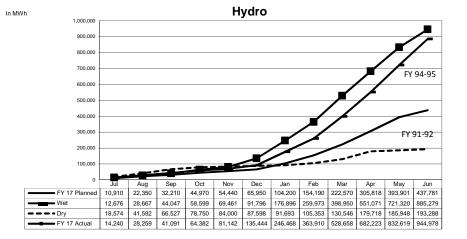
			Hy	droelectric	;		
				\$/MWh	Under	(Ovr)	YTD %
	Budget	Actual		Actual	Bud	get	Remaining
Routine O & M	\$ 8,369	\$ 7,227	\$	7.65	\$	1,142	14%
Capital Assets/Spare Parts Inventories	2,135	2,769		2.93		(634)	-30%
Other Costs	2,861	2,124		2.25		737	26%
CA ISO Charges	237	2,758		2.92		(2,522)	-1064%
Debt Service	38,253	38,253		40.48		-	0%
Annual Budget	51,854	53,131		56.23		(1,277)	-2%
Less: Third Party Revenue							
Interest Income	91	358		0.38		(267)	-294%
ISO Energy Sales	19,542	31,505		33.34		11,963)	-61%
Ancillary Services Sales	2,487	2,622		2.77		(135)	-5%
Misc	-	27		0.03		(27)	
	22,120	34,512		36.52		12,392)	-56%
Net Annual Budget Cost to Participants	\$ 29,734	\$ 18,619	\$	19.70	\$	11,115	37%
Net GenerationMWh @ Meter	437,781	944,978					
\$/MWh (A)	\$ (19.46)	\$ (20.78)					

Footnotes:

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

MWhs Generated





Annual Budget NCPA Generation Detail Analysis By Plant 2016-2017 Fiscal Year To Date As of June 30, 2017

Generation Cost Analysis

		Lodi Energy Center								
				\$/MWh		Under(Ovr)	YTD %			
	Budget	Actual		Actual		Budget	Remaining			
Routine O & M	\$ 14,041	\$ 10,621	\$	35.34	\$	3,420	24%			
Fuel	44,101	9,435		31.39		34,666	79%			
AB 32 GHG Offset	-	-		-		-				
CA ISO Charges and Energy Purchases	2,374	3,384		11.26		(1,010)	-43%			
Capital Assets/Spare Parts Inventories	2,805	1,761		5.86		1,044	37%			
Other Costs	3,233	2,555		8.50		678	21%			
Debt Service	26,437	26,417		87.90		20	0%			
Annual Budget	 92,991	54,174		180.25		38,818	42%			
Less: Third Party Revenue										
Interest Income	44	194		0.64		(149)	-335%			
ISO Energy Sales	68,846	15,194		50.56		53,652	78%			
Ancillary Services Sales	1,303	630		2.10		673	52%			
Transfer Gas Credit	-	-		-		-	0%			
Misc	3	4,361		14.51		(4,358)	0%			
	70,197	20,379		67.81		49,817	71%			
Net Annual Budget Cost to Participants	\$ 22,795	\$ 33,794	\$	112.44	\$	(11,000)	-48%			
Net GenerationMWh @ Meter	1,655,765	300,552								
\$/MWh (A)	\$ (2.20)	\$ 24.55	1							

		Combusti	on Turbine N	o. 2 (STIG)	
			\$/MWh	Under(Ovr)	YTD %
	Budget	Actual	Actual	Budget	Remaining
Routine O & M	\$ 1,413	\$ 1,321	\$ 284.27	\$ 92	7%
Fuel and Pipeline Transport Charges	936	827	177.92	109	12%
Capital Assets/Spare Parts Inventories	133	121	26.09	12	9%
Other Costs	477	391	84.12	87	18%
CA ISO Charges	2	85	18.21	(82)	-3596%
Debt Service	5,626	5,626	1,210.57	-	0%
Annual Budget	8,587	8,370	1,801.18	217	3%
Less: Third Party Revenue					
Interest Income	19	61	13.13	(42)	-226%
ISO Energy Sales	282	468	100.62	(186)	-66%
Ancillary Service Sales	-	0	0.00	(0)	0%
Fuel and Pipeline Transport Credits	415	1,174	252.65	(759)	-183%
Misc	-	-	-	-	0%
	715	1,703	366.40	(987)	-138%
Net Annual Budget Cost to Participants	\$ 7,872	\$ 6,668	\$ 1,434.78	\$ 1,204	15%
Net GenerationMWh @ Meter	3,918	4,647			
\$/MWh (A)	\$ 573.32	\$ 224.22			

Footnotes:

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

Lodi Energy Center In MWh 1,800,000 1,600,000 1,400,000 1,200,000 1,000,000 800,000 600,000 400,000 200,000 Oct Nov Jan Feb Mar Apr May Jun Jul Sep Dec Aug 1,256,404 1,440,268 1,449,740 1,548,344 1,655,765 270,290 602,705 917,017 1,096,906 FY 17 Planned 112,646 441,563 740,428 613,725 961,472 1,006,73 1,010,15 1,076,75 - - - FY 16 Actual 103,883 241,148 372,757 538,494 745,504 842,734 869,894 107,660 133,257 153,893 171,381 199,799 238,717 254,034 261,119 261,119 264,555 300,552 FY 17 Actual 76,008

CT - 2 5,000 4,500 4,000 3,500 ~ 3,000 2,500 2,000 1,500 1,000 500 0 Aug 2,826 Sep 2,922 Jul Oct Nov Dec Jan Feb Mar Apr May Jun 3,519 1,485 3,220 3,220 3,519 3,519 3,519 3,519 3,918 FY 17 Planned 3,519 678 678 1,521 2,688 2,688 2,688 2,888 2,888 2,888 2,888 2,888 3,290 FY 17 Actual 1,010 1,194 1,208 1,681 1,681 1,681 1,681 1,681 2,458 2,458 3,001 4,647

MWhs Generated

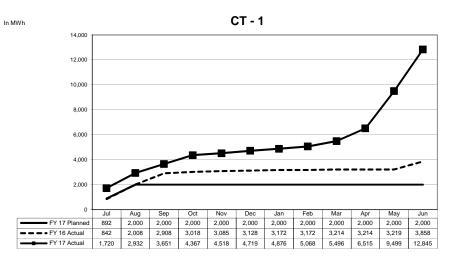
In MWh

Annual Budget NCPA Generation Detail Analysis By Plant 2016-2017 Fiscal Year To Date As of June 30, 2017

Generation Cost Analysis

		Combu	usti	ion Turbin	e l	No. 1	
			\$/MWh		Under(Ovr)		YTD %
	Budget	Actual		Actual		Budget	Remaining
Routine O & M	\$ 1,459	\$ 1,794	\$	139.68	\$	(335)	-23%
Fuel and Pipeline Transport Charges	174	668		52.01		(494)	-284%
Capital Assets/Spare Parts Inventories	525	537		41.82		(12)	-2%
Other Costs	489	458		35.68		31	6%
CA ISO Charges	1	177		13.75		(176)	-17041%
Debt Service	-	-				-	
Annual Budget	2,648	3,634		282.94		(986)	-37%
Less: Third Party Revenue							
Interest Income	0	-				0	
ISO Energy Sales	160	1,498		116.60		(1,338)	0%
Ancillary Services Sales	-	0		0.01		(0)	0%
Misc	-	16		1.22		(16)	0%
	161	1,513		117.83		(1,353)	-843%
Net Annual Budget Cost to Participants	\$ 2,488	\$ 2,121	\$	165.11	\$	367	15%
Net GenerationMWh @ Meter	2,000	12,845					
\$/MWh (A)	\$ 1,243.89	\$ 165.11	1				

MWhs Generated



Footnotes:

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