



12745 N. Thornton Road
Lodi, CA 95242

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LEC PPC Agenda

Date: December 8, 2016

Subject: December 12, 2016 Lodi Energy Center Project Participant Committee Meeting

Location: 12745 N. Thornton Road, Lodi, CA and/or Posted Teleconference Locations

Time: 10:00 a.m.

*** In compliance with the Brown Act, you may participate in person at the meeting location or via teleconference at one of the locations listed below. In either case, please: (1) post this notice at a publicly accessible location at the participation location at least 72-hours before the meeting begins, and (2) have a speaker phone available for any member of the public who may wish to attend at your location.

NCPA 651 Commerce Drive Roseville, CA 95678	NCPA 12745 N. Thornton Road Lodi, CA 95241	CITY OF HEALDSBURG 401 Grove Street Healdsburg, CA 95448
BAY AREA RAPID TRANSIT 300 Lakeside Drive, 16 th Floor Oakland, CA 94612	CITY OF GRIDLEY 685 Kentucky Street Gridley, CA 95948	CITY OF LOMPOC 100 Civic Center Plaza Lompoc, CA 93438
CITY OF BIGGS 465 "C" Street Biggs, CA 95917	PLUMAS-SIERRA RURAL ELECTRIC COOP 73233 Highway 70 Portola, CA 96122	POWER & WATER RESOURCES POOLING AUTHORITY 9888 Kent Street Elk Grove, CA 95624
CALIFORNIA DEPARTMENT OF WATER RESOURCES 2135 Butano Drive, Suite 100 Room 125 Sacramento, CA 95825	SILICON VALLEY POWER/CITY OF SANTA CLARA 1500 Warburton Avenue, Santa Clara, CA 95050	CITY OF UKIAH 300 Seminary Avenue Ukiah, CA 95482
CITY OF AZUSA 729 N. Azusa Avenue Azusa, CA 91702		

Persons requiring accommodations in accordance with the Americans with Disabilities Act in order to attend or participant in this meeting are requested to contact the NCPA Secretary at 916.781.3636 in advance of the meeting to arrange for such accommodations.

The Lodi Energy Center Project Participant Committee may take action on any of the items listed on this Agenda regardless of whether the matter appears on the Consent Calendar or is described as an action item, a report, or an information item. If this Agenda is supplemented by staff reports, they are available to the public upon written request. Pursuant to California Government Code Section 54957.5, the following is the location at which the public can view Agendas and other public writings: NCPA, 651 Commerce Drive, Roseville, CA or www.ncpa.com

1. Call Meeting to Order and Roll Call

PUBLIC FORUM

Any member of the public who desires to address the Lodi Energy Center Project Participant Committee on any item considered by the Lodi Energy Center Project Participant Committee at this meeting, before or during the Committee's consideration of that item, shall so advise the Chair and shall thereupon be given an opportunity to do so. Any member of the public who desires to address the Lodi Energy Center Project Participant Committee on any item within the jurisdiction of the Lodi Energy Center Project Participant Committee and not listed on the Agenda may do so at this time.

2. Meeting Minutes - Approval of November 14, 2016 regular meeting minutes.

MONTHLY REPORTS

3. Operational Report for November 2016 - (Jeremy Lawson)

4. Market Data Report for November 2016 – Verbal Report (Bob Caracristi)

5. Monthly Asset Report for October 2016 – (Michael DeBortoli)

6. Bidding Strategies Report - Verbal Report and update regarding bidding strategies and regulation down revenues (Ken Goeke)

CONSENT CALENDAR

All items on the Consent Calendar are considered routine and will be approved without discussion by a single roll call vote. Any Project Participant or member of the public may remove any item from the Consent Calendar. If an item is removed, it will be discussed separately following approval of the remainder of the Consent Calendar. Prior to the roll call vote to approve the Consent Calendar, the Participants will be polled to determine if any Participant wishes to abstain from one or more items on the Consent Calendar.

7. Treasurer's Report for November 2016 - Accept by all Participants

8. Financial Report for November 2016 - Approve by all Participants

9. GHG Reports (excerpted from monthly ARB) - Accept by all Participants

Persons requiring accommodations in accordance with the Americans with Disabilities Act in order to attend or participant in this meeting are requested to contact the NCPA Secretary at 916.781.3636 in advance of the meeting to arrange for such accommodations.

- 10. Nalco Company Water and Process Services (Nalco Company LLC) Amendment** – Staff is seeking approval of a First Amendment to the existing five year Multi-Task General Services Agreement with Nalco Company LLC increasing the not to exceed amount from \$1,000,000 to \$2,000,000, for specialty chemicals and services for use at all facilities owned and/or operated by NCPA.

Consent Items pulled for discussion: _____

BUSINESS ACTION ITEMS

- 11. LEC Project Management and Operations Agreement (PMOA) Schedule 1.00, Exhibit 1 Revision** – Staff seeking approval of revised Exhibit 1 to Schedule 1.00 to PMOA for updated Heat Rate data. (*Jeremy Lawson*)

INFORMATIONAL/ DISCUSSION ITEMS

- 12. Gas Transportation Update** (*Ken Speer*)

ADJOURNMENT

Next Regular Meeting: January 9, 2017

Persons requiring accommodations in accordance with the Americans with Disabilities Act in order to attend or participant in this meeting are requested to contact the NCPA Secretary at 916.781.3636 in advance of the meeting to arrange for such accommodations.

Lodi Energy Center
Project Participant Committee Regular Meeting
November 14, 2016 - MEETING MINUTES
Location: Lodi Energy Center
12745 N. Thornton Rd, Lodi CA 95242
and by teleconference
10:00 A.M.

1. Call Meeting to Order and Roll Call

The PPC meeting was called to order at 10:00 a.m. by Chairman George Morrow. He asked that roll be called for the Project Participants as listed below.

PPC Meeting Attendance Summary		
Participant	Attendance	Particulars / GES
Azusa - Morrow	Present	2.7857%
BART - Lloyd	Absent	6.6000%
Biggs - Sorenson	Present	0.2679%
CDWR - Forsythe	Present	33.5000%
Gridley - Borges	Absent	1.9643%
Healdsburg - Crowley	Absent	1.6428%
Lodi - Chiang	Present	9.5000%
Lompoc - Singh	Absent	2.0357%
MID - Caballero	Present	10.7143%
Plumas-Sierra - Brozo	Absent	0.7857%
PWRPA - Bradley	Present	2.6679%
SVP - Hance	Present	25.7500%
Ukiah - Grandi	Absent	1.7857%
Summary		
Present	7	85.1858%
Absent	6	14.8142%
Quorum by #:	Yes	
Quorum by GES:	Yes	
Meeting Date:	November 14, 2016	

Public Forum

Chairman Morrow asked if any members of the public were present in Lodi or at any of the other noticed meeting locations who would like to address the PPC on any agenda items or on any item within the jurisdiction of the LEC PPC and not listed on the agenda. No members of the public were present.

2. Meeting Minutes

The draft minutes of the regular meeting held on October 10, 2016 and the draft minutes of the special meeting held on October 25, 2016 were considered. The LEC PPC considered the following motion:

Date: 11/14/2016

Motion: The PPC approves the minutes of the October 10, 2016 regular meeting and the minutes of the October 25, 2016 special meeting as presented or *including any edits discussed at today's meeting.*

Moved by:

MID

Seconded by:

Santa Clara

Discussion: There was no further discussion.

Vote Summary on Motion		
Participant	Vote	Particulars / GES
Azusa	Yes	2.7857%
BART	Absent	6.6000%
Biggs	Yes	0.2679%
CDWR	Yes	33.5000%
Gridley	Absent	1.9643%
Healdsburg	Absent	1.6428%
Lodi	Yes	9.5000%
Lompoc	Absent	2.0357%
Modesto	Yes	10.7143%
Plumas-Sierra	Absent	0.7857%
PWRPA	Yes	2.6679%
Silicon Valley Power	Yes	25.7500%
Ukiah	Absent	1.7857%
Vote Summary		
Total Ayes	7	85.1858%
Total Noes	0	0.0000%
Total Abstain	0	0.0000%
Total Absent	6	14.8142%
Result:	Motion passed.	

MONTHLY REPORTS

3. Operational Reports for October 2016

Jeremy Lawson presented the Operational Report for October. There were no OSHA recordable accidents, no permit violations and no NERC/WECC violations.

The plant experienced an outage on October 5, 2016 on start-up when a warm-up valve opened without appropriate conditions and caused the plant to trip. The plant experienced a second issue on October 18, 2016 on start-up when the auxiliary boiler failed and delayed schedule by three hours. On October 21, 2016, LEC experienced another outage when the plant failed on

high stratification during an annual RATA test. The HRSG was opened up to find out why stratification was occurring. Ammonia salt and insulation build up within the HRSG was causing uneven flow. The HRSG was cleaned out with CO blasting to correct the breakdown. The plant was put back together and another RATA test was performed. Overall results looked good and the RATA test was successful. Other outages remain as scheduled.

The operational report reflected monthly production of 20,628 MWH, 94 service hours, and equivalent operating availability of 65.25%. The report set forth the Capacity Factor @ 280MW Pmax of 9.90% and @ 302MW Pmax of 9.18%. There were five hot starts, two warm starts, and three cold starts during the month. The next scheduled outage continues to be planned for May 2017.

4. Market Data Report for October 2016

Bob Caracristi discussed the operating and financial settlement results for the month. There was discussion with regard to Flex RA's.

5. Monthly Asset Report

Mike DeBortoli presented the monthly asset report and budget review for September 2016. FY17 shows a \$10.9 million budget. Last month's forecast was \$4.3 million. Net annual cost was \$36 million.

There was discussion and proposal of the following cost reductions: One current vacancy in the maintenance department, iRig Time Stamping, Platforms (scaffolding), DCS Software Upgrade (on hold for now), Ammonia Risk Reduction (proceed with feasibility at this point), Physical Security Upgrades, Cooling Tower Basin Cleanout (push into the future), STG Outage. \$11.7 million for a 14.4% reduction.

There was further discussion with regard to the following rejected potential reductions: Pipe Inspection (safety issue), Critical Valve Work (primarily used for start-up), HRSG Steam Reliefs (safety and integrity), HRSG Hot Spot Repair (this cannot be avoided).

6. Bidding Strategies Report

Ken Goeke presented monthly Bidding Strategies for October 2016. Ken reported that the margin was thin and that no special strategies were implemented in September. There was further discussion on bidding strategies.

Consent Calendar (Items 7 – 10)

The consent calendar was considered. Chairman Morrow asked if any Participant wished to have any item removed for separate discussion. Hearing no requests, he then asked if any Participant wished to abstain from one or more items on the Consent Calendar. There were no abstentions. The LEC PPC considered the following motion:

Date: 11/14/2016

Motion: The PPC approves the Consent Calendar items consisting of agenda items no. 7. Treasurer's Report for October 2016; 8. Financial Reports for October 2016; 9. GHG Reports excerpted from monthly ARB; 10.

GP Crane and Hoist Services five year Multi-Task General Services Agreement for not to exceed \$500,000 for crane and hoist inspection and maintenance services for use at NCPA, Members/SCPPA facilities.

Moved by: Lodi
Seconded by: MID

Discussion: There was no further discussion.

Vote Summary on Motion		
Participant	Vote	Particulars / GES
Azusa	Yes	2.7857%
BART	Absent	6.6000%
Biggs	Yes	0.2679%
CDWR	Yes	33.5000%
Gridley	Absent	1.9643%
Healdsburg	Absent	1.6428%
Lodi	Yes	9.5000%
Lompoc	Absent	2.0357%
Modesto	Yes	10.7143%
Plumas-Sierra	Absent	0.7857%
PWRPA	Yes	2.6679%
Silicon Valley Power	Yes	25.7500%
Ukiah	Absent	1.7857%
Vote Summary		
Total Ayes	7	85.1858%
Total Noes	0	0.0000%
Total Abstain	0	0.0000%
Total Absent	6	14.8142%
Result:	Motion passed.	

BUSINESS ACTION ITEMS

11. FY16 Annual Billing Settlements

Sondra Ainsworth presented the FY16 Final Annual Billing Settlements. The LEC PPC considered the following motion:

Date: 11/14/2016

Motion: The PPC approves the Business Action item no. 11. FY 2016 Annual Billing Settlements for the period July 1, 2015 through June 30, 2016;

Moved by: CDWR
Seconded by: SVP

Discussion: There was no further discussion.

Vote Summary on Motion		
Participant	Vote	Particulars / GES
Azusa	Yes	2.7857%
BART	Absent	6.6000%
Biggs	Yes	0.2679%
CDWR	Yes	33.5000%
Gridley	Absent	1.9643%
Healdsburg	Absent	1.6428%
Lodi	Yes	9.5000%
Lompoc	Absent	2.0357%
Modesto	Yes	10.7143%
Plumas-Sierra	Absent	0.7857%
PWRPA	Yes	2.6679%
Silicon Valley Power	Yes	25.7500%
Ukiah	Absent	1.7857%
Vote Summary		
Total Ayes	7	85.1858%
Total Noes	0	0.0000%
Total Abstain	0	0.0000%
Total Absent	6	14.8142%
Result:	Motion passed.	

12. LEC Operational Insurance Coverage

Donna Stevener and Rui Dai presented the operational insurance coverage. Donna noted that they are still in the process of getting quotes but the costs reflected in the meeting are not-to-exceed costs. Discussion was had about Aon being the new broker, excess coverage, terrorism coverage and escalation costs. The LEC PPC considered the following motion:

Date: 11/14/2016

Motion: The PPC approves Business Action item no. 12. LEC Operational Insurance Coverage for policy year 2017.

Moved by: SVP
Seconded by: Lodi

Discussion: There was no further discussion.

Vote Summary on Motion		
Participant	Vote	Particulars / GES
Azusa	Yes	2.7857%
BART	Absent	6.6000%
Biggs	Yes	0.2679%
CDWR	Yes	33.5000%
Gridley	Absent	1.9643%
Healdsburg	Absent	1.6428%
Lodi	Yes	9.5000%
Lompoc	Absent	2.0357%
Modesto	Yes	10.7143%
Plumas-Sierra	Absent	0.7857%
PWRPA	Yes	2.6679%
Silicon Valley Power	Yes	25.7500%
Ukiah	Absent	1.7857%
Vote Summary		
Total Ayes	7	85.1858%
Total Noes	0	0.0000%
Total Abstain	0	0.0000%
Total Absent	6	14.8142%
Result:	Motion passed	

INFORMATIONAL ITEMS

13. Other New Business

None.

Adjournment

The next regular meeting of the PPC is scheduled for Monday, December 12, 2016. The meeting was adjourned at 11:28 a.m.

Submitted by: Tracy Kves



12745 N. Thornton Road
Lodi, CA 95242

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Lodi Energy Center Project Participant Committee Operational Report

Agenda Item No.: 3

Date: 12/12/2016
To: Lodi Energy Center Project Participant Committee

Safety

- OSHA Recordable: 0 Accidents

Notice of Violations

- Permits: 0 Violations
- NERC/WECC: 0 Violations

Outage Summaries:

- No Forced Outage
- LEC Recycled Water Obligation - There were 455 hours of water curtailment to LEC. During LEC operation, staff managed available storage to meet operations. NCPA and City of Lodi are working together to solve these issues.

Planned Outage Summaries:

- 2017 May: Steam Turbine Limited Overhaul has been deferred (Steam Turbine Bearing Inspection, Steam Turbine Valve Inspection, Alignments, etc.). Outage will center around HRSG and valve maintenance

Generating Unit Statistics:

LEC

Report**Date:**

Start Date 11/1/2016

End Date 12/1/2016

1. Monthly Production 17,498 MWH
2. Productivity Factor
- a. Service Hours 81 Hours
 - b. Service Factor 11.2 %
 - c. Capacity Factor @ 280MW Pmax 8.7 %
 - d. Capacity Factor @ 302MW Pmax 8.0 %
3. Equivalent Operating Availability (EOA) 100.0 %
4. Forced Outage Rate (FOR)
- a. Combustion Turbine Generator 0.0 %
 - b. Steam Turbine Generator 0.0 %

5. Heat Rate Deviation

- a. Fuel Cost (Not Current Market Price) 4.00 \$/mmBTU

MW Range	PMOA HR BTU/kW- Hr	Average HR BTU/kW- Hr	Deviation %	Production MWH	Cost \$
Seg. 1 296 - 302	6850	7,001	2.20%	15	\$9
Seg. 2 284 - 296	6870	6,986	1.70%	4,646	\$2,164
Seg. 3 275 - 284	6971	7,017	0.66%	3,864	\$709
Seg. 4 250 - 275	7081	7,045	-0.51%	3,383	-\$493
Seg. 5 225 - 250	7130	7,128	-0.03%	1,113	-\$9
Seg. 6 200 - 225	7315	7,193	-1.67%	556	-\$271
Seg. 7 175 - 225	7711	7,450	-3.39%	721	-\$754
Seg. 8 165 - 175	7856	7,796	-0.76%	1,239	-\$296
	7,223	7,202	-0.23%	15,538	\$1,059

6. AGC Control Deviation

MW Range	High Dev MWH	Low Dev MWH	Total Dev MWH	Cost \$
Seg. 1 296 - 302	0	0	0	\$2
Seg. 2 297 - 302	10	-18	28	\$789
Seg. 3 298 - 302	6	-32	38	\$1,073
Seg. 4 299 - 302	16	-7	23	\$646
Seg. 5 300 - 302	8	-6	14	\$397
Seg. 6 301 - 302	6	-5	11	\$315
Seg. 7 302 - 302	7	-10	17	\$501
Seg. 8 303 - 302	6	-1	6	\$202
	60	-78	138	\$3,926

7. Starting Reliability

Start Type	Hot Starts	Warm Starts	Cold Starts
Number of Starts	0	5	4
Start Time Benchmark (Minutes)	85	160	235
Start Time Actual (Average Minute)	0.0	100.0	192.8
Start Time Deviation (%)	-100.0%	-37.5%	-18.0%
Start Fuel Benchmark PMOA (mmBTU)	1,967	5,200	5,430
Start Fuel Actual (Average mmBTU)	1,967	1,844	3,833
Fuel Deviation (%)	0.0%	-64.5%	-29.4%
Costs of Fuel Deviations (\$)	\$0	-\$13,423	-\$6,387

Definitions:

1. Monthly Production = Plant Net MWH's
2. Capacity Factor
 - a. Service Hours = In Production or in Service State
 - b. Service Factor = $SH / PH \times 100\%$
 - c. Capacity Factor = $Production / 302MW \times PH$
 - d. Capacity Factor = $Production / 280MW \times PH$
3. Monthly Equivalent Availability Factor (EAF) = $(AH - EPDH - EFDH) / PH \times 100\%$
4. Forced Outage Rate = $(FOH / (FOH + SH)) \times 100\%$
5. Heat Rate Deviation (HRD)
 - a. Fuel Cost = Cost of Fuel in \$/mmBTU
 - b. Average Heat Rate = The Average Heat Rate for the given Range
 - c. Heat Rate Deviation = $(Heat\ Rate\ Average - Heat\ Rate\ Expected) / Heat\ Rate\ Expected \times 100\%$
 - d. Production = The Sum of Production for the given Range
 - e. Costs of Heat Rate Deviations = $(Average\ Heat\ Rate - Expected\ Heat\ Rate) \times Production \times Cost\ of\ Fuel$
6. AGC Deviation-
 - a. MWH's = AGC Set Point Generation - LEC Actual Generation
 - b. Cost of Deviations = Fuel Cost x Heat Rate x Generation
7. Starting Reliability
 - a. Number of Starts = Start Count for Hot, Warm, and Cold
 - b. Start Time = Average Time from 0 Fuel Flow to Pmin
 - c. Start Fuel = Average Fuel Consumption to Pmin
 - d. Cost of Fuel Deviation = $(Actual\ Fuel\ Consumed - Expected\ Fuel) \times Cost\ of\ Fuel$

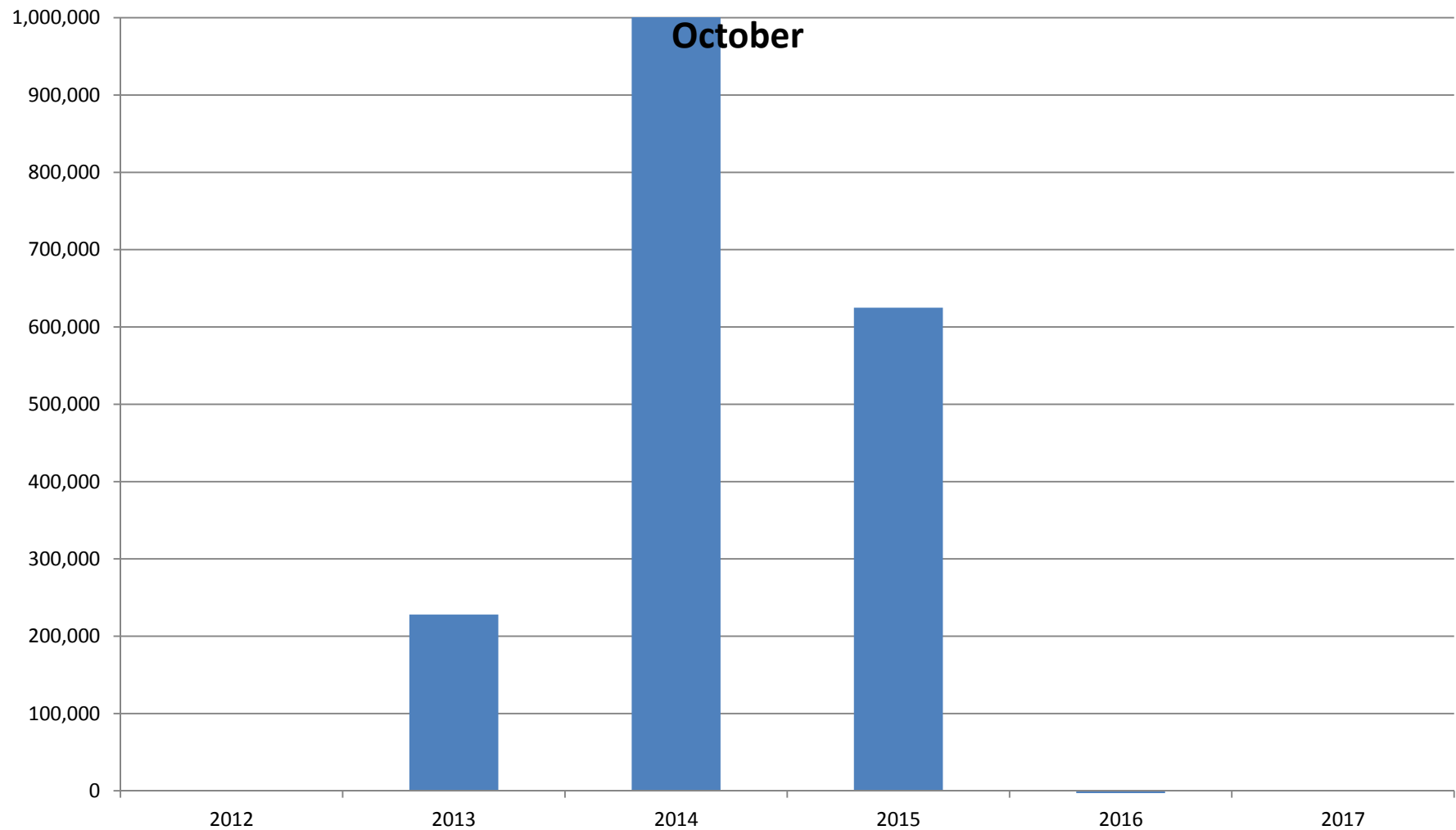


October Asset Report

	Most Recent			Above / (below)	Percent Difference	
	Actual	Forecast	Budget	Forecast	Above / (below)	
Revenue	925,677	1,634,484	6,555,703	(708,808)	-43%	
VOM	880,839	1,918,636	6,034,926	(1,037,797)	-54%	
Fixed	1,037,693	827,695	924,030	209,998	25%	
Projects	133,304	131,250	233,750	2,054	2%	
A&G	191,456	200,538	200,538	(9,082)	-5%	
Debt	2,199,759	2,203,105	2,203,105	(3,346)	-0.15%	
Net Cost	(3,517,374)	(3,646,740)	(3,040,646)	129,366	-4%	
Net Annual Cost		(36,022,940)	(31,768,945)	(\$4,253,995)		
				Above budget by 13.39%		



Historical Margins



Lodi Energy Center
Monthly Budget Analysis
Expenditures
Report Date: 11/30/2016

	July	August	September	October	November	December	January	February	March	April	May	June	Year	FY2017 Budget	Percent Used	Comments
VOM	2,309,456	1,310,062	1,067,517	880,839	1,773,633	2,701,252	2,794,349	1,323,792	226,153	299,453	0	726,946	15,413,452	57,881,217	26.6%	
Capacity Factor	36%	15%	13%	10%	19%	29%	26%	14%	2%	1%	0%	8%	15%	67%	21.6%	
Fuel Consumed (mmBTU, estimated)	552,311	236,335	193,710	159,185	267,095	415,439	372,551	187,464	33,743	16,104	0	113,998	2,547,935	11,341,990	22.5%	
Avg Fuel Cost (\$/mmBTU)	3.44	4.30	4.54	4.47	4.54	4.72	4.77	4.78	4.70	4.48	0.00	4.42	4.35	3.89	111.9%	
Power Produced (MWHr, estimated)	76,008	31,654	25,598	20,635	38,992	60,648	54,387	27,367	4,926	2,351	0	16,642	359,208	1,655,765	21.7%	
Avg Power Price (\$/MWHr)	39.13	49.26	48.59	44.86	50.11	52.10	51.02	52.16	50.45	45.56	0.00	47.38	47.78	41.58	114.9%	
Operations / Variable / LTSA	3,746	120,596	43,703	52,563	38,212	59,435	362,144	26,820	4,827	202,535	0	60,183	974,764	5,106,876	19.1%	
Fuel (estimated)	1,901,128	1,015,383	879,760	711,673	1,536,952	2,333,118	2,136,775	1,148,315	194,568	84,147	0	576,364	12,518,183	44,100,578	28.4%	
AB32 GHG Offset (estimated)	373,676	161,082	133,422	109,084	182,483	283,833	273,132	137,437	24,738	11,807	0	83,576	1,774,268	8,001,632	22.2%	
CA ISO Charges (estimated)	30,906	13,001	10,632	7,520	15,987	24,866	22,299	11,220	2,020	964	0	6,823	146,237	672,131	21.8%	
Routine O&M (Fixed)	726,101	760,849	900,424	1,037,693	804,490	1,482,695	927,695	727,695	827,695	827,695	1,765,144	827,695	11,615,872	11,088,367	104.8%	
Maintenance / Fixed	141,434	207,472	302,678	412,565	292,045	230,251	230,251	230,251	230,251	230,251	767,640	230,251	3,505,338	3,250,596	107.8%	Oct outage
Administration	8,597	10,027	2,573	6,262	18,889	18,889	18,889	18,889	18,889	18,889	18,889	18,889	178,568	226,663	78.8%	
Mandatory Costs	33,146	1,783	76,294	7,023	25,643	25,643	25,643	25,643	25,643	25,643	25,643	25,643	323,388	291,357	111.0%	
Inventory Stock	0	0	0	28,566	0	0	100,000	0	0	100,000	0	100,000	328,566	400,000	82.1%	
Labor	359,440	330,374	334,995	464,326	337,541	337,541	437,541	337,541	437,541	337,541	837,600	337,541	4,889,519	4,765,279	102.6%	
Insurance	72,853	73,333	73,253	8,320	15,000	755,000	0	0	0	0	0	0	997,759	770,000	129.6%	
Power Management & Settlements	110,631	110,631	110,631	110,631	110,631	110,631	110,631	110,631	110,631	110,631	110,631	110,631	1,327,568	1,327,566	100.0%	
Other Costs	0	27,229	0	0	4,742	4,742	4,742	4,742	4,742	4,742	4,742	4,742	65,166	56,906	114.5%	
Projects	135,218	228,984	131,250	133,304	131,250	131,250	131,250	131,250	131,250	131,250	131,250	131,250	1,678,756	2,805,000	59.8%	
Maintenance Reserve	131,250	131,250	131,250	131,250	131,250	131,250	131,250	131,250	131,250	131,250	131,250	131,250	1,575,000	1,575,000	100.0%	
Operations & Maintenance Projects	3,968	0	0	0	0	0	0	0	0	0	0	0	3,968	30,000	13.2%	
Capital Projects	0	97,734	0	2,054	0	0	0	0	0	0	0	0	99,788	1,200,000	8.3%	
A&G	137,131	111,701	370,459	191,456	200,538	200,538	200,538	200,538	200,538	200,538	200,538	200,538	2,415,049	2,406,453	100.4%	
Administrative & General (Allocated)	122,215	97,959	346,453	168,615	171,920	171,920	171,920	171,920	171,920	171,920	171,920	171,920	2,110,601	2,063,039	102.3%	
Generation Services Shared	14,916	13,742	24,006	22,841	28,618	28,618	28,618	28,618	28,618	28,618	28,618	28,618	304,448	343,414	88.7%	
Total O&M Cost	3,307,906	2,411,596	2,469,650	2,243,292	2,909,911	4,515,735	4,053,832	2,383,275	1,385,636	1,458,936	2,096,932	1,886,429	31,123,129	74,181,037	42.0%	
Debt Service	2,199,759	2,199,759	2,199,759	2,199,759	2,203,105	2,203,105	2,203,105	2,203,105	2,203,105	2,203,105	2,203,105	2,203,105	26,423,877	26,437,261	99.9%	
Revenues	7,334,108	1,560,351	1,243,718	925,677	1,953,813	3,159,949	2,774,824	1,427,542	248,497	107,103	0	788,484	21,524,066	68,849,353	31.3%	
ISO Energy Sales (estimated)	2,974,197	1,559,271	1,243,718	925,677	1,953,813	3,159,949	2,774,824	1,427,542	248,497	107,103	0	788,484	17,163,075	68,846,223	24.9%	
Other Income	4,359,911	1,080	0	0	0	0	0	0	0	0	0	0	4,360,991	3,130		
Net	\$1,826,443	(\$3,051,004)	(\$3,425,691)	(\$3,517,374)	(\$3,159,203)	(\$3,558,891)	(\$3,482,113)	(\$3,158,838)	(\$3,340,244)	(\$3,554,938)	(\$4,300,037)	(\$3,301,051)	(\$36,022,940)	(\$31,768,945)	Above budget by 13.39%	



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LEC Treasurer's Report

AGENDA ITEM NO.: 7

Date: December 12, 2016
To: LEC Project Participant Committee
Subject: Treasurer's Report for the Month Ended November 30, 2016

In compliance with NCPA policy and State of California Government Code Sections 53601 and 53646(b), the following monthly report is submitted for your information and acceptance.

Cash - At month end cash totaled \$42,159.

Investments - The carrying value of the LEC's investment portfolio totaled \$39,432,624 at month end. The current market value of the portfolio totaled \$39,316,242.

The overall portfolio had a combined weighted average interest rate of 0.687% with a bond equivalent yield (yield to maturity) of 0.651%. Investments with a maturity greater than one year totaled \$10,293,000. During the month \$9.8 million was invested.

Funds not required to meet annual cash flow are reinvested and separately reported as they occur.

Interest Rates - During the month, rates on 90 day T-Bills increased by 17 basis points (from 0.32% to 0.49%) and rates on one year T-Bills increased by 12 basis points (from 0.67% to 0.79%).

To the best of my knowledge and belief, all securities held by LEC as of November 30, 2016 are in compliance with the Agency's investment policy. There are adequate cash flow and investment maturities to meet next month's cash requirements.

Environmental Analysis

The Treasurer's report will not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 of the California Environmental Quality Act. No environmental review is necessary.

Respectfully submitted,

DONNA STEVENER
Assistant General Manager/CFO
Administrative Services/Finance

Prepared by:

SONDRA AINSWORTH
Treasurer-Controller

Attachments

LODI ENERGY CENTER

TREASURER'S REPORT

NOVEMBER 30, 2016

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Northern California Power Agency/Lodi Energy Center
Treasurer's Report
Cash & Investment Balance
November 30, 2016

	CASH	INVESTMENTS	TOTAL	PERCENT	INVESTMENTS at MARKET
MANDATORY FUNDS					
Debt Service Account	-	16,329,449	16,329,449	41.37%	16,328,678
Debt Service Reserve	-	11,976,476	11,976,476	30.34%	11,938,966
O & M Reserve	-	11,055,279	11,055,279	28.01%	10,977,178
	-	39,361,204	39,361,204	99.71%	39,244,822
ADDITIONAL PROJECT FUNDS					
GHG Cash Account	-	71,419	71,419	0.18%	71,419
Transmission Upgrade Escrow ¹	42,159	-	42,159	0.11%	-
Participant Deposit Account	-	1	1	0.00%	1
	\$ 42,159	\$ 39,432,624	\$ 39,474,783	100.00%	\$ 39,316,242

NOTE A -Investment amounts shown at book carrying value.

¹ Amount held in escrow

Northern California Power Agency/Lodi Energy Center
Treasurer's Report
Cash Activity Summary
November 30, 2016

	RECEIPTS			EXPENDITURES			CASH
	OPS/CONSTR	INTEREST (NOTE B)	INVESTMENTS (NOTE A)	OPS/CONSTR	INVESTMENTS (NOTE B)	INTER-COMPANY/ FUND TRANSFERS	INCREASE / (DECREASE)
MANDATORY FUNDS							
Debt Service Account	\$ -	\$ 66	\$ 4,401,000	\$ -	\$ (9,717,342)	\$ 5,316,276	\$ -
Debt Service Reserve	-	36,477	-	-	(36,477)	-	-
O & M Reserve	-	-	-	-	-	-	-
	-	36,543	4,401,000	-	(9,753,819)	5,316,276	-
ADDITIONAL PROJECT FUNDS							
GHG Cash Account	-	-	-	-	-	-	-
Transmission Upgrade Escrow ¹	-	4	-	-	-	-	4
Participant Deposit Account	-	-	-	-	-	-	-
TOTAL	\$ -	\$ 36,547	\$ 4,401,000	\$ -	\$ (9,753,819)	\$ 5,316,276	\$ 4

NOTE A -Investment amounts shown at book carrying value.

NOTE B -Net of accrued interest purchased on investments.

¹ Amount held in escrow

Northern California Power Agency/Lodi Energy Center
Treasurer's Report
Investment Activity Summary
November 30, 2016

	PURCHASED	SOLD OR MATURED	(NON-CASH) DISC/(PREM) AMORT	(NON-CASH) GAIN/(LOSS) ON SALE	INVESTMENTS	
					TRANSFERS	INCREASE / (DECREASE)
MANDATORY FUNDS						
Debt Service Account	9,717,342	(4,401,000)	2,667	-	-	5,319,009
Debt Service Reserve	36,477	-	(50)	-	-	36,427
O & M Reserve	-	-	(1,510)	-	-	(1,510)
	<u>\$ 9,753,819</u>	<u>\$ (4,401,000)</u>	<u>\$ 1,107</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 5,353,926</u>
ADDITIONAL PROJECT FUNDS						
GHG Cash Account	-	-	-	-	-	-
Participant Deposit Acct.	-	-	-	-	-	-
TOTAL	<u><u>\$ 9,753,819</u></u>	<u><u>\$ (4,401,000)</u></u>	<u><u>\$ 1,107</u></u>	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>	<u><u>\$ 5,353,926</u></u>

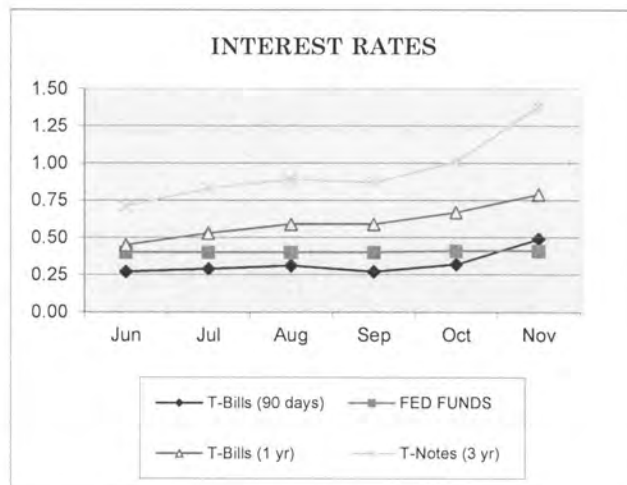
Less Non- Cash Activity	
Disc/(Prem) Amortization & Gain/(Loss) on Sale	(1,107)
Net Change in Investment --Before Non-Cash Activity	<u><u>\$ 5,352,819</u></u>

NOTE A -Investment amounts shown at book carrying value.

**Northern California Power Agency
Lodi Energy Center
Interest Rate/Yield Analysis
November 30, 2016**

	WEIGHTED AVERAGE INTEREST RATE	BOND EQUIVALENT YIELD
OVERALL COMBINED	0.687%	0.651%
Debt Service Account	0.197%	0.199%
Debt Service Reserve	0.938%	0.974%
O & M Reserve	1.140%	0.970%
GHG Cash Account	0.603%	0.603%

KEY INTEREST RATES		
	CURRENT	PRIOR YEAR
Fed Fds (Ovrnight)	0.41%	0.12%
T-Bills (90da.)	0.49%	0.17%
Agency Disc (90da.)	0.51%	0.23%
T-Bills (1yr.)	0.79%	0.51%
Agency Disc (1yr.)	0.71%	0.52%
T-Notes (3yr.)	1.38%	1.24%



Northern California Power Agency
Total Portfolio
Investment Maturities Analysis
November 30, 2016

Type	0-7 Days	8-90 Days	91-180 Days	181-270 Days	271-365 Days	1-5 Years	6-10 Years	Total	Percent
US Government Agencies	\$ 6,610	\$ -	\$ -	\$ 7,270	\$ -	\$ 10,293	\$ -	\$ 24,173	61.37%
US Bank Trust Money Market Commercial Paper	13,165							13,165	33.42%
Investment Trusts (LAIF)	2,044							2,044	5.19%
U.S.Treasury Market Acct.	9							9	0.02%
U.S.Treasury Bill								-	0.00%
Certificates of Deposit								-	0.00%
Total Dollars	\$ 21,828	\$0	\$0	\$7,270	\$0	\$10,293	\$0	\$ 39,391	100.00%
Total Percents	55.41%	0.00%	0.00%	18.46%	0.00%	26.13%	0.00%	100.00%	

Investments are shown at Face Value, in thousands.

NORTHERN CALIFORNIA POWER AGENCY

Detail Report Of Investments

APPENDIX

Note: **This appendix has been prepared to comply with
Government Code section 53646.**



Northern California Power Agency

Treasurer's Report

11/30/2016

LEC Issue #1 2010A DS Fund

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
US Bank Trust	USB	2,080,917	0.100	07/01/2013	2,080,917		0.100	2,080,917	SYS79003	79003	2,080,917
Federal Home Loan Ba	USBT	694,000	0.370	07/28/2016	693,101	12/01/2016	0.375	693,879	313384R68	26350	694,000
Federal Home Loan Ba	USBT	695,000	0.309	08/29/2016	694,437	12/01/2016	0.314	694,878	313384R68	26364	695,000
Federal National Mtg	USBT	694,000	0.340	07/11/2016	693,063	12/01/2016	0.345	694,000	313588R64	26342	694,000
Fund Total and Average		\$ 4,163,917	0.220		\$ 4,161,518	0	0.223	\$ 4,163,674			\$ 4,163,917

LEC Issue #1 2010B DS Fund

US Bank Trust	USB	4,278,984	0.100	07/01/2013	4,278,984		0.100	4,278,984	SYS79004	79004	4,278,984
Federal Home Loan Ba	USBT	726,000	0.370	07/28/2016	725,080	12/01/2016	0.375	725,873	313384R68	26351	726,000
Federal Home Loan Ba	USBT	725,000	0.310	08/29/2016	724,413	12/01/2016	0.314	724,873	313384R68	26365	725,000
Federal National Mtg	USBT	727,000	0.339	07/11/2016	726,018	12/01/2016	0.345	727,000	313588R64	26343	727,000
Fund Total and Average		\$ 6,456,984	0.181		\$ 6,454,475	1	0.183	\$ 6,456,730			\$ 6,456,984

LEC Issue #2 2010A DS Fund

US Bank Trust	USB	1,302,816	0.100	07/01/2013	1,302,816		0.100	1,302,816	SYS79011	79011	1,302,816
Federal Home Loan Ba	USBT	435,000	0.370	07/28/2016	434,437	12/01/2016	0.375	434,924	313384R68	26352	435,000
Federal Home Loan Ba	USBT	434,000	0.309	08/29/2016	433,649	12/01/2016	0.314	433,924	313384R68	26366	434,000
Federal National Mtg	USBT	434,000	0.340	07/11/2016	433,414	12/01/2016	0.345	434,000	313588R64	26344	434,000
Fund Total and Average		\$ 2,605,816	0.220		\$ 2,604,316	0	0.223	\$ 2,605,664			\$ 2,605,816

LEC Issue #2 2010B DS Fund

US Bank Trust	USB	2,056,732	0.100	07/01/2013	2,056,732		0.100	2,056,732	SYS79012	79012	2,056,732
Federal Home Loan Ba	USBT	349,000	0.370	07/28/2016	348,548	12/01/2016	0.375	348,939	313384R68	26353	349,000
Federal Home Loan Ba	USBT	348,000	0.309	08/29/2016	347,718	12/01/2016	0.314	347,939	313384R68	26367	348,000
Federal National Mtg	USBT	349,000	0.340	07/11/2016	348,529	12/01/2016	0.345	349,000	313588R64	26345	349,000
Fund Total and Average		\$ 3,102,732	0.181		\$ 3,101,527	1	0.183	\$ 3,102,610			\$ 3,102,732
GRAND TOTALS:		\$ 16,329,449	0.197		\$ 16,321,836	1	0.199	\$ 16,328,678			\$ 16,328,449

*Bond Equivalent Yield to Maturity is shown based on a 365 day year to provide a basis for comparison between all types. Investments with less than 6 months to maturity use an approximate method, all others use an exact method.

Current Market Value is based on prices from Trustee/ Custodian Statements or bid prices from the Wall Street Journal as of 11/30/2016



Northern California Power Agency
Treasurer's Report
11/30/2016

LEC Issue #1 2010 DSR Fund

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
US Bank Trust	USB	95,275	0.100	07/01/2013	95,275		1	0.100	95,275	SYS79005	79005	95,275
Federal National Mtg	USB	4,170,000	0.875	05/30/2014	4,171,960	08/28/2017	270	0.977	4,171,001	3135GOMZ3	26136	4,170,448
Federal Farm Credit	USB	4,360,000	1.660	06/08/2016	4,360,000	05/25/2021	1,636	1.659	4,321,937	3133EGBZ7	26337	4,360,000
Fund Total and Average		\$ 8,625,275	1.263		\$ 8,627,235		957	1.313	\$ 8,568,213			\$ 8,625,723

LEC Iss#1 2010B BABS Subs Resv

US Bank Trust	USB	2,263,222	0.100	07/01/2013	2,263,222		1	0.100	2,263,222	SYS79006	79006	2,263,222
Fund Total and Average		\$ 2,263,222	0.100		\$ 2,263,222		1	0.100	\$ 2,263,222			\$ 2,263,222

LEC Issue #2 2010B DSR BABS

US Bank Trust	USB	1,087,531	0.100	07/01/2013	1,087,531		1	0.100	1,087,531	SYS79013	79013	1,087,531
Fund Total and Average		\$ 1,087,531	0.100		\$ 1,087,531		1	0.100	\$ 1,087,531			\$ 1,087,531
GRAND TOTALS:		\$ 11,976,028	0.938		\$ 11,977,988		690	0.974	\$ 11,938,966			\$ 11,976,476

*Bond Equivalent Yield to Maturity is shown based on a 365 day year to provide a basis for comparison between all types. Investments with less than 6 months to maturity use an approximate method, all others use an exact method.
Current Market Value is based on prices from Trustee/ Custodian Statements or bid prices from the Wall Street Journal as of 11/30/2016
Investment # 26337- FFCB - Callable on 5/25/17, then anytime

Northern California Power Agency
Treasurer's Report

11/30/2016

LEC O & M Reserve

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Local Agency Investm		1,972,548	0.602	07/01/2013	1,972,548		1	0.602	1,972,548	SYS70047	70047	1,972,548
Union Bank of Calif	UBOC	8,533	0.002	07/18/2013	8,533		1	0.002	8,533	SYS70041	70041	8,533
Federal Home Loan Ba	UBOC	3,100,000	0.625	06/27/2016	3,099,380	06/27/2017	208	0.645	3,096,838	3130A8LC5	26338	3,099,645
Federal National Mtg	UBOC	2,933,000	1.875	08/28/2015	2,998,142	02/19/2019	810	1.220	2,973,299	3135G0ZA4	26248	2,974,553
Federal National Mtg	UBOC	3,000,000	1.300	06/30/2016	3,000,000	06/30/2020	1,307	1.300	2,925,960	3136G3UJ2	26341	3,000,000
Fund Total and Average		\$ 11,014,081	1.140		\$ 11,078,603		631	0.970	\$ 10,977,178			\$ 11,055,279
GRAND TOTALS:		\$ 11,014,081	1.140		\$ 11,078,603		631	0.970	\$ 10,977,178			\$ 11,055,279

*Bond Equivalent Yield to Maturity is shown based on a 365 day year to provide a basis for comparison between all types. Investments with less than 6 months to maturity use an approximate method, all others use an exact method.

Current Market Value is based on prices from Trustee/ Custodian Statements or bid prices from the Wall Street Journal as of 11/30/2016
Investment # 26341- FNMA - Callable on 6/30/17 only



Northern California Power Agency
Treasurer's Report
11/30/2016

LEC GHG Auction Acct

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Local Agency Investm		71,419	0.602	07/01/2013	71,419		1	0.602	71,419	SYS70046	70046	71,419
Fund Total and Average		\$ 71,419	0.603		\$ 71,419		1	0.603	\$ 71,419			\$ 71,419
GRAND TOTALS:		\$ 71,419	0.603		\$ 71,419		1	0.603	\$ 71,419			\$ 71,419

*Bond Equivalent Yield to Maturity is shown based on a 365 day year to provide a basis for comparison between all types. Investments with less than 6 months to maturity use an approximate method, all others use an exact method.
Current Market Value is based on prices from Trustee/ Custodian Statements or bid prices from the Wall Street Journal as of 11/30/2016



Northern California Power Agency
Treasurer's Report
11/30/2016

LEC Construction Revolving

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Local Agency Investm		1	0.254	07/01/2013	1	1	1	0.254	1	SYS70040	70040	1
Fund Total and Average		\$ 1	0.254		\$ 1	1	1	0.254	\$ 1	1		\$ 1
GRAND TOTALS:		\$ 1	0.254		\$ 1	1	1	0.254	\$ 1	1.		\$ 1

*Bond Equivalent Yield to Maturity is shown based on a 365 day year to provide a basis for comparison between all types. Investments with less than 6 months to maturity use an approximate method, all others use an exact method.
Current Market Value is based on prices from Trustee/ Custodian Statements or bid prices from the Wall Street Journal as of 11/30/2016



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LEC Financial Reports

AGENDA ITEM NO: 8

Date: December 12, 2016

Subject: November 30, 2016 Financial Reports (Unaudited)

**NORTHERN CALIFORNIA POWER AGENCY
LODI ENERGY CENTER
STATEMENTS OF NET POSITION
UNAUDITED**

	November	
	2016	2015
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 71,419	\$ 71,066
Interest receivable	41,910	34,177
Inventory and supplies - at average cost	1,881,416	1,563,068
Prepaid insurance	128,333	13,886
Due from (to) Agency, net	10,326,128	19,512,083
TOTAL CURRENT ASSETS	12,449,206	21,194,280
RESTRICTED ASSETS		
Cash and cash equivalents	15,188,715	16,795,205
Investments	24,214,645	24,174,350
Interest receivable	11,181	49,479
TOTAL RESTRICTED ASSETS	39,414,541	41,019,034
ELECTRIC PLANT		
Electric plant in service	423,630,070	423,412,179
Less: accumulated depreciation	(58,420,103)	(43,817,114)
	365,209,967	379,595,065
Construction work-in-progress	102,031	91,177
TOTAL ELECTRIC PLANT	365,311,998	379,686,242
OTHER ASSETS		
Regulatory assets	19,989,370	17,543,679
TOTAL OTHER ASSETS	19,989,370	17,543,679
TOTAL ASSETS	\$ 437,165,115	\$ 459,443,235

**NORTHERN CALIFORNIA POWER AGENCY
LODI ENERGY CENTER
STATEMENTS OF NET POSITION
UNAUDITED**

	November	
	2016	2015
LIABILITIES & NET POSITION		
CURRENT LIABILITIES		
Accounts and retentions payable	\$ 509,467	\$ 1,632,324
Operating reserves	12,044,811	14,495,055
Current portion of long-term debt	9,950,000	9,480,000
Accrued interest payable	11,327,937	11,585,709
TOTAL CURRENT LIABILITIES	33,832,215	37,193,088
NON-CURRENT LIABILITIES		
Operating reserves and other deposits	1,715,391	5,491,128
Long-term debt, net	351,582,189	362,143,723
TOTAL NON-CURRENT LIABILITIES	353,297,580	367,634,851
TOTAL LIABILITIES	387,129,795	404,827,939
DEFERRED INFLOWS OF RESOURCES		
Regulatory credits	42,842,261	43,845,191
NET POSITION		
Invested in capital assets, net of related debt	(19,073,082)	(18,238,993)
Restricted	14,394,737	12,117,420
Unrestricted	11,871,404	16,891,678
TOTAL NET POSITION	7,193,059	10,770,105
TOTAL LIABILITIES AND NET POSITION	\$ 437,165,115	\$ 459,443,235

**NORTHERN CALIFORNIA POWER AGENCY
LODI ENERGY CENTER
STATEMENT OF REVENUES, EXPENSES
& CHANGES IN NET POSITION
UNAUDITED**

	Five Months Ended November	
	2016	2015
SALES FOR RESALE		
Participants	\$ 14,436,102	\$ 15,481,434
Other	8,314,231	23,750,511
TOTAL SALES FOR RESALE	22,750,333	39,231,945
OPERATING EXPENSES		
Operations	7,932,759	16,921,381
Depreciation	6,085,679	6,083,501
Purchased power	1,334,244	2,154,069
Maintenance	1,862,438	2,599,721
Administrative and general	1,536,025	1,622,063
Transmission	227,272	275,730
Intercompany (sales) purchases	96,140	87,475
TOTAL OPERATING EXPENSES	19,074,557	29,743,940
NET OPERATING REVENUES	3,675,776	9,488,005
OTHER REVENUES (EXPENSES)		
Interest expense	(6,633,294)	(6,765,393)
Interest income	66,121	140,731
Other	6,285,443	2,221,900
TOTAL OTHER REVENUES (EXPENSES)	(281,730)	(4,402,762)
FUTURE RECOVERABLE AMOUNTS	831,542	1,152,964
REFUNDS TO PARTICIPANTS	(14)	(93)
INCREASE IN NET POSITION	4,225,574	6,238,114
NET POSITION		
Beginning of year	2,967,485	4,531,991
End of period	\$ 7,193,059	\$ 10,770,105

**Lodi Energy Center
FY 2017 Operating Costs
As of November 30, 2016**

	Annual Budget	Actual	Remaining	YTD % Remaining	Notes
Routine O&M Costs					
Variable	\$ 5,106,876	\$ 852,058	\$ 4,254,818	83%	E
Fixed	3,250,596	1,695,658	1,554,938	48%	
Administration	226,663	32,437	194,226	86%	D
Mandatory Costs	291,357	146,382	144,975	50%	
Inventory Stock	400,000	32,456	367,544	92%	
Routine O&M Costs without Labor	9,275,492	2,758,991	6,516,501	70%	
Labor	4,765,279	1,827,904	2,937,375	62%	
Total Routine O&M Cost	14,040,771	4,586,895	9,453,876	67%	
Other Costs					
Fuel	44,100,578	4,764,289	39,336,289	89%	A
CA ISO Charges	672,131	227,272	444,859	66%	
CA ISO Purchased Energy	1,702,141	1,334,244	367,897	22%	C
Debt Service	26,437,261	11,001,306	15,435,955	58%	
Insurance	770,000	300,148	469,852	61%	
Other Costs	56,906	33,789	23,117	41%	
Generation Services Shared	343,414	96,140	247,274	72%	
Administrative & General (Allocated)	2,063,039	669,091	1,393,948	68%	
Power Management Allocated Costs	1,327,566	553,153	774,413	58%	
Total O&M Cost	91,513,807	23,566,327	67,947,480	74%	
Projects					
Operations & Maintenance	30,000	3,968	26,032	87%	
Capital	1,200,000	168,488	1,031,512	86%	
Maintenance Reserve	1,575,000	656,250	918,750	58%	
Total Projects	2,805,000	828,706	1,976,294	70%	
Annual Cost	94,318,807	24,395,033	69,923,774	74%	
Less: Third Party Revenue					
Interest Income	44,489	80,244	(35,755)	0%	B
ISO Energy Sales	68,846,223	8,155,049	60,691,174	88%	
Ancillary Services Sales	1,302,829	159,182	1,143,647	88%	
Other Income	3,130	4,361,056	(4,357,926)	0%	
	70,196,671	12,755,531	57,441,140	82%	
Net Annual Cost to Participants	\$ 24,122,136	\$ 11,639,502	\$ 12,482,634	52%	

Total Variable Costs	51,581,726	7,177,863	44,403,863
Total Fixed Costs	42,737,081	17,217,170	25,519,911
	<u>\$ 94,318,807</u>	<u>\$ 24,395,033</u>	<u>\$ 69,923,774</u>

Net Cumulative Generation (MWh)	1,655,765	171,381
Total O&M Cost Per MWh	\$ 55.27	\$ 137.51
Net Annual Cost Per MWh	\$ 14.57	\$ 67.92

Footnotes:

General - During the month, there were 21 days when the plant was available but did not run for economic reasons.

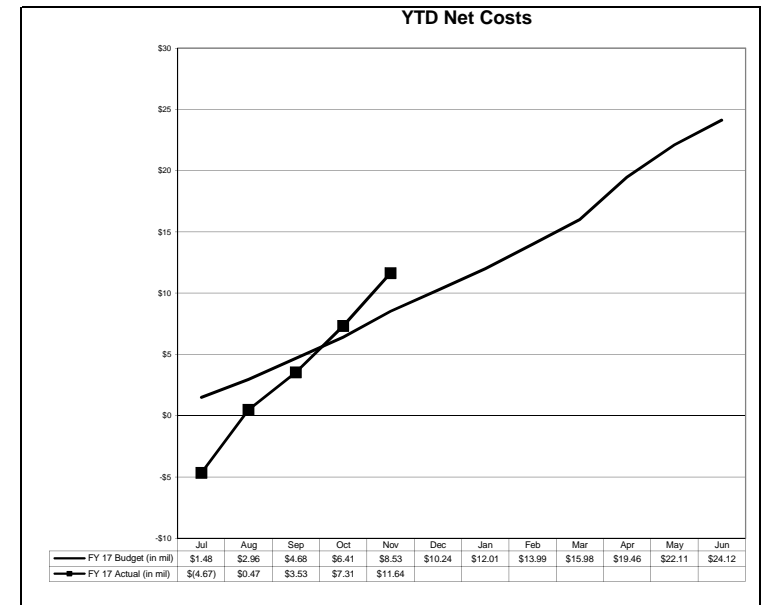
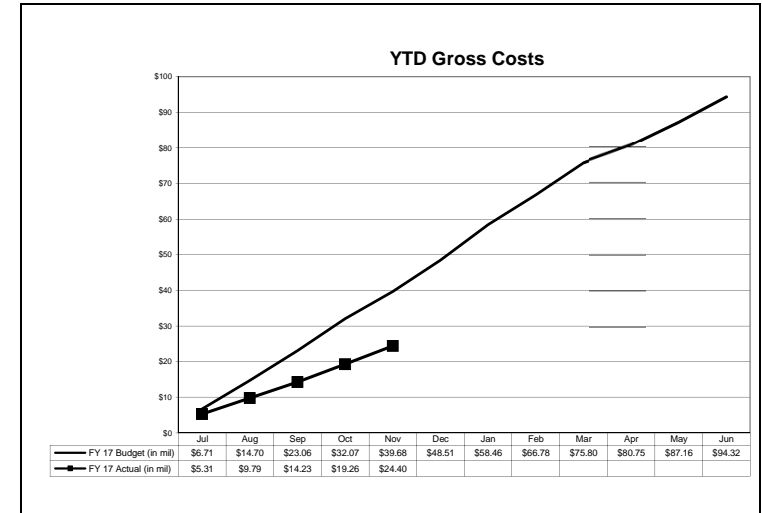
A - Higher than budgeted costs due to CA ISO real time settlement resulting in additional market purchases by NCPA and for Participants purchasing energy from CA ISO using LEC as the SC.

B - Other Income includes PG&E mandated CPUC refund.

C - Payments for annual bank trust fees -costs projected to normalize for remainder of fiscal year.

D - Payment for annual permit fees at Air Resources Board - costs projected to normalize for remainder of fiscal year.

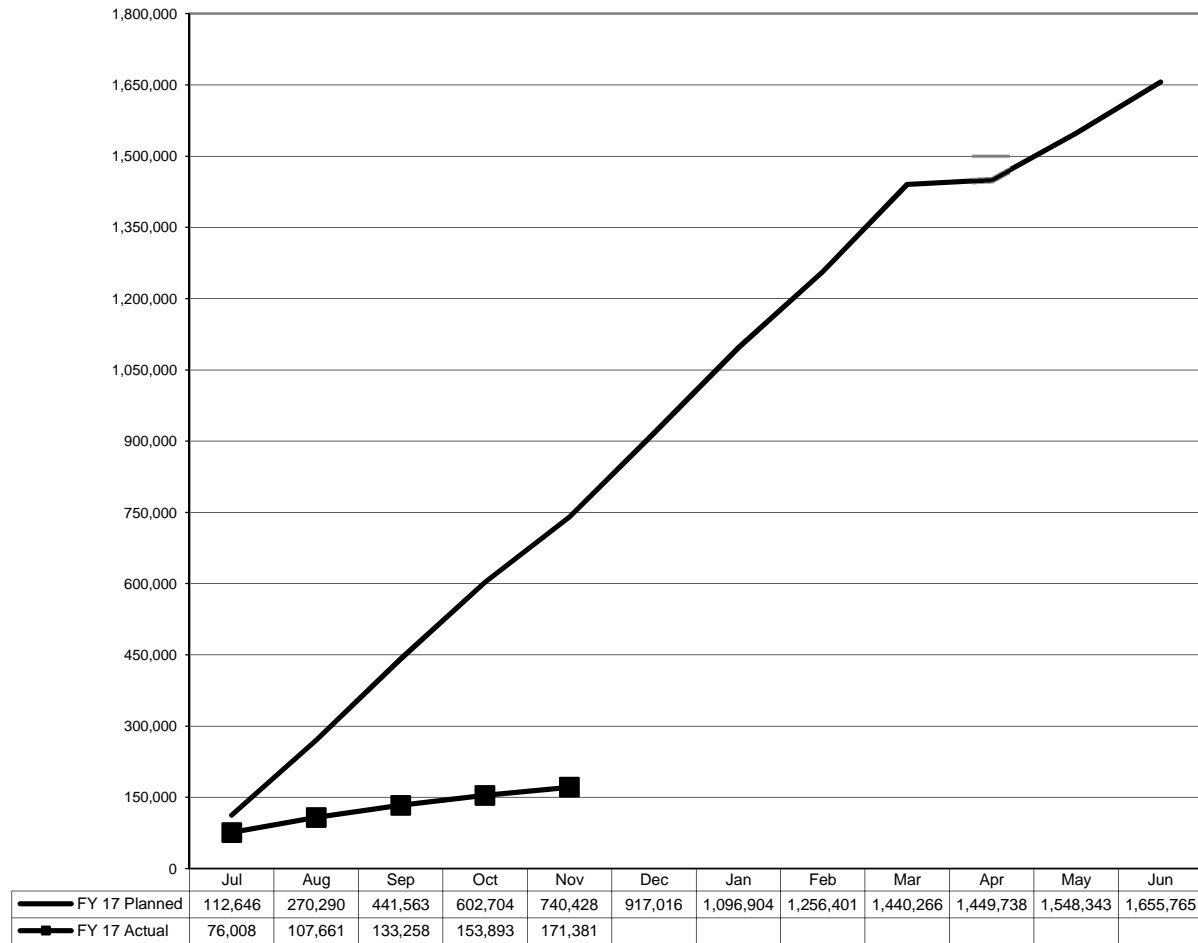
E - Unplanned payment for cleaning of HRSG tubes, CO catalyst and SCR catalyst related to the HRSG Stack Stratification Correction Project.



Annual Budget LEC Generation Analysis Planned vs. Actual FY 2017

In MWh

Lodi Energy Center





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LEC GHG Reports

AGENDA ITEM NO.: 9

Date: December 7, 2016

Subject: GHG Reports (excerpted from monthly ARB)

2013 NCPA All Resources Bill LEC GHG Compliance Instrument Detail Report
for the Lodi Energy Center

IDENTIFIER	Actual													Compliance Year 2013 Total
	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Energy (MWh)	0	82,787	101,925	128,167	134,284	32,545	80,153	122,492	94,615	92,091	98,739	105,078	138,068	1,210,944
Gas Schedule (MMBtu)	0	593,484	723,038	894,657	952,529	229,724	579,650	870,331	673,965	650,250	692,396	738,008	965,292	8,563,324
Emissions Factor (MT/MMBtu)	0	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	
HVAC/Water Heater (MT)													86,000	
Monthly MT Emissions (MT)	0	32,027	39,019	48,280	51,403	12,397	31,281	46,967	36,371	35,091	37,365	39,827	52,178	462,206
Cumulative MT Obligation (MT)	0	32,027	71,046	119,326	170,730	183,127	214,407	261,375	297,745	332,836	370,201	410,028	462,206	462,206
Compliance Instrument Participant Transfers (to LEC)														
Auction Allowances	92,695	5,350	0	13,644	105,000	50,632	30,628	1,600	102,200	12,594	0	0	46,290	460,633
Secondary Market Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Sale Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsets	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Compliance Instrument Participant Transfers (MT)	92,695	5,350	0	13,644	105,000	50,632	30,628	1,600	102,200	12,594	0	0	46,290	460,633
NCPA Compliance Instrument Purchases (for LEC)														
Auction Purchases	47,000	0	0	0	0	0	0	0	0	0	0	0	0	47,000
Secondary Market Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Sale Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Offset Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total NCPA Compliance Instrument Purchases (MT)	47,000	0	0	0	0	0	0	0	0	0	0	0	0	47,000
Compliance Instruments Surrendered to CARB (MT)	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Monthly Activity (MT)	139,695	5,350	0	13,644	105,000	50,632	30,628	1,600	102,200	12,594	0	0	46,290	507,633
Cumulative MT Account Balance [MTA] (MT)	139,695	145,045	145,045	158,689	263,689	314,321	344,949	346,549	448,749	461,343	461,343	461,343	507,633	507,633
MTA Shortfall (MT)	(139,695)	(113,018)	(73,999)	(39,363)	(92,959)	(131,194)	(130,542)	(85,174)	(151,004)	(128,507)	(91,142)	(51,315)	(45,427)	(45,427)

2014 NCPA All Resources Bill LEC GHG Compliance Instrument Detail Report for the Lodi Energy Center													
IDENTIFIER	Actual												Compliance Year 2014
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	Total
Energy (MWh)	136,604	156,089	120,489	55,378	71,210	51,037	118,473	69,006	178,831	197,715	51,636	106,338	1,312,806
Gas Schedule (MMBtu)	951,700	1,092,730	858,805	391,272	512,068	371,695	836,762	496,327	1,251,547	1,371,546	372,826	759,691	9,266,969
Emissions Factor (MT/MMBtu)	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054
HVAC/Water Heater (MT)												173,000	
Monthly MT Emissions (MT)	51,358	58,969	46,345	21,115	27,634	20,059	45,156	26,784	67,540	74,015	20,120	41,170	500,265
Cumulative MT Obligation (MT)	513,564	572,533	618,879	639,994	667,628	687,686	732,842	759,626	827,166	901,181	782,385	823,555	823,555
Compliance Instrument Participant Transfers (to LEC)													
Auction Allowances	102,347	50,000	48,066	25,000	1,290	138,448	0	0	13,586	50,520	100,350	350	529,957
Secondary Market Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Sale Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsets	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Compliance Instrument Participant Transfers (MT)	102,347	50,000	48,066	25,000	1,290	138,448	0	0	13,586	50,520	100,350	350	529,957
NCPA Compliance Instrument Purchases (for LEC)													
Auction Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Secondary Market Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Sale Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Offset Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Total NCPA Compliance Instrument Purchases (MT)	0	0	0	0	0	0	0	0	0	0	0	0	0
Compliance Instruments Surrendered to CARR (MT)	0	0	0	0	0	0	0	0	0	0	138,916	0	138,916
Total Monthly Activity (MT)	102,347	50,000	48,066	25,000	1,290	138,448	0	0	13,586	50,520	100,350	350	529,957
Cumulative MT Account Balance [MTA] (MT)	609,980	659,980	708,046	733,046	734,336	872,784	872,784	872,784	886,370	936,890	898,324	898,674	898,674
MTA Shortfall (MT)	(96,416)	(87,447)	(89,167)	(93,052)	(66,708)	(185,098)	(139,942)	(113,158)	(59,204)	(35,709)	(115,939)	(75,119)	(75,119)

	2015 NCPA All Resources Bill LEC GHG Compliance Instrument Detail Report for the Lodi Energy Center												
	Actual												Compliance Year 2015
IDENTIFIER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	Total
Energy (MWh)	196,019	151,600	184,507	181,244	91,067	142,275	103,883	137,266	131,608	165,737	75,231	131,779	1,692,216
Gas Schedule (MMBtu)	1,368,474	1,073,330	1,299,294	1,269,481	646,027	1,009,450	740,553	971,283	927,730	1,171,129	541,136	940,340	11,958,227
Emissions Factor (MT/MMBtu)	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	
HVAC/Water Heater (MT)													
Monthly MT Emissions (MT)	73,850	57,922	70,116	68,508	34,863	54,475	39,964	52,415	50,065	63,200	29,202	50,745	645,326
Cumulative MT Obligation (MT)	897,404	955,327	1,025,443	1,093,951	1,128,814	1,183,288	1,223,252	1,275,668	1,325,733	1,388,933	592,071	642,816	642,816
Compliance Instrument Participant Transfers (to LEC)													
Auction Allowances	41,342	250	250,100	15,000	86,000	107,327	104,000	0	0	58,201	375	200	662,795
Secondary Market Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Sale Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsets	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Compliance Instrument Participant Transfers (MT)	41,342	250	250,100	15,000	86,000	107,327	104,000	0	0	58,201	375	200	662,795
NCPA Compliance Instrument Purchases (for LEC)													
Auction Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Secondary Market Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Sale Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Offset Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Total NCPA Compliance Instrument Purchases (MT)	0	0	0	0	0	0	0	0	0	0	0	0	0
Compliance Instruments Surrendered to CARB (MT)	0	0	0	0	0	0	0	0	0	0	826,064	0	826,064
Total Monthly Activity (MT)	41,342	250	250,100	15,000	86,000	107,327	104,000	0	0	58,201	375	200	662,795
Cumulative MT Account Balance [MTA] (MT)	940,016	940,266	1,190,366	1,205,366	1,291,366	1,398,693	1,502,693	1,502,693	1,502,693	1,560,894	735,205	735,405	735,405
MTA Shortfall (MT)	(42,612)	15,061	(164,923)	(111,415)	(162,552)	(215,405)	(279,441)	(227,025)	(176,960)	(171,961)	(143,134)	(92,589)	(92,589)

	2016 NCPA All Resources Bill LEC GHG Compliance Instrument Detail Report for the Lodi Energy Center												
	Actual										Estimated		Compliance Year 2016
IDENTIFIER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	Total
Energy (MWh)	97,230	27,160	91,578	45,437	3,423	66,596	76,008	31,653	25,597	20,636	35,093	54,583	574,993
Gas Schedule (MMBtu)	695,120	194,179	678,033	339,504	27,754	485,792	547,510	234,782	192,679	158,835	252,668	392,999	4,199,855
Emissions Factor (MT/MMBtu)	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	0.054	
HVAC/Water Heater (MT)													
Monthly MT Emissions (MT)	37,512	10,479	36,590	18,321	1,498	26,216	29,546	12,670	10,398	8,572	13,635	21,208	226,645
Cumulative MT Obligation (MT)	680,329	690,807	727,398	745,719	747,217	773,432	802,979	815,649	826,047	834,618	848,253	869,462	869,462
Compliance Instrument Participant Transfers (to LEC)													
Auction Allowances	211,481	0	2,500	31,000	0	41,000	0	56,600	0	0	0	0	342,581
Secondary Market Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Sale Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0
Offsets	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Compliance Instrument Participant Transfers (MT)	211,481	0	2,500	31,000	0	41,000	0	56,600	0	0	0	0	342,581
NCPA Compliance Instrument Purchases (for LEC)													
Auction Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Secondary Market Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve Sale Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Offset Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0
Total NCPA Compliance Instrument Purchases (MT)	0	0	0	0	0	0	0	0	0	0	0	0	0
Compliance Instruments Surrendered to CARB (MT)	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Monthly Activity (MT)	211,481	0	2,500	31,000	0	41,000	0	56,600	0	0	0	0	342,581
Cumulative MT Account Balance [MTA] (MT)	946,886	946,886	944,386	913,386	913,386	872,386	872,386	928,986	928,986	928,986	928,986	928,986	928,986
MTA Shortfall (MT)	(266,557)	(256,079)	(216,988)	(167,667)	(166,169)	(98,954)	(69,407)	(113,337)	(102,939)	(94,368)	(80,733)	(59,524)	(59,524)

	2017 NCPA All Resources Bill LEC GHG Compliance Instrument Detail Report for the Lodi Energy Center								
	Estimated						Compliance Year 2017	Cumulative Totals	
IDENTIFIER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	Total	Total	Source
Energy (MWh)	48,948	24,630	4,433	2,116	0	14,978	95,106	474,767	Forecast/Meter
Gas Schedule (MMBtu)	352,428	177,338	31,920	15,235	0	107,840	684,761	3,360,105	Forecast/Meter
Emissions Factor (MT/MMBtu)	0.054	0.054	0.054	0.054	0.054	0.054			MARS
HVAC/Water Heater (MT)									
Monthly MT Emissions (MT)	19,019	9,570	1,723	822	0	5,820	36,953	1,871,395	derived
Cumulative MT Obligation (MT)	888,480	898,051	899,773	900,595	900,595	906,415	906,415	3,704,454	derived
Compliance Instrument Participant Transfers (to LEC)									
Auction Allowances	0	0	0	0	0	0	0	1,995,966	CITSS
Secondary Market Allowances	0	0	0	0	0	0	0	0	CITSS
Reserve Sale Allowances	0	0	0	0	0	0	0	0	CITSS
Offsets	0	0	0	0	0	0	0	0	CITSS
Total Compliance Instrument Participant Transfers (MT)	0	0	0	0	0	0	0	1,995,966	
NCPA Compliance Instrument Purchases (for LEC)								0	
Auction Purchases	0	0	0	0	0	0	0	47,000	CITSS
Secondary Market Purchases	0	0	0	0	0	0	0	0	CITSS
Reserve Sale Purchases	0	0	0	0	0	0	0	0	CITSS
Offset Purchases	0	0	0	0	0	0	0	0	CITSS
Total NCPA Compliance Instrument Purchases (MT)	0	0	0	0	0	0	0	47,000	
Compliance Instruments Surrendered to CARB (MT)	0	0	0	0	0	0	0	964,980	CITSS
Total Monthly Activity (MT)	0	0	0	0	0	0	0	2,457,334	derived
Cumulative MT Account Balance [MTA] (MT)	928,986	928,986	928,986	928,986	928,986	928,986	928,986	928,986	derived
MTA Shortfall (MT)	(40,506)	(30,935)	(29,213)	(28,391)	(28,391)	(22,571)	(22,571)		derived

Forecast has been updated through June 2016

NCPA All Resources Bill LEC GHG Obligation Detail Report (Cumulative) December 2016															
IDENTIFIER	AZUSA	BART	BIGGS	CDWR	GRI	HEA	LOD	LOM	MID	PLU	PWRPA	SNCL	UKI	TOTAL	Charge Code
Allocation Percentages															
Generation Entitlement Share %	2.7857%	6.6000%	0.2679%	33.5000%	1.9643%	1.6428%	9.5000%	2.0357%	10.7143%	0.7857%	2.6679%	25.7500%	1.7857%	100%	
Obligation Accounts															
Current MT Compliance Obligation (MTO) Balance (MT)	24,283	57,533	2,336	292,023	17,123	14,321	81,822	17,697	93,398	6,848	23,256	224,466	18,047	873,152	
Current MT Compliance Instrument Account (MTA) Balance (MT)	29,969	70,754	3,643	333,572	24,694	20,383	112,691	32,078	114,878	7,782	28,609	274,215	22,990	1,076,258	
MTA Shortfall (MT)	(5,686)	(13,221)	(1,307)	(41,549)	(7,571)	(6,062)	(30,869)	(14,382)	(21,480)	(934)	(5,353)	(49,749)	(4,943)	(203,106)	MTA SHORTFALL
Monthly GHG Price \$/MT	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89	12.89	MTA SHORTFALL
GHG Minimum Cash Compliance Obligation (\$)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MTA SHORTFALL
Current Month CCA Balance (\$)*	60,991	0	143	0	1,103	4,780	755	0	0	0	0	0	2,652	70,424	CCA BALANCE
Net GHG Obligation (\$)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NET GHG OBLIG

* The Current Month CCA Balance (\$) consists of the current cash balance plus any outstanding balance of Net GHG Obligation (\$) billed but not yet received.



Lodi Energy Center Project Participant Committee

Staff Report

AGENDA ITEM NO.: 10

Date: December 6, 2016
Meeting Date: December 12, 2016
To: Lodi Energy Center Project Participant Committee
Subject: Nalco Company Water and Process Services (Nalco Company LLC) – First Amendment to the existing Five Year Multi-Task General Services Agreement; Applicable to all facilities owned and/or operated by NCPA.

Proposal

Staff recommends approval of the First Amendment with Nalco Company Water and Process Services (Nalco Company LLC) for increasing the not to exceed amount from \$1,000,000 to \$2,000,000 and revise the scope of work to include all facilities owned and/or operated by NCPA.

Background

On February 26, 2015 NCPA entered into a five year Multi-Task General Services Agreement with Nalco Company LLC for specialty chemicals and services as is needed at the various plant locations from time to time. Nalco Company LLC is a provider of these specialty chemicals and services. This amendment will increase the not to exceed amount of the agreement from \$1,000,000 to \$2,000,000 and will expand the scope of work to allow for use at any facility owned and/or operated by the Agency. Exhibit B will be modified to include language on pricing for services at the additional Agency locations.

Selection Process

This five year contract does not commit NCPA to any expenditure of funds. When these services are required, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA has entered into enabling agreements with CellMark USA, LLC, Univar and GE Betz for similar services. NCPA will seek bids from as many qualified providers as possible and enter into additional enabling agreements as needed. The bid is awarded to the lowest cost provider. NCPA will issue purchase orders based on cost and availability of the services needed at the time the service is required.

Fiscal Impact

Upon execution, the total cost of the agreement is not-to-exceed \$2,000,000 over five years to be used out of NCPA approved budgets as services are rendered. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures.

Environmental Analysis

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a “project” for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

Submitted by:

KEN SPEER
Assistant General Manager
Generation Services

Attachments: (2)

- First Amendment to Multi-Task General Services Agreement with Nalco Company LLC
- Multi-Task General Services Agreement with Nalco Company LLC



**FIRST AMENDMENT TO MULTI-TASK GENERAL SERVICES AGREEMENT BETWEEN
THE NORTHERN CALIFORNIA POWER AGENCY AND
NALCO COMPANY WATER AND PROCESS SERVICES (NALCO COMPANY LLC)**

This First Amendment ("Amendment") to the Multi-Task General Services Agreement between the Northern California Power Agency ("Agency") and Nalco Company LLC (a.k.a. Nalco Company Water and Process Services) ("Contractor") (collectively referred to as "the Parties") dated as of February 26, 2015 (the "Agreement"), is entered into this ____ day of _____, 201__, with reference to the following facts:

WHEREAS, the Parties entered into the Agreement for Contractor to provide specialty chemicals and services to Agency's Lodi Energy Center and CT2 STIG facilities; and

WHEREAS, the Parties now desire to amend the Agreement to increase the total compensation authorized by the Agreement, modify the Scope of Work to include other Agency facilities, modify the Compensation Schedule and Hourly Fees, and make such other changes as set forth below; and

WHEREAS, in accordance with Section 8.2 of the Agreement, all changes to the Agreement must be in writing and signed by all the Parties

NOW, THEREFORE, the Parties agree as follows:

1. The first paragraph of Section 1 of the Agreement is replaced in its entirety to read as follows:

Section 1. SCOPE OF WORK. Subject to the terms and conditions set forth in this Agreement, Contractor is willing to provide to Agency the range of services and/or goods described in the Scope of Work attached hereto as Exhibits A and A-1 and incorporated herein ("Work").

2. The first paragraph of Section 2 of the Agreement is replaced in its entirety with the following:

Section 2. COMPENSATION. Agency hereby agrees to pay Contractor an amount **NOT TO EXCEED TWO MILLION** dollars (\$2,000,000) for the Work, which shall include all fees, costs, expenses and other reimbursables, as set forth in Contractor's fee schedule, attached hereto and incorporated herein as Exhibits B and B-1. This dollar amount is not a guarantee that Agency will pay that full amount to the Contractor, but is merely a limit of potential Agency expenditures under this Agreement.

3. The Agreement is amended to add the following as Section 4.2.4:

4.2.4 Pollution Insurance. If Contractor's Work involves its transporting hazardous materials, then Contractor shall obtain and maintain Contractors' Pollution Liability Insurance for sudden and accidental occurrences, which may be part of the Commercial General Liability Insurance of not less than two million dollars (\$2,000,000) for any one occurrence and not less than four million dollars (\$4,000,000) aggregate.

4. The Agreement is amended to add Exhibit A-1, (SCOPE OF WORK – Geothermal and Hydroelectric Facilities), attached hereto and incorporated herein.
5. The Agreement is amended to add Exhibit B-1 (COMPENSATION SCHEDULE AND HOURLY FEES – Geothermal and Hydroelectric Facilities), attached hereto and incorporated herein.
6. Except as specifically modified herein, no other provision in the Agreement is intended to be modified, and the Agreement, as amended, shall remain in full force and effect in its entirety.
7. This Amendment may be executed in multiple counterparts, each of which shall be an original and all of which together constitute one amendment to the Agreement.
8. Each signatory of this Amendment represents hereby that he or she has the authority to execute and deliver the same on behalf of the party hereto for which such signatory acts.

SIGNATURES ON FOLLOWING PAGE

The Parties have executed this Amendment as of the date signed by the Agency.

NORTHERN CALIFORNIA POWER AGENCY

NALCO COMPANY LLC

Date: _____

Date: _____

RANDY S. HOWARD, General Manager

MATTHEW J. ROCCA, District Manager

Attest:

Assistant Secretary of the Commission

Approved as to Form:

Ruthann G. Ziegler, Assistant General Counsel

2722325.6

EXHIBIT A-1

SCOPE OF WORK – Geothermal and Hydroelectric Facilities

Nalco Company LLC ("Contractor") shall provide specialty chemicals and services as requested by Agency at the Geothermal and Hydroelectric facilities, as follows:

Water Treatment Chemicals: Biocide, Packaged in a 2000 lb. Tote (265 gal.) #90005.61 and other chemicals as needed. Incidental to the provision of chemicals, Contractor may also provide complimentary analytical work including chemical analysis of substances and water cooling tower analysis.

Contractor shall also provide additional products not listed above as requested in writing by NCPA. Pricing for products not specified in Exhibit B-1 will be quoted by Contractor at the time the product is requested.

EXHIBIT B-1

COMPENSATION SCHEDULE AND HOURLY FEES – Geothermal and Hydroelectric Facilities

Compensation for all work, including hourly fees and expenses, shall not exceed the amount set forth in Section 2, above. The hourly rates and/or compensation break down and an estimated amount of expenses is as follows:

1. Nalco 90005 Algaecide (Biocide), Delivered in 265 gallon IBC Totes
Price = \$6.00 / LB
2. Nalco H-130 Macro-fouling Biocide, Delivered in 265 gall IBC Totes
Price = \$4.50 / LB

Price includes shipping/freight costs but does not include State Sales Tax.

After July 30, 2017, Contractor may adjust the above prices one (1) time annually, and any adjustment shall be effective only upon thirty (30) days prior written notice to Agency.



**MULTI-TASK
GENERAL SERVICES AGREEMENT BETWEEN
THE NORTHERN CALIFORNIA POWER AGENCY AND
NALCO COMPANY WATER AND PROCESS SERVICES**

This agreement for general services ("Agreement") is made by and between the Northern California Power Agency, a joint powers agency with its main office located at 651 Commerce Drive, Roseville, CA 95678-6420 ("Agency") and Nalco Company Water and Process Services, with its office located at 1601 W. DIEMER RD., NAPERVILLE, IL 60563 ("Contractor") (together sometimes referred to as the "Parties") as of 2/26/, 2015 ("Effective Date") in Roseville, California.

Section 1. SCOPE OF WORK. Subject to the terms and conditions set forth in this Agreement, Contractor is willing to provide to Agency the range of services and/or goods described in the Scope of Work attached hereto as Exhibit A and incorporated herein ("Work").

- 1.1 **Term of Agreement.** The term of this Agreement shall begin on the Effective Date and shall end when Contractor completes the Work, or no later than five (5) years from the date this Agreement was signed by Agency, whichever is shorter.
- 1.2 **Standard of Performance.** Contractor shall perform the Work in the manner and according to the standards observed by a competent practitioner of the profession in which Contractor is engaged and for which Contractor is providing the Work. Contractor represents that it is licensed, qualified and experienced to provide the Work set forth herein.
- 1.3 **Assignment of Personnel.** Contractor shall assign only competent personnel to perform the Work. In the event that Agency, in its sole discretion, at any time during the term of this Agreement, requests the reassignment of any such personnel, Contractor shall, immediately upon receiving written notice from Agency of such request, reassign such personnel.
- 1.4 **Request for Work to be Performed.** At such time that Agency determines to have Contractor perform Work under this Agreement, Agency shall issue a Purchase Order. The Purchase Order shall identify the specific Work to be performed ("Requested Work"), may include a not-to-exceed cap on monetary cap on Requested Work and all related expenditures authorized by that Purchase Order, and shall include a time by which the Requested Work shall be completed.

Section 2. COMPENSATION. Agency hereby agrees to pay Contractor an amount **NOT TO EXCEED ONE MILLION** dollars (\$1,000,000) for the Work, which shall include all fees, costs, expenses and other reimbursables, as set forth in Contractor's fee schedule, attached hereto and incorporated herein as Exhibit B. This dollar amount is not a guarantee that Agency will pay that full amount to the Contractor, but is merely a limit of potential Agency expenditures under this Agreement.

2.1 Invoices. Contractor shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain the following information:

- The beginning and ending dates of the billing period;
- Work performed;
- The Purchase Order number authorizing the Requested Work;
- At Agency's option, for each work item in each task, a copy of the applicable time entries or time sheets shall be submitted showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense, with supporting documentation;
- At Agency's option, the total number of hours of work performed under the Agreement by Contractor and each employee, agent, and subcontractor of Contractor performing work hereunder.

Invoices shall be sent to:

Northern California Power Agency
651 Commerce Drive
Roseville, California 95678
Attn: Accounts Payable

2.2 Monthly Payment. Agency shall make monthly payments, based on invoices received, for Work satisfactorily performed, and for authorized reimbursable costs incurred. Agency shall have thirty (30) days from the receipt of an invoice that complies with all of the requirements above to pay Contractor.

2.3 Payment of Taxes. Contractor is solely responsible for the payment of all federal, state and local taxes, including employment taxes, incurred under this Agreement.

2.4 Authorization to Perform Work. The Contractor is not authorized to perform any Work or incur any costs whatsoever under the terms of this Agreement until receipt of a Purchase Order from the Contract Administrator.

2.5 Timing for Submittal of Final Invoice. Contractor shall have ninety (90) days after completion of the Requested Work to submit its final invoice for the Requested Work. In the event Contractor fails to submit an invoice to Agency for any amounts due within the ninety (90) day period, Contractor is deemed to have waived its right to collect its final payment for the Requested Work from Agency.

Section 3. FACILITIES AND EQUIPMENT. Except as set forth herein, Contractor shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the Work.

Section 4. INSURANCE REQUIREMENTS. Before beginning any Work under this Agreement, Contractor, at its own cost and expense, shall procure the types and amounts of insurance listed below and shall maintain the types and amounts of insurance listed below for the period covered by this Agreement.

4.1 Workers' Compensation. If Contractor employs any person, Contractor shall maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Contractor with limits of not less than one million dollars (\$1,000,000.00) per accident.

4.2 Commercial General and Automobile Liability Insurance.

4.2.1 Commercial General Insurance. Contractor shall maintain commercial general liability insurance for the term of this Agreement, including products liability, covering any loss or liability, including the cost of defense of any action, for bodily injury, death, personal injury and broad form property damage which may arise out of the operations of Contractor. The policy shall provide a minimum limit of \$1,000,000 per occurrence/\$2,000,000 aggregate. Commercial general coverage shall be at least as broad as ISO Commercial General Liability form CG 0001 (current edition) on "an occurrence" basis covering comprehensive General Liability.

4.2.2 Automobile Liability. Contractor shall maintain automobile liability insurance form CA 0001 (current edition) for the term of this Agreement covering any loss or liability, including the cost of defense of any action, arising from the operation, maintenance or use of any vehicle (symbol 1), whether or not owned by the Contractor, on or off Agency premises. The policy shall provide a minimum limit of \$1,000,000 per each accident. This insurance shall provide contractual liability covering all motor vehicles and mobile equipment to the extent coverage may be excluded from general liability insurance.

4.2.3 General Liability/Umbrella Insurance. The coverage amounts set forth above may be met by a combination of underlying and umbrella policies as long as in combination the limits equal or exceed those stated.

4.3 Professional Liability Insurance.

4.4 All Policies Requirements.

4.4.1 Verification of coverage. Prior to beginning any work under this Agreement, Contractor shall provide Agency with (1) a Certificate of Insurance that demonstrates compliance with all applicable insurance provisions contained herein and (2) policy endorsements to the policies referenced in Section 4.2, adding the Agency as an additional insured to the extent of Contractor's indemnification

obligations and declaring such insurance primary in regard to work performed pursuant to this Agreement.

4.4.2 Notice of Reduction in or Cancellation of Coverage. Contractor shall provide at least thirty (30) days prior written notice to Agency of any cancellation of the policies referenced in Section 4.

4.4.3 [This section intentionally left blank.]

4.5 Waiver of Subrogation. Except to the extent prohibited by law or contrary to the indemnifications herein, Contractor agrees to waive subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Agency for all work performed by Contractor, its employees, agents and subcontractors.

4.6 Contractor's Obligation. Contractor shall be solely responsible for ensuring that all equipment, vehicles and other items utilized in the performance of Work are operated, provided or otherwise utilized in a manner that ensures they are and remain covered by the policies referenced in Section 4 during this Agreement. Contractor shall also ensure that all workers involved in the provision of Work are properly classified as employees, agents or independent contractors and are and remain covered by any and all workers' compensation insurance required by applicable law during this Agreement.

Section 5. INDEMNIFICATION AND CONTRACTOR'S RESPONSIBILITIES.

5.1 Effect of Insurance. Agency's acceptance of insurance certificates and endorsements required under this Agreement does not relieve Contractor from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Contractor acknowledges and agrees to the provisions of this section and that it is a material element of consideration.

5.2 Scope. Contractor shall indemnify, defend with counsel reasonably acceptable to the Agency, and hold harmless the Agency, and its officials, commissioners, officers, employees, agents and volunteers from and against all losses, liabilities, claims, demands, suits, actions, damages, expenses, penalties, fines, costs (including without limitation costs and fees of litigation), judgments and causes of action ("Liabilities") to the extent such Liabilities arise from the negligence, recklessness, or willful misconduct of, or violation of applicable laws by, Contractor, its officers, officials, agents, and employees, except to the extent such Liabilities are caused by the negligence of Agency. Notwithstanding, should this Agreement be construed as a construction agreement under

Civil Code section 2783, then the exception referenced above shall also be for the active negligence of Agency.

- 5.3 Notwithstanding anything to the contrary in this Agreement, Contractor's liability for any and all Liabilities under this Agreement shall not exceed the contract value under Section 2, or the amount of insurance under Section 4, whichever is greater.

Section 6. STATUS OF CONTRACTOR.

- 6.1 **Independent Contractor.** Contractor is an independent contractor and not an employee of Agency. Agency shall have the right to control Contractor only insofar as the results of Contractor's Work and assignment of personnel pursuant to Section 1; otherwise, Agency shall not have the right to control the means by which Contractor accomplishes Work rendered pursuant to this Agreement. Notwithstanding any other Agency, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing services under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any and all claims to, any compensation, benefit, or any incident of employment by Agency, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of Agency and entitlement to any contribution to be paid by Agency for employer contributions and/or employee contributions for PERS benefits.

Contractor shall indemnify, defend, and hold harmless Agency for the payment of any employee and/or employer contributions for PERS benefits on behalf of Contractor or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of Agency. Contractor and Agency acknowledge and agree that compensation paid by Agency to Contractor under this Agreement is based upon Contractor's estimated costs of providing the Work, including salaries and benefits of employees, agents and subcontractors of Contractor.

- 6.2 **Contractor Not Agent.** Except as Agency may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of Agency in any capacity whatsoever as an agent. Contractor shall have no authority, express or implied, pursuant to this Agreement to bind Agency to any obligation whatsoever.
- 6.3 **Assignment and Subcontracting.** This Agreement contemplates personal performance by Contractor and is based upon a determination of Contractor's unique professional competence, experience, and specialized professional knowledge. A substantial inducement to Agency for entering into this Agreement was and is the personal reputation and competence of Contractor. Contractor may not assign this Agreement or any interest therein without the prior written approval of the Agency. Contractor shall not subcontract any portion of the performance contemplated and provided for herein, other than to the subcontractors identified in Exhibit A, without prior written approval of the Agency. Where

written approval is granted by the Agency, Contractor shall supervise all work subcontracted by Contractor in performing the Work and shall be responsible for all work performed by a subcontractor as if Contractor itself had performed such Work. The subcontracting of any work to subcontractors shall not relieve Contractor from any of its obligations under this Agreement with respect to the Work and Contractor is obligated to ensure that any and all subcontractors performing any Work shall be fully insured in all respects and to the same extent as set forth under Section 4, to Agency's satisfaction.

- 6.4 Certification as to California Energy Commission.** If requested by the Agency, Contractor shall, at the same time it executes this Agreement, execute Exhibit C.

Section 7. LEGAL REQUIREMENTS.

- 7.1 Governing Law.** The laws of the State of California shall govern this Agreement.
- 7.2 Compliance with Applicable Laws.** Contractor and its subcontractors and agents, if any, shall comply with all laws applicable to the performance of the work hereunder.
- 7.3 Licenses and Permits.** Contractor represents and warrants to Agency that Contractor and its employees, agents, and subcontractors (if any) have and will maintain at their sole expense during the term of this Agreement all licenses, permits, qualifications, and approvals of whatever nature that are legally required to practice their respective professions.
- 7.4 Work Requiring Payment of Prevailing Wages.** If applicable, in accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which these services are to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in the California Labor Code shall be paid to all workers engaged in performing the services under this Agreement.

Section 8. TERMINATION AND MODIFICATION.

- 8.1 Termination.** Agency may cancel this Agreement at any time and without cause upon ten (10) days prior written notice to Contractor.

In the event of termination, Contractor shall be entitled to compensation for Work satisfactorily completed as of the effective date of termination; Agency, however, may condition payment of such compensation upon Contractor delivering to Agency any or all records or documents (as referenced in Section 9.1 hereof).

- 8.2 Amendments.** The Parties may amend this Agreement only by a writing signed by all the Parties.

- 8.3 **Survival.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between Agency and Contractor shall survive the termination of this Agreement.
- 8.4 **Options upon Breach by Contractor.** If Contractor materially breaches any of the terms of this Agreement, including but not limited to those set forth in Section 4, Agency's remedies shall include, but not be limited to, the following:
- 8.4.1 Immediately terminate the Agreement;
 - 8.4.2 Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Contractor pursuant to this Agreement;
 - 8.4.3 Retain a different Contractor to complete the Work not finished by Contractor; and/or
 - 8.4.4 Charge Contractor the difference between the costs to complete the Work that is unfinished at the time of breach and the amount that Agency would have paid Contractor pursuant hereto if Contractor had completed the Work.

Section 9. KEEPING AND STATUS OF RECORDS.

- 9.1 **Records Created as Part of Contractor's Performance.** All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Contractor prepares or obtains pursuant to this Agreement and that relate to the matters covered hereunder shall be the property of the Agency. Contractor hereby agrees to deliver those documents to the Agency upon termination of the Agreement. Agency and Contractor agree that, unless approved by Agency in writing, Contractor shall not release to any non-parties to this Agreement any data, plans, specifications, reports and other documents.
- 9.2 **Contractor's Books and Records.** Contractor shall maintain any and all records or other documents evidencing or relating to charges for Work or expenditures and disbursements charged to the Agency under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to the Contractor to this Agreement.
- 9.3 **Inspection and Audit of Records.** Any records or documents that this Agreement requires Contractor to maintain shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of the Agency. Under California Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars (\$10,000.00), the Agreement shall be subject to the examination and audit of the State Auditor, at the

request of Agency or as part of any audit of the Agency, for a period of three (3) years after final payment under the Agreement.

9.4 Confidential Information and Disclosure.

9.4.1 Confidential Information. The term "Confidential Information", as used herein, shall mean any and all confidential, proprietary, or trade secret information, whether written, recorded, electronic, oral or otherwise, where the Confidential Information is made available in a tangible medium of expression and marked in a prominent location as confidential, proprietary and/or trade secret information. Confidential Information shall not include information that: (a) was already known to the Receiving Party or is otherwise a matter of public knowledge, (b) was disclosed to Receiving Party by a third party without violating any confidentiality agreement, (c) was independently developed by Receiving Party without reverse engineering, as evidenced by written records thereof, or (d) was not marked as confidential Information in accordance with this section.

9.4.2 Non-Disclosure of Confidential Information. During the term of this Agreement, either party may disclose ("The Disclosing Party") confidential Information to the other party ("the Receiving Party"). The Receiving Party: (a) shall hold the Disclosing Party's Confidential Information in confidence; and (b) shall take all reasonable steps to prevent any unauthorized possession, use, copying, transfer or disclosure of such Confidential Information.

9.4.3 Permitted Disclosure. Notwithstanding the foregoing, the following disclosures of Confidential Information are allowed. Receiving Party shall endeavor to provide prior written notice to Disclosing Party of any permitted disclosure made pursuant to Section 9.4.3.2 or 9.4.3.3. Disclosing Party may seek a protective order, including without limitation, a temporary restraining order to prevent or contest such permitted disclosure; provided, however, that Disclosing Party shall seek such remedies at its sole expense. Neither party shall have any liability for such permitted disclosures:

9.4.3.1 Disclosure to employees, agents, Contractors, contractors, subcontractors or other representatives of Receiving Party that have a need to know in connection with this Agreement.

9.4.3.2 Disclosure in response to a valid order of a court, government or regulatory agency or as may otherwise be required by law; and

9.4.3.3 Disclosure by Agency in response to a request pursuant to the California Public Records Act.

- 9.4.4 Handling of Confidential Information.** Conclusion of Agreement. Receiving Party shall return to Disclosing Party or destroy Confidential Information (including all copies thereof) upon termination of this Agreement, if requested by Disclosing Party in writing. Notwithstanding the foregoing, the Receiving Party may retain copies of such Confidential Information, subject to the confidentiality provisions of this Agreement: (a) for archival purposes in its computer system; (b) in its legal department files; and (c) in files of Receiving Party's representatives where such copies are necessary to comply with applicable law. Party shall not disclose the Disclosing Party's Information to any person other than those of the Receiving Party's employees, agents, Contractors, contractors and subcontractors who have a need to know in connection with this Agreement.

Section 10. PROJECT SITE.

- 10.1 Operations at the Project Site.** Each Project site may include the power plant areas, all buildings, offices, and other locations where Work is to be performed, including any access roads. Contractor shall perform the Work in such a manner as to cause a minimum of interference with Agency's operations and the operations of other contractors at the Project site and to protect all persons and property thereon from damage or injury. Upon completion of the Work at a Project site, Contractor shall leave such Project site clean and free of all tools, equipment, waste materials and rubbish, stemming from or relating to Contractor's Work.
- 10.2 Contractor's Equipment, Tools, Supplies and Materials.** Contractor shall be solely responsible for the transportation, loading and unloading, and storage of any equipment, tools, supplies or materials required for performing the Work, whether owned, leased or rented. Agency will not be responsible for any such equipment, supplies or materials which may be lost, stolen or damaged or for any additional rental charges for such. Equipment, tools, supplies and materials left or stored at a Project site, with or without permission, is at Contractor's sole risk. Agency may assume that anything left on the Project site an unreasonable length of time after the Work is completed has been abandoned. Any transportation furnished by Agency shall be solely as an accommodation and Agency shall have no liability therefor. Contractor shall assume the risk and is solely responsible for its owned, non-owned and hired automobiles, trucks or other motorized vehicles as well as any equipment, tools, supplies, materials or other property which is utilized by Contractor on the Project site. All materials and supplies used by Contractor in the Work shall be new and in good condition.
- 10.3 Use of Agency Equipment.** Contractor shall assume the risk and is solely responsible for its use of any Agency owned equipment and property provided by Agency for the performance of Work.

Section 11. WARRANTY.

- 11.1 **Nature of Work.** Contractor warrants that all Work shall be free from defects in design and workmanship, and that Contractor shall perform all Work in accordance with applicable federal, state, and local laws, rules and regulations including engineering, construction and other codes and standards and prudent electrical utility standards, and in accordance with the terms of this Agreement. The water treatment program does not cover, and Contractor makes no warranties with respect to, water system biohazards from waterborne pathogens, including but not limited to Legionella bacteria. **CONTRACTOR DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**
- 11.2 **Deficiencies in Work.** Agency shall have the right to require, and Contractor shall be obligated at its own expense to perform, all further Work which may be required to correct any deficiencies which result from Contractor's failure to perform any Work in accordance with the standards required by this Agreement. If during the term of this Agreement or the one (1) year period following completion of the Work, any equipment, supplies or other materials or Work used or provided by Contractor under this Agreement fails due to defects in material and/or workmanship or other breach of this Agreement, Contractor shall, upon any reasonable written notice from Agency, replace or repair the same to Agency's satisfaction. Contractor's liability under this warranty is limited to replacement of nonconforming product, repair, or replacement of defective items, or, a refund of or invoice credit for the product price. Notwithstanding anything to the contrary in this Agreement, in no event shall either party be liable for any special, consequential or indirect damages. Contractor shall not be liable for any failure caused by Agency's failure to follow Contractor's written instructions.
- 11.3 **Assignment of Warranties.** Contractor hereby assigns to Agency all additional warranties, extended warranties, or benefits like warranties, such as insurance, provided by or reasonably obtainable from suppliers of equipment and material used in the Work.

Section 12. HEALTH AND SAFETY PROGRAMS. The Contractor shall establish, maintain, and enforce safe work practices, and implement an accident/incident prevention program intended to ensure safe and healthful operations under their direction. The program shall include all requisite components of such a program under Federal, State and local regulations and shall comply with all Agency site programs.

- 12.1 Contractor is responsible for acquiring job hazard assessments as necessary to safely perform the Work and provide a copy to Agency upon request.
- 12.2 Contractor is responsible for providing all employee health and safety training and personal protective equipment in accordance with potential hazards that may be encountered in performance of the Work and provide copies of the certified training

records upon request by Agency. Contractor shall be responsible for proper maintenance and/or disposal of their personal protective equipment and material handling equipment.

- 12.3** Contractor is responsible for ensuring that its lower-tier subcontractors are aware of and will comply with the requirements set forth herein.
- 12.4** Agency, or its representatives, may periodically monitor the safety performance of the Contractor performing the Work. Contractors and its subcontractors shall be required to comply with the safety and health obligations as established in the Agreement. Non-compliance with safety, health, or fire requirements may result in cessation of work activities, until items in non-compliance are corrected. It is also expressly acknowledged, understood and agreed that no payment shall be due from Agency to Contractor under this Agreement at any time when, or for any Work performed when, Contractor is not in full compliance with this Section 12.
- 12.5** Contractor shall immediately report any injuries to the Agency site safety representative. Additionally, the Contractor shall investigate and submit to the Agency site safety representative copies of all written accident reports, and coordinate with Agency if further investigation is requested.
- 12.6** Contractor shall take all reasonable steps and precautions to protect the health of its employees and other site personnel with regard to the Work. Contractor shall conduct occupational health monitoring and/or sampling to determine levels of exposure of its employees to hazardous or toxic substances or environmental conditions. Copies of any sampling results will be forwarded to the Agency site safety representative upon request.
- 12.7** Contractor shall develop a plan to properly handle and dispose of any hazardous wastes, if any, Contractor generates in performing the Work.
- 12.8** Contractor shall advise its employees and subcontractors that any employee, who jeopardizes his/her safety and health, or the safety and health of others, may be subject to actions including removal from Work.
- 12.9** Contractor shall, at the sole option of the Agency, develop and provide to the Agency a Hazardous Material Spill Response Plan that includes provisions for spill containment and clean-up, emergency contact information including regulatory agencies and spill sampling and analysis procedures. Hazardous Materials to include diesel fuel used for trucks owned or leased by the Contractor.

Section 13 MISCELLANEOUS PROVISIONS.

- 13.1 Attorneys' Fees.** If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which

that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.

- 13.2 Venue.** In the event that either party brings any action against the other under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.
- 13.3 Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.
- 13.4 No Implied Waiver of Breach.** The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.
- 13.5 Successors and Assigns.** The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the Parties.
- 13.6 Conflict of Interest.** Contractor may serve other clients, but none whose activities within the corporate limits of Agency or whose business, regardless of location, would place Contractor in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*
- Contractor shall not employ any Agency official in the work performed pursuant to this Agreement. No officer or employee of Agency shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 *et seq.*
- 13.7 Contract Administrator.** This Agreement shall be administered by Ken Speer, Assistant General Manager, or his/her designee, who shall act as the Agency's representative. All correspondence shall be directed to or through the representative.
- 13.8 Notices.** Any written notice to Contractor shall be sent to:

Nalco Company Water and Process Services
P. O. Box 188978
Sacramento, California 95818

Any written notice to Agency shall be sent to:

Randy S. Howard
General Manager
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

With a copy to:

Michael F. Dean
General Counsel
Northern California Power Agency
Meyers Nave
555 Capitol Mall, Suite 1200
Sacramento, CA 95814

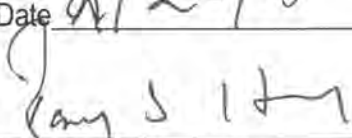
- 13.9 Professional Seal.** Where applicable in the determination of the Agency, the first page of a technical report, first page of design specifications, and each page of construction drawings shall be stamped/sealed and signed by the licensed professional responsible for the report/design preparation.
- 13.10 Integration; Incorporation.** This Agreement, including all the exhibits attached hereto, represents the entire and integrated agreement between Agency and Contractor and supersedes all prior negotiations, representations, or agreements, either written or oral. All exhibits attached hereto are incorporated by reference herein.
- 13.11 Alternative Dispute Resolution.** If any dispute arises between the Parties that cannot be settled after engaging in good faith negotiations, Agency and Contractor agree to resolve the dispute in accordance with the following:
- 13.11.1** Each party shall designate a senior management or executive level representative to negotiate any dispute;
 - 13.11.2** The representatives shall attempt, through good faith negotiations, to resolve the dispute by any means within their authority.
 - 13.11.3** If the issue remains unresolved after fifteen (15) days of good faith negotiations, the Parties shall attempt to resolve the disagreement by negotiation between legal counsel. If the above process fails, the Parties shall resolve any remaining disputes through mediation to expedite the resolution of the dispute.

- 13.11.4** The mediation process shall provide for the selection within fifteen (15) days by both Parties of a disinterested third person as mediator, shall be commenced within thirty (30) days and shall be concluded within fifteen (15) days from the commencement of the mediation.
- 13.11.5** The Parties shall equally bear the costs of any third party in any alternative dispute resolution process.
- 13.11.6** The alternative dispute resolution process is a material condition to this Agreement and must be exhausted as an administrative prior to either Party initiating legal action. This alternative dispute resolution process is not intended to nor shall be construed to change the time periods for filing a claim or action specified by Government Code §§ 900 *et seq.*
- 13.12 Controlling Provisions.** In the case of any conflict between the terms of this Agreement and the Exhibits hereto, and Contractor's Proposal (if any), the Agreement shall control. In the case of any conflict between the Exhibits hereto and the Contractor's Proposal, the Exhibits shall control.
- 13.13 Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.
- 13.14 Construction of Agreement.** Each party hereto has had an equivalent opportunity to participate in the drafting of the Agreement and/or to consult with legal counsel. Therefore, the usual construction of an agreement against the drafting party shall not apply hereto.
- 13.15 No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any non-signator third parties.

The Parties have executed this Agreement as of the date signed by the Agency.

NORTHERN CALIFORNIA POWER AGENCY

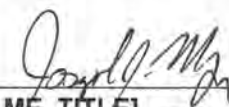
Date

8/26/15


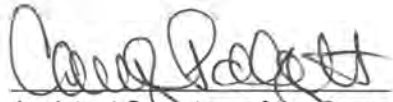
RANDY S. HOWARD, General Manager

NALCO COMPANY WATER AND PROCESS SERVICES

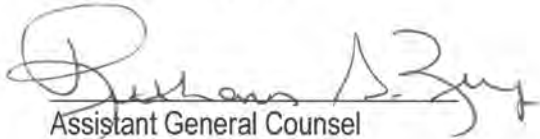
Date FEBRUARY 23, 2015


[NAME, TITLE] JOSEPH MAZUR
VICE PRESIDENT - MARKETING

Attest:



Assistant Secretary of the Commission
Approved as to Form:



Assistant General Counsel

EXHIBIT A

SCOPE OF WORK

Nalco Company Water and Process Services ("Contractor") shall provide specialty chemicals and services as requested by the Northern California Power Agency ("Agency").

1. Analytical
2. Service Plan
3. Specialty Chemical Supply

Details for each item can be found on the following pages.

1 Services and Equipment

1.1 Inspections and Sampling

The Contractor will be expected to inspect the Boiler and Water systems during each outage and provide a written report of each inspection. Photographic documentation of the inspections by video or still camera may be required. LEC may also require the use of a fiber optics boroscope.

The Contractor service representative shall sample all water and steam systems and provide a certified analysis each quarter or as required by LEC for special circumstances. The sample streams listed in Exhibit B shall be analyzed for complete anions and cations, pH, and conductivity. Results shall be maintained in an Excel or similar data base. The database shall be updated at least quarterly.

1.2 Corrosion and Deposition Monitoring

The proposed treatments must provide protection from corrosion and deposition, which can adversely impact power plant efficiency and equipment life. The acceptable corrosion rates at LEC are as follows:

Carbon Steel/Cast Iron (Tower Circulating Water)	< 3.0 Mils per year (MPY) if corrosion inhibitor is used
Stainless Steel (Tower Circulating Water)	< 0.1 MPY
Titanium (Tower Circulating Water)	< 0.1 MPY
Carbon Steel/Cast Iron (Closed Loop Cooling Water)	< 1.0 Mils per year (MPY)
Stainless Steel (Closed Loop Cooling Water)	< 0.1 MPY
Titanium (Closed Loop Cooling Water)	< 0.1 MPY
Copper and Copper Alloys (Closed Loop Cooling Water)	< 0.01 MPY

Two (2) corrosion coupon racks shall be provided for installation on the cooling tower circulating water and closed loop cooling water systems.

Additional corrosion coupon racks can be installed at other locations if recommended for supplemental monitoring. Comparable metallurgical coupons in each system monitored will be supplied and analyzed by the Contractor on a quarterly basis or more frequently as required by LEC for special circumstances.

1.3 Material Safety Data Sheets

LEC must be provided with a Material Safety Data Sheet (MSDS) for each product supplied. The MSDS will be kept on file at LEC. Chemical providers shall notify LEC of any changes, additions, or deletions on the MSDS prior to the shipment of any product following the change. Upon acceptance and approval, the new MSDS must precede product delivery by US Mail or accompany the product at the time of delivery. All product actives must be identified by its common chemical name, with the corresponding Chemical Abstract Service (CAS) number, in addition to the Contractor's identification on the respective MSDS.

1.4 Shipment and Storage of Chemicals

Freight charges shall be included in the cost to supply the proposed chemicals. LEC requests that treatment chemicals be supplied in reusable totes or drums where feasible. The base totes can be refilled by bulk truck or portable shuttle totes.

If drums or barrels are supplied, the Contractor shall provide for removal and/or disposal of the empty container from the site. Any NCPA name and address stenciled on the container shall be removed prior to the removal of any such container from this site. Failure to comply with this provision may result in the discontinuation of any contract or agreement between LEC and the Contractor.

All totes, drums, or pails must be clearly labeled with the Contractor ID and product name. The labels must be able to withstand the environment for the time the container is on site and in use. The Contractor shall perform an annual audit of all labels and placards to ensure that text is legible and current.

1.5 Service Plan

The costs for water treatment chemicals are important to a power plant's overall costs. Of equal importance to these costs is the quality of support from the Contractor. The plant considers specialty chemicals and services as an investment. Expert oversight must be provided to provide an acceptable return on the plant's investment. Service must include a plan to provide value-added expertise, insight, and support to ensure that the specified chemicals are used optimally.

Full-day service visits to the site are required at least once week. More frequent site visits may be required in order to meet the service requirements detailed later in this section.

1.6 Service and Reporting Requirements

The general requirements of Section 1.5 shall be documented in weekly Contractor service visits and subsequent reports. A detailed description of the required services and their frequency appears in Table 1-1 on the following page. The required reports appear in Table 1-2 later in this section.

Table 1-1: Required Services and Frequencies

Description	Service Plan Activity and Frequency
Risk management services focused on worker and environmental safety.	Meet annually with plant contact, review chemicals used and associated personnel and environmental exposure risks. Review MSDS.
Safety, Health, and Environmental communications and Material Safety Data Sheets as required to ensure safe application of the chemicals provided	Provide hard and soft copies of MSDS and Product Bulletins for any chemical proposed or used on site. Verify that all MSDS and Product Bulletins are the most recent versions. MSDS and Product Bulletins shall be updated at least annually. Provide electronic and hard copies of any other Safety, Health, and Environmental communications. Review and update such communications as necessary.
Product application specifications to ensure safe application of the chemicals provided	For each product, provide electronic and hard copies of a written description of proper product dosage, method to calculate or monitor dosage, any environmental limits on product application, and other information requested by the plant contact to ensure safe application of chemicals provided. Review and update product application data at least annually.
Emergency response during chemical transit, chemical spills, or other events impacting worker and environmental safety	Provide no less than two emergency contacts and no less than one 24-hour emergency response phone number to plant contact. Review and update contact information as necessary.
System survey describing chemical application points, water treatment processes and uses, and water flow diagrams	Provide a one-line diagram of the whole-plant water system labeling all major equipment and chemical injection points. Provide this information to the plant contact. Review and update system survey at least annually.
People survey describing plant contacts, responsible reporting parties, and Contractor contacts	Provide list to plant contact describing who receives reports and who is responsible for implementing recommendations. Update list as necessary or at least annually.

Description	Service Plan Activity and Frequency
<p>Program administration manual including general chemical information, general process information, information on specific chemicals used or proposed for use, troubleshooting and test procedures, chemical feed system information, and information required to support operation, maintenance, and installation of any Contractor-provided equipment</p>	<p>Provide a written Chemical Program Overview for each treated system including a Chemical Program Description for the system and a Chemical Product Description for each chemical used.</p> <p>Provide Feed System Data Table for each chemical feed system including the Chemical Name, Storage Tank Volume, Metering Pump Capacity, Chemical Density, and Chemical Injection Point Location.</p> <p>Provide Chemical Limits and Troubleshooting information for each system. Include a table listing each system's chemical parameters, their control limits, and the action levels associated with each control limit. Also include a brief description of each system's chemical parameters, what causes the parameter to change, and recommendations for corrective action based on the different action levels. For each system, provide a General Troubleshooting Table listing each chemical parameter, the common causes or sources of high or low readings, the corrective actions for high or low readings, and the consequences of high or low readings.</p> <p>A printed and electronic copy of the Chemical Limits and Troubleshooting information shall be provided to the plant contact. Information shall be reviewed and updated at least annually. Format shall be reviewed with the plant contact at least annually and updated as directed by the plant contact.</p> <p>Provide written and electronic versions of all Program Administration Manual data to the plant contact. Review and update at least annually.</p>
<p>Service plan describing the specific services to be performed during each visit.</p>	<p>The service plan is contained in this document. Any additions, deletions, or changes must be approved by the plant contact. Review this document with the plant contact and obtain plant contact signature at least quarterly (unless Low Service Level is selected, in which case review is performed annually). Both Contractor and the plant contact shall maintain copies of the signed document.</p>

Description	Service Plan Activity and Frequency
Written service reports for each site visit describing services performed, problems found, action taken, recommendations for plant action, and planned follow-up.	Service reports for all site visits will normally be provided in a single monthly report.
Business review performed at least annually describing the total value of all goods and services consumed, the estimated expenditures for the coming year, projects or project work completed with supporting data for any cost savings achieved as a result of this work, and technical and financial goals for the coming year.	Provide printed and electronic versions of the business review to plant contact. Review business review format with plant contact at least annually. Change or update as directed by plant contact.
Inspection of water and steam systems during operation or during outages with a written report detailing equipment status and recommendations.	Meet with plant contact at least monthly to determine the need for inspections in the following month. Review inspection report format with plant contact at least annually. Provide a written report of inspection results within four working weeks of the inspection.
Water and deposit analyses performed at Contractor off-site laboratories provided that such water and deposit analyses are required to verify the proper operation of Contractor-provided goods and services.	Obtain water samples from Contractor-treated systems if required. Obtain deposit samples from Contractor-treated systems, if required, as they're available during outages or upsets. Contractor is responsible for providing sample containers. Provide written analysis and sample results within four working weeks of sample date.
Metallographic analyses performed at Contractor off-site laboratories provided that such metallographic analyses are required to verify the proper operation of Contractor-provided goods and services.	Obtain samples from Contractor-treated systems, if required, as they're available during outages or upsets. Contractor is responsible for providing packaging and shipping recommendations. Provide written analysis and sample results within four working weeks of sample date.

Description	Service Plan Activity and Frequency
Laboratory procedures training to ensure proper performance of those chemical tests required to ensure proper application of Contractor-provided goods and services	Provide laboratory procedures training annually. Training shall consist of single a pre-scheduled laboratory procedures demonstration in which the Contractor representative shall meet with available plant operators to perform wet chemistry and demonstrate the proper wet test procedure to the operators for each wet test performed. Document persons trained, date, and time. Provide training records to plant contact in electronic and printed format.
Monitor and provide a written report of chemical consumption versus budget consumption for any Contractor-provided chemical.	<p>Utilize spreadsheet to report actual chemical consumption (pounds or gallons) and actual chemical cost for each month for each Contractor-provided product. The written report shall compare chemical usage versus consumption for each product. The written report shall describe the reasons for deviation from target usage and corrective actions required (if any) to restore chemical usage to targets.</p> <p>Printed and electronic report shall be provided to plant contact at least monthly.</p> <p>Review report format with plant contact at least quarterly. Update or change as directed by plant contact.</p>
Report on condition and operation of chemical storage, feed, and control equipment	<p>Visually inspect each chemical feed system and each chemical feed control system at least annually. Provide recommendations for feed and control system improvements. Identify necessary repairs or safety issues. Verify that MSDS are stored at, on, or near each chemical storage tank. Verify that tank labels and placards are legible and in good condition. Correct any deficiencies.</p> <p>Summarize findings in a written report to the plant contact.</p> <p>Review report format with plant contact at least annually. Update or change as directed by plant contact.</p>

Description	Service Plan Activity and Frequency
Provide monitoring, control, and corrective actions for plant water systems.	<p>Review logsheets and trends for all plant water streams or systems (provided that the data is available to Contractor). Provide an analysis of each system describing chemistry issues and concerns, recommendations for corrective action, recommendations for control improvements, and a discussion of relationships between chemical control parameters. This monitoring program shall include normalized monitoring of demin system reverse osmosis units. Contractor shall perform the normalization calculations and retain them in the same database used to retain other plant chemistry data.</p> <p>Printed and electronic report shall be provided to plant contact at least monthly. The report shall include trends and an analysis of control capability for each parameter (percent in control, for example) with recommendations for improvement for any parameter with less than 80% of readings within the target range.</p> <p>Review report format with plant contact at least quarterly. Update or change as directed by plant contact.</p>
Provide detailed chemistry evaluation and recommendations for plant water systems	<p>Perform a detailed review and analysis of each system's chemical treatment program. Review the treatment program design, purpose, and efficacy. Compare chemical treatment program goals to results. Evaluate and propose alternative chemistries, including cost analysis.</p> <p>Printed and electronic report shall be provided to plant contact at least annually as part of the business review.</p> <p>Review report format with plant contact at least annually. Update or change as directed by plant contact.</p>

Description	Service Plan Activity and Frequency
<p>Provide corrosion rate monitoring of once-through, recirculating, and closed loop cooling systems. Corrosion coupon results shall be maintained in a Contractor-provided database. Such database shall be updated and provided to PLANT at least quarterly. Both parties shall mutually agree upon corrosion coupon metallurgy.</p>	<p>Report shall include both general and pitting corrosion rates (provided that corrosion monitoring equipment is installed and operable for the monitored system). Coupon exposure time for recirculating or once-through cooling systems shall be approximately 90 days. Corrosion analysis may be substituted for corrosion coupons if approved by plant contact.</p> <p>Printed and electronic report shall be provided to plant contact at least quarterly.</p> <p>Review report format with plant contact at least annually. Update or change as directed by plant contact.</p>
<p>In-service inspections of evaporative cooling towers shall be performed at least twice per year. Such inspections shall include a visual inspection of cooling tower hardware.</p>	<p>Printed and electronic report shall be provided to plant contact at least semi-annually.</p> <p>Review report format with plant contact at least annually. Update or change as directed by plant contact.</p>
<p>Provide operator, supervisor, and manager training on basic water chemistry, cooling systems, HRSG systems, and pretreatment systems. Topics to be approved by plant management two weeks prior to date of training. Train personnel as directed by plant management. Schedule at least two different training sessions covering the same material to accommodate shift schedules.</p>	<p>Provide training annually. Document persons trained, date, and time. Training length shall be at the discretion of the plant contact, but will normally be designed to last approximately four hours. Provide training records to plant contact in electronic and printed format.</p>
<p>On-site emergency response during normal working hours</p>	<p>Provide no less than two Contractor emergency contacts and no less than one 24-hour emergency response phone number to plant contact. Review and update contact information at least annually.</p>
<p>Provide chemistry data trending software</p>	<p>Provide chemistry trending software. Software must be capable of importing existing plant database (Excel format) to ensure that previous historical data is retained.</p>

Description	Service Plan Activity and Frequency
Provide once-through, recirculating, and closed loop cooling system biological control monitoring	<p>Provide sample sessile bacteria counts, bacteria metabolic residuals and bacteria speciation analysis at least quarterly. Reports shall include recommendations for improvement, cost analysis of biological treatment programs, and evaluation of current program efficacy.</p> <p>Printed and electronic report shall be provided to plant contact at least monthly. The speciation analysis shall be included in the monthly report.</p> <p>Review report format with plant contact at least annually. Update or change as directed by plant contact.</p>

The services of Table 1.1 shall be documented in accordance with the reporting requirements of Table 1-2.

Table 1-2: Required Reports and Frequencies

Description	Service Plan Activity and Frequency
Monthly reports include the following:	<p>The reports listed below will normally be included in the body of one monthly service report. The monthly service report will normally be divided into several sections including:</p> <p>Chemical Usage and Consumption Chemistry Monitoring and Control Cycle Chemistry Cooling Systems Pretreatment Systems BOP Water Systems Inspections (if any)</p>
Quarterly reports include the following:	<p>The reports listed below will normally be included in the body of one monthly service report.</p> <p>Corrosion Monitoring</p>
Semi-annual reports include the following:	<p>The reports listed below will normally be included in the body of one monthly service report.</p> <p>Chemical Storage, Feed, and Control Equipment Operational Review Cooling System In-Service Inspection</p>
Annual reports include the following:	<p>The reports listed below will normally be included in the body of one monthly service report with the exception of the Business Review which will be distributed separately.</p> <p>Business Review Chemistry Evaluation Chemical Safety Audit</p>
Special reports include the following:	<p>Outage inspections of water and steam systems Deposit samples Specially requested water samples Metallographic analysis Training presentations</p>

EXHIBIT B

COMPENSATION SCHEDULE AND HOURLY FEES

Compensation for all work, including hourly fees and expenses, shall not exceed the amount set forth in Section 2, above. The hourly rates and or compensation break down and an estimated amount of expenses is as follows:

1. Analytical Cost: \$31,020/year

Annual Sampling Program Costs						
Requirements from Section 3.2 and Appendix 7 of the RFP						
Sample Number	Samples per Year	Location	Code	Cost each	Annual Cost	
1	4	Cycle Makeup Water (Demin Storage Tank)	STEAM	\$ 208	\$	832
2	4	Condensate Polisher Effluent	STEAM	\$ 208	\$	832
3	4	Condensate Polisher Effluent	STEAM	\$ 208	\$	832
4	4	IP Feedwater BOP	STEAM	\$ 208	\$	832
5	4	HP Feedwater HRSG	STEAM	\$ 208	\$	832
6	4	LP Drum Water	BLR	\$ 355	\$	1,420
7	4	IP Drum Water	BLR	\$ 355	\$	1,420
8	4	HP Separator Water	STEAM	\$ 208	\$	832
9	4	HP Main Steam	STEAM	\$ 208	\$	832
10	4	LP Sat Steam	STEAM	\$ 208	\$	832
11	4	IP Main Steam	STEAM	\$ 208	\$	832
12	4	IP Sat Steam	STEAM	\$ 208	\$	832
13	4	LP Main Steam	STEAM	\$ 208	\$	832
14	4	Hot Reheat Steam	STEAM	\$ 208	\$	832
15	4	IP Rotor Air Cooler Water	STEAM	\$ 208	\$	832
16	4	LP Rotor Air Cooler Water	STEAM	\$ 208	\$	832
17	4	Condensate Polisher #1 Effluent	STEAM	\$ 208	\$	832
18	4	Condensate Polisher #2 Effluent	STEAM	\$ 208	\$	832
19	4	LP Rotor Air cooler Steam	STEAM	\$ 208	\$	832
20	4	IP Rotor Air Cooler Steam	STEAM	\$ 208	\$	832
21	4	HP Feedwater BOP	STEAM	\$ 208	\$	832
22	4	Condensate BOP	STEAM	\$ 208	\$	832
23	4	Aux Boiler Steam	STEAM	\$ 208	\$	832
24	4	Aux Boiler Drum Water	BLR	\$ 355	\$	1,420
25	4	HP Separator Steam	STEAM	\$ 208	\$	832
26	4	Circ Water	RICIRC	\$ 402	\$	1,608
27	4	Service Water	MAKEUP	\$ 288	\$	1,152
28	4	Raw Water	MAKEUP	\$ 208	\$	1,152
29	4	Circ Water DMA	BIO	\$ 116	\$	464
30	4	Closed Loop DMA	BIO	\$ 116	\$	464
31	4	Evap Cooler 1 DMA	BIO	\$ 116	\$	464
32	4	Evap Cooler 2 DMA	BIO	\$ 116	\$	464
33	4	Circ Water Sessile	BIO SW/B	\$ 168	\$	672
34	4	Closed Loop Sessile	BIO SW/B	\$ 168	\$	672
35	4	Evap Cooler 1 Sessile	BIO SW/B	\$ 168	\$	672
36	4	Evap Cooler 2 Sessile	BIO SW/B	\$ 168	\$	672
37	4	Closed Loop: Mild Steel Coupon	BIO SW/B	NC	NC	
38	4	Closed Loop: Copper Steel Coupon	BIO SW/B	NC	NC	
39	4	Closed Loop: Titanium	BIO SW/B	NC	NC	
40	4	Closed Loop: Copper Steel Coupon	BIO SW/B	NC	NC	
41	4	Circ Water: Mild Steel Coupon	BIO SW/B	NC	NC	
42	4	Circ Water: Copper Steel Coupon	BIO SW/B	NC	NC	
43	4	Circ Water: Titanium	BIO SW/B	NC	NC	
Annual Sampling Program Cost					\$	31,020

- Included at no additional charge:
 - o Use of Nalco's 3D Trasar controller, automated reporting, and a 24/7 monitoring and alarm package
 - o Use of Nalco's web based data management system for the collection and analysis of samples collected onsite.
 - o Continued technical support for issues like the RAC failure, Benson cycle chemistry support, clarifier operation, and others.

2. Service Plan Cost: \$30,000/year

3. Specialty Chemical Supply Cost: First year is based on rates in table below and is subject to escalation per the Price Adjustment Formula.

Current Chemical Price List:

Lodi Energy Center											
System	Chemical	Product Name	Product Number	Dosage (mg/l)	Target Residual (mg/l)	Container Size	\$/Lb (Firm)	Lb/Year (Based on Base Case)	\$/Year (Based on Base Case)	Container Provided By	Chemical Type
Auxiliary Boiler	Oxygen Scavenger	Nalco 1720	1720.12	50	30	55-gal MPF	\$2.94	1142	\$3,357	Vendor	Specialty
Auxiliary Boiler	Phosphate (for Drum)	BT-3400	BT-3400.38	2.0	2.0	55-gal MPF	\$3.80	492	\$1,870	Vendor	Specialty
Closed Loop	Corrosion Inhibitor	TRAC108	TRAC108.56	slug	3,000	55-gal drum	\$1.71	564	\$964	Vendor	Specialty
Cooling Tower Circ Water	Anti-foam	71D6 PLUS	71D6 PLUS.11	5	NA	5-gal pail	\$7.57	66	\$500	Vendor	Specialty
Cooling Tower Circ Water	Bicide (Sodium Bromide)	1318	1318.33	45	0.3	200-gal JPF	\$2.78	0	\$0	Vendor	Specialty
Cooling Tower Circ Water	Corrosion Inhibitor	3DT187	3DT187.33	45	NA	200-gal JPF	\$2.55	0	\$0	Vendor	Specialty
Cooling Tower Circ Water	Microbial Dispersant	73551	73551.56	5	NA	55-gal drum	\$2.17	0	\$0	Vendor	Specialty
Cooling Tower Circ Water	Mineral Dispersant	3DT187	3DT187.33	45	NA	200-gal JPF	\$2.55	5,220	\$13,311	Vendor	Specialty
Cooling Tower Circ Water	Non-Oxidizing Bicide	H-550	H-550.61	50	NA	250-gal tote	\$4.78	2,000	\$9,560	Vendor	Specialty
Demin Water Treatment	RO Low pH Cleaner	PC-77	PC-77.56	2%	NA	55-gal drum	\$1.80	551	\$992	Vendor	Specialty
Demin Water Treatment	RO Anti-scalant	PC-191T	PC-191T.36	5	NA	55-gal MPF	\$3.83	824	\$2,390	Vendor	Specialty
Demin Water Treatment	RO High pH Cleaner	PC-98	PC-98.56	2%	NA	55-gal drum	\$2.25	470	\$1,058	Vendor	Specialty
Raw Water Treatment	Polymer/Flocculant	7763	7763	2	NA	200-gal JPF	\$2.44	2,421	\$5,906	Vendor	Specialty
									\$39,908		

STIG Plant							
System	Chemical	Product Name	Product Number	Container Size	\$/Lb (Firm)	Container Provided By	Chemical Type
Cooling Tower Circ Water	One-Drum Treatment	3DT187	3DT187.36	55-gal MPF	4.40	Vendor	Specialty
Demin Water Treatment	Caustic (25%)	8735	8735.38	30-gal µPF	6.63	Vendor	Specialty
Demin Water Treatment	RO Low pH Cleaner	PC-77	PC-77.11	5-gal pail	4.91	Vendor	Specialty
Demin Water Treatment	RO Anti-scalant	PC-191T	PC-191T.56	55-gal drum	2.23	Vendor	Specialty
Demin Water Treatment	RO High pH Cleaner	PC-98	PC-98.11	5-gal pail	4.74	Vendor	Specialty
Main Steam Cycle	Amine	352	352	55-gal MPF	5.03	Vendor	Specialty
Main Steam Cycle	Oxygen Scavenger	Eliminox	Eliminox.36	55-gal MPF	4.00	Vendor	Specialty
Main Steam Cycle	Phosphate (for Drum)	1742	1742	200-gal JPF	2.20	Vendor	Specialty

- Items listed in **BOLD** are included as part of Nalco's Porta-Feed system. These chemicals are either supplied in 200 gallon stainless steel returnable tanks or are delivered by a Nalco Delivery Specialist to a designated base tank.
- Where practical, Base Tanks will be supplied by Nalco at no cost to LEC. For the SR Base Tanks LEC is responsible for the containment. Where the usage is low or slug fed periodically it may be more efficient to just switch out these containers. The 55 gallon drums and plastic Schutz Totes are returnable. 5 and 15 gallon pails are not returnable.

Chemical Price Adjustments:

Price Adjustment Formula

In December 2015 the product prices will be reviewed for increase or decrease. Any adjustments will become effective the following January 1st.

Any price increases or decreases will be based on a weighted average of the following Bureau of Labor Statistics Indices, comparing the most recent November values with November 2014 values:

Index	Weighting
WPU 061Chemicals and Allied Products Producer Price Index (PPI)	64%
CUUR0000SA0E Energy Series Consumer Price index (CPI-E)	16%
CUUR0000SA0 Urban Series Consumer Price Index (CPI-Urban)	20%

The price adjustment formula is:

$$0.64 * ((\text{PPI-061 [2]} - \text{PPI-061 [1]}) / \text{PPI-061 [1]}) + 0.16 * ((\text{CPI-E [2]} - \text{CPI-E [1]}) / \text{CPI-E [1]}) + 0.20 * ((\text{CPI Urban [2]} - \text{CPI Urban [1]}) / \text{CPI Urban [1]})$$

2 denotes index for November of the current year

1 denotes index for November 2014

NOTE: As a public agency, NCPA shall not reimburse Contractor for travel, food and related costs in excess of those permitted by the Internal Revenue Service.

EXHIBIT C

CERTIFICATION

Affidavit of Compliance for Contractors

I,

JOSEPH J. MAZUR, VICE PRESIDENT-MARKETING

(Name of person signing affidavit)(Title)

do hereby certify that background investigations to ascertain the accuracy of the identity and employment history of all employees of

NALCO COMPANY

(Company name)

for contract work at

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI CA 95242

(Project name and location)

have been conducted as required by the California Energy Commission Decision for the above-named project.


(Signature of officer or agent)

Dated this 23RD day of FEBRUARY, 20 15.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

2384168.7



Lodi Energy Center Project Participant Committee

Staff Report

AGENDA ITEM NO.: 11

Date: December 6, 2016
To: Lodi Energy Center Project Participant Committee
Subject: Approval of Updated Lodi Energy Center (LEC) Project Management and Operations Agreement (PMOA) Schedule 1.00, Exhibit 1

Recommendation

NCPA staff recommends that the PPC pass a motion approving implementation of the revised PMOA Agreement Schedule 1.00, Exhibit 1 for Heat Rate.

Background

NCPA and the LEC Project Participants executed the Lodi Energy Center Project Management and Operations Agreement (PMOA), which became effective on August 1, 2010. The PMOA contains multiple Schedules, which provide procedures and protocols, and guidelines regarding Project operations. Pursuant to the PMOA, Schedules can be revised, deleted or added from time to time based on then existing operating or market conditions, and subject to the approval of the Project Participant Committee (PPC), and with regard to certain Schedules, approval additionally by the NCPA Commission when such Schedules "...could be reasonably viewed as having an impact on other NCPA projects." (PMOA, Article 10).

Staff is recommending changes to PMOA Agreement Schedule 1.00, Exhibit 1 "Heat Rate" which provides LEC's plant net heat rate and startup/shut down fuel and time requirements. Staff proposes a revision to these requirements based on actual data from overall plant improvements in operation. A "redline" version of the proposed PMOA Schedule 1.00, Exhibit 1 is attached to this staff report reflecting the specific changes staff is recommending.

Fiscal Impact

No significant costs will be incurred to implement the changes to the PMOA Schedules and funds are available in the NCPA budget to support the work associated with these contract updates.

Environmental Analysis

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

Prepared by:
KEN SPEER
Assistant General Manager
Generation Services

Attachments: (1)

- Lodi Energy Center Project Management and Operations Agreement Amended Schedule 1.00, Exhibit 1: Heat Rate

**EXHIBIT
1**

Heat Rate

The Heat Rates are Plant Net Heat Rates using Higher Heating Value (HHV) of Gas.

Segment Number	Heat Rate Operating Level (MWN)	Heat Rate (BTU/kWh)
1	165	7856 7760
2	175	7711 7450
3	200	7315 7200
4	225	7130
5	250	7081
6	275	6971
7	284	6870
8	304	6850

The startup fuel requirements are to start/synchronize the Project to its Minimum Load (“Pmin”) level.

Startup / Shutdown	Fuel Requirement (MMBtu)	Down Time
Cold Start	5430 3500	> 64 20 Hours
Warm Start	5200 1800	16-6 - 6420 Hours
Hot Start	1967 1300	< 16-6 Hours
Shutdown	251 180	

Over a given operating period, the total fuel requirements will be used to determine related GHG obligation.