

12745 N. Thornton Road Lodi, CA 95242

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Agenda

Date: October 9, 2014

Subject: October 13, 2014 Lodi Energy Center Project Participant Committee Meeting

Location: 12745 N. Thornton Road, Lodi, CA or via teleconference

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. <u>In either case</u>, please: (1) post this notice at a publicly accessible location at the <u>participation</u> location at least 72-hours before the call begins, and (2) have a speaker phone available for any member of the public who may wish to attend at your location.

NCPA	NCPA	CITY OF HEALDSBURG
12745 N. Thornton Road	651 Commerce Drive	401 Grove Street
Lodi, CA	Roseville, CA	Healdsburg, CA
BAY AREA RAPID TRANSIT	CITY OF GRIDLEY	CITY OF LOMPOC
300 Lakeside Drive, 16th Floor	685 Kentucky Street	100 Civic Center Plaza
Oakland, CA	Gridley, CA	Lompoc, CA
CITY OF BIGGS	PLUMAS-SIERRA RURAL	CITY OF UKIAH
465 "C" Street	ELECTRIC COOP	411 W Clay Street
Biggs, CA	73233 Highway 70	Ukiah, CA
	Portola, CA	
CALIFORNIA DEPARTMENT OF		
WATER RESOURCES		
3310 El Camino Ave. Room LL93		
Sacramento, CA		

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

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.

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 Lodi Energy Center Project Participant Committee's PPC 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 the following PPC meeting minutes:
 - September 4, 2014 special meeting
 - September 8, 2014 regular meeting
 - September 15, 2014 special meeting
 - September 22, 2014 special meeting
 - September 29, 2014 special meeting
 - October 6, 2014 special meeting

MONTHLY REPORTS

- 3. Operational Report for September 2014 (Jeremy Lawson)
- 4. Market Data Report for September 2014 Verbal Report (Bob Caracristi)
- 5. Monthly Asset Report (Michael DeBortoli)

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.

- 6. Treasurer's Report for September 2014 Accept by all Participants
- 7. Financial Report for September 2014 Approve by all Participants
- 8. GHG Reports (excerpted from monthly ARB) Accept by all Participants
- 9. Control Components, Inc. Staff seeking approval of a two year Multi-Task General Services Agreement and Agreement for Purchase of Equipment, Materials, and Supplies with Control Components, Inc. in an amount not to exceed \$400,000 for valve and vent maintenance services and supply of valve spare parts as needed at all Generation Services facilities. All purchase orders issued pursuant to the agreement will be charged against existing and future approved Annual Operating Budgets
- **10. Environex, Inc.** Staff seeking approval of a five year Multi-Task General Services Agreement with Environex, Inc. in an amount not to exceed \$260,000 for catalyst testing services as needed at all

Generation Services facilities. All purchase orders issued pursuant to the agreement will be charged against existing and future approved Annual Operating Budgets

Consent Items pulled for discussion:

BUSINESS ACTION ITEMS

- 11. LEC Operational Insurance Coverage Staff to provide renewal update and seek approval of the insurance program for policy period November 20, 2014 through November 20, 2015 (Donna Stevener)
- **12. LEC PPC Meeting Dates for 2015** Staff seeking approval of regular meeting dates for 2015 *(Ken Speer)*

INFORMATIONAL ITEMS

- **13. Planned Outage for November 1 –** Staff to give update regarding LEC outage scheduled for November 1 (*Michael DeBortoli*)
- **14. PG&E's Compressed Air Storage Project** Staff to provide update regarding Underground Well Study Report and PG&E impact (*Michael DeBortoli*)
- **15. Water Storage Report** Staff to present informational update and evaluation of need for tertiary water storage (*Michael DeBortoli*)
- 16. Other New Business

CLOSED SESSION

17. Threat to Public Services or Facilities – Pursuant to Government Code Section 54957: Discussion Among Agency Representatives Regarding Findings of Security Consultant

ADJOURNMENT

Next Regular Meeting: November 3, 2014

Lodi Energy Center Project Participant Committee SPECIAL Meeting September 4, 2014 - MEETING MINUTES Location: Lodi Energy Center 12745 N. Thornton Rd, Lodi CA 95242 and by teleconference 3:00 P.M.

1. <u>Call Meeting to Order and Roll Call</u>

The PPC special meeting was called to order at 3:03 p.m. by Chairman Mike Werner. He asked that roll be called as listed below.

PPC Meeting Attendance Summary			
Participant	Attendance	Particulars / GES	
Azusa - Morrow	Absent	2.7857%	
BART - Schultz	Present	6.6000%	
Biggs - Sorenson	Present	0.2679%	
CDWR - Werner	Present	33.5000%	
Gridley - Stiles	Absent	1.9643%	
Healdsburg - Crowley	Absent	1.6428%	
Lodi - Kirkley	Present	9.5000%	
Lompoc - Hostler	Absent	2.0357%	
MID - McFall	Present	10.7143%	
Plumas-Sierra - Brozo	Absent	0.7857%	
PWRPA - Palmerton	Present	2.6679%	
SVP - Hance	Present	25.7500%	
Ukiah - Grandi	Absent	1.7857%	
Summary			
Present	7	89.0001%	
Absent	6	10.9999%	
Quorum by #:	Yes		
Quorum by GES:	Yes		
Meeting Date:		9/4/2014	

Public Forum

Chairman Werner 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. No members of the public were present.

2. Update Regarding Forced Outage Issues, LEC Start-up, and Bidding Strategies

Ken Speer began the discussion to update the Committee since the report given at the special meeting on August 22. Over the past weekend further problems were had with the valves which caused the control valve not to open on a number of attempts. On Sunday, August 31 there was

one failed attempt to open and on the following Monday there were three failed attempts to open the valve. On those dates the operators were able to get the valve to open thus allowing the plant to start-up. Staff continues to test and observe data and has discovered drifting in the LVDT, which records the valve position. Mike DeBortoli revisited the work-around solution for plant start-up which was implemented on August 20 which allowed the unit to start-up at a lower pressure. Mike presented a brief PowerPoint presentation which included a diagram labelled to aid in the discussion of the relationship between the valves, seat, and directional flow of pressure at start-up. Mike discussed the process for identifying problems, the recalibration work done after the tear down, and said the pressure was reduced even further since it was noted that the start-up time was increasingly taking longer. He suspects these subsequent issues have to do with an electronics issue occurring subsequent to the original problem. He would like to take the plant out of service for a day to do further testing with respect to the drifting and electronics issues. Because of the very real concerns about the possibility of not being able to get the valve open due to the increasingly longer opening times for the emergency stop valve, on Tuesday NCPA decided to run the plant around the clock and self-schedule into the 15 minute market to prevent the plant from cycling. The balance of the plant is being economically bid. The reason this decision was made was over concern about the exposure to SCP penalties in the event the plant would not start and was in a forced outage situation.

The Power Management Division presented a PowerPoint presentation outlining the real-time market self-scheduling results and projected numbers including penalties should a forced outage occur. The options presented to the Committee for consideration were to continue self-scheduling the plant at Pmin until repairs can be made to mitigate the risk of cycling the plant with the balance economically bid; or to continue to economically bid the entire plant into the market, likely resulting in cycling which may result in a forced outage. Depending on the length of a potential forced outage, the amount of SCP penalties could be great. Also, the issue of timing of such an outage is important since the plant is already committed as Local RA in September and October. Tony Zimmer discussed the fact that the deadline for claiming Resource Adequacy for November is in a week and said NCPA does not have authority to procure replacement RA capacity on behalf of the project. It was also noted that the longer the plant can be delayed for an outage the more time Participants have to obtain replacement RA capacity to relieve the risk of SCP penalties.

Although cognizant of the risks of shutting the plant down, Mike DeBortoli said he would like to do so over the coming weekend to do more work on the valve issue, calibration, and testing to obtain more data needed for the repairs. It was noted that taking the plant out on a weekend is more advantageous than a week day due to lower demands. The group had a lively discussion about benefits and risks on both sides.

Frank Schultz of BART made the following motion: The PPC approves continuing to Self-Schedule the plant at Pmin and to bid the balance of the capacity until a further decision to take the plant offline is made at the regular PPC meeting on September 8, 2014. There was no second. As an alternative, Liz Kirkley made the following motion which was considered by the PPC.

Motion: The PPC approves continuing to Self-Schedule the project through 9/5/14 and then take the project out on Forced Outage on 9/6/14 to perform testing and calibration.

Moved by: Seconded by:

Lodi Biggs

Discussion: There was no further discussion.

Vote Summary on Motion					
Participant Vote Particulars / GES					
Azusa	Absent	2.7857%			
BART	Yes	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	Vote Summary				
Total Ayes	7	89.0001%			
Total Noes	0	0.0000%			
Total Abstain	0	0.0000%			
Total Absent	6	10.9999%			
Result:	Motion passed.				

Kent Palmerton requested that NCPA prepare a short Executive Summary regarding this issue for the Participants' board members.

Adjournment.

Chairman Werner adjourned the special meeting at 4:25 p.m.

Lodi Energy Center Project Participant Committee Meeting September 8, 2014 - MEETING MINUTES Location: Lodi Energy Center 12745 N. Thornton Rd, Lodi CA 95242 and by teleconference 10:00 A.M.

1. <u>Call Meeting to Order and Roll Call</u>

The PPC meeting was called to order at 10:06 a.m. by Vice Chair George Morrow. He asked that roll of the Project Participants be called as listed below.

PPC Meeting Attendance Summary			
Participant	Attendance	Particulars / GES	
Azusa - Morrow	Present	2.7857%	
BART - Schultz	Absent	6.6000%	
Biggs - Sorenson	Present	0.2679%	
CDWR - Forsythe	Present	33.5000%	
Gridley - Stiles	Absent	1.9643%	
Healdsburg - Crowley	Absent	1.6428%	
Lodi - Cadek	Present	9.5000%	
Lompoc - Hostler	Present	2.0357%	
MID - Caballero	Present	10.7143%	
Plumas-Sierra - Brozo	Absent	0.7857%	
PWRPA - Palmerton	Present	2.6679%	
SVP - Hance	Present	25.7500%	
Ukiah - Grandi	Absent	1.7857%	
Summary			
Present	8	87.2215%	
Absent	5	12.7785%	
Quorum by #:	Yes		
Quorum by GES:	Yes		
Meeting Date:		9/8/2014	

Public Forum

Vice Chair Morrow asked if any members of the public were present in Lodi or at any of the other noticed meeting locations that would like to address the PPC on any agenda items. No members of the public were present.

2. <u>Meeting Minutes</u>

The draft minutes of the August 11, 2014 regular meeting and August 22, 2014 special meeting were considered. The LEC PPC considered the following motion:

Date:	9/8/2014
Motion:	The PPC approves the minutes of the August 11, 2014 regular meeting and August 22, 2014 special meeting including any edits discussed at today's meeting.

Moved by:	MID
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	Yes	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	8	87.2215%
Total Noes	0	0.0000%
Total Abstain	0	0.0000%
Total Absent	5	12.7785%
Result:	Motion passed.	

MONTHLY REPORTS

3. Operational Reports for August 2014

Mike DeBortoli presented the monthly written Operational Report including Safety, Notice of Violations, Outage Summaries, Planned Outages, and Generating Unit Statistics for August. There were no OSHA Recordable accidents, no Permit violations, and no NERC/WECC violations. The report covered the forced outage which occurred on August 5 as a result of a problem with the High Pressure Steam Turbine Control Valve and Emergency Stop Valve which

caused it not to open, as previously discussed at the August regular and special meetings. Staff continues to work with Siemens. The outage continued through August 20, 2014.

The report reflected monthly production of 68,997 net MWH, 282 service hours, and equivalent operating availability of 51.22%. The report set forth the Capacity Factor @ 280MW Pmax of 33.16% and @ 302MW Pmax of 30.75%. During the month the plant had 12 hot starts, three warm starts, and one cold start.

4. Market Data Report for August 2014

Bob Caracristi discussed the operating and financial settlement results for the month.

5. <u>Monthly Asset Report</u>

Mike DeBortoli presented the first monthly budget review for FY 15 with actual numbers compared to estimated values for July and through this fiscal year end. He discussed the operations/variable costs category as a result of producing a lot of power during July. The net numbers for July were better than what were budgeted.

Consent Calendar

The consent calendar was considered. Chairman Werner asked if any Participant wished to remove any item listed on the Consent Calendar for separate discussion. Hearing none, 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:

9/8/2014
The PPC approves the Consent Calendar consisting of the following items as
listed on the Agenda:
6. Treasurer's Report for August 2014
7. Financial Report for August 2014
8. GHG Reports
9. LEC Project Management and Operations Agreement (PMOA) Schedule
7.00-Differential Transmission Cost Adjustment

Moved by:	Lodi
Seconded by:	SVP

Discussion: Vice Chair Morrow thanked James Takehara for his work on PMOA Schedule 7.00 over the past several months.

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	Yes	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	8	87.2215%
Total Noes	0	0.0000%
Total Abstain	0	0.0000%
Total Absent	5	12.7785%
Result:	Motion passed.	

BUSINESS ACTION ITEMS

10. Update regarding Forced Outage Issues, LEC Start-up, and Bidding Strategies

Mike DeBortoli gave an update regarding the work performed during the plant shutdown over the past weekend. The good news is that he testing and recalibration work was accomplished and in addition testing of the sky vents was done and the plant was started back up. He said much information was gained with testing any numerous calls from Sweden. He presented schematic drawings of the valve shaft and springs and explained the workings of component parts of the valves. He said the parts are due on site September 26 but presently staff is not sure what parts to change since the specific problem has not been identified. If all the parts are changed then the cause of the problem will remain unknown as well as what steps to take to avoid it in the future. Mike also explained about the seat and how it works. He said there was another issue with a steam leak behind the seat which is still outstanding as it has not yet been tested. There are many questions which remain and feedback is needed from Siemens as well. Mike was asked about the life cycle of the part. Mike said it should be about 50,000 hours and that this failure is premature. Mike said currently we are short on answers with lots of questions which is not a position in which we like to find ourselves.

Tony Zimmer presented a PowerPoint presentation about RA implications and whether to claim RA for November. He reminded Participants that submittals are due by September 15. The risks were again laid out with respect to penalties should a forced outage occur. Discussion was had about continuing to self-schedule the plant at Pmin into the Day-ahead market for all 24 hours of each day until repairs can be made and economically bid the balance of the plant capacity into the Day-ahead and Real-time markets. The group also discussed the request that Participants acquire replacement capacity for an outage may be deemed a planned outage not a forced outage. Dave Dockham talked about the Market Purchase Program as an instrument for those signatories to the agreement with respect to acquiring replacement capacity. Market considerations were discussed. Ken Speer summarized the options; the LEC PPC considered the following motion:

Date: 9/8/2014

Motion:

The PPC approves establishing a planned outage target date of approximately November 1, 2014 and requesting CAISO approval of same; authorizes NCPA to continue to Self-Schedule the plant at Pmin into the Day-Ahead Market for all 24 hours of each day until repairs can be made to the plant; economically Bid the balance of the plant capacity into the Day-Ahead and Real-Time markets; continue to observe prices; if prices are significantly negative for any duration of time reevaluate Bid strategy with PPC. Project Participants to inform Project Manager by 5:00 p.m. on September 12, 2014 if they desire to commit the Project for RA purposes for the period of November 1 - 30, 2014.

Moved by:AzusaSeconded 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	Yes	2.0357%
Modesto	Yes	10.7143%
Plumas-Sierra	Absent	0.7857%
PWRPA	Absent	2.6679%
Silicon Valley		
Power	Yes	25.7500%
Ukiah	Absent	1.7857%
Vote Summary		
Total Ayes	7	84.5536%
Total Noes	0	0.0000%
Total Abstain	0	0.0000%
Total Absent	6	15.4464%
Result:	Motion passed.	

The group agreed that a Special Meeting will be held on Monday, September 15 to provide an update regarding plant operations and market data results.

The meeting was recessed at 12:10 p.m. for a lunch break and reconvened at 12:35 p.m. **INFORMATIONAL ITEMS**

11. <u>LEC Congestion Study Report – Overview of Findings</u>

Gillian Biedler introduced Roger Treinen of Nexant who presented a PowerPoint presentation summarizing the Final Report for the NCPA Lodi Energy Center LMP Analysis Project. He discussed the objectives of the study regarding congestion on the 8Mile line, historical data analysis, financial impacts, presented a market simulation post upgrade analysis, and intermediate remedies for consideration. George Morrow thanked him for the presentation and said the report validates the presumption that the upgrade to the line makes sense.

12. Insurance Policy Review

Donna Stevener presented an overview of the Lodi Energy Center Operational Insurance Program. She discussed the renewal process. She noted that last year the PPC opted out of coverage for replacement power. NCPA is conducting a physical security project which has identified some exposures which may exceed current levels. Quotes will be obtained for coverage at higher limits as well for discussion. NCPA as a whole has had no claims in nine years. George Morrow commented that he had never seen coverage for replacement power to be economic however maybe look at having it as separate coverage. Donna said she thinks it is separate with no impact on the casualty rates. She will review all quotes, lay out the options and levels of insurance available, and the Committee will be asked to consider and approve the insurance renewal at its next meeting.

13. <u>Request for American Flag at LEC</u>

Mike DeBortoli followed up regarding Owen Stiles' suggestion that a large American Flag be flown at the LEC location. Mike DeBortoli said this is not possible because the flag would need to be lighted at night and the LEC permit does not allow any lights other than for security.

Adjournment

The next regular meeting of the PPC is scheduled for Monday, October 13, 2014. The meeting was adjourned at 1:33 p.m.

Lodi Energy Center Project Participant Committee SPECIAL Meeting September 15, 2014 - MEETING MINUTES Location: Lodi Energy Center 12745 N. Thornton Rd, Lodi CA 95242 and by teleconference 10:00 A.M.

1. <u>Call Meeting to Order and Roll Call</u>

The PPC special meeting was called to order at 10:06 p.m. by Vice Chair George Morrow. He asked that roll be called as listed below.

PPC Meeting Attendance Summary									
Participant	Attendance	Particulars / GES							
Azusa - Morrow	Present	2.7857%							
BART - Lloyd	Present	6.6000%							
Biggs - Sorenson	Present	0.2679%							
CDWR - Forsythe	Present	33.5000%							
Gridley - Stiles	Present	1.9643%							
Healdsburg -									
Crowley	Absent	1.6428%							
Lodi - Cadek	Present	9.5000%							
Lompoc - Hostler	Present	2.0357%							
MID - McFall	Present	10.7143%							
Plumas-Sierra -									
Brozo	Absent	0.7857%							
PWRPA -									
Palmerton	Present	2.6679%							
SVP - Hance	Present	25.7500%							
Ukiah - Grandi	Absent	1.7857%							
Summary									
Present	10	95.7858%							
Absent	3	4.2142%							
Quorum by #:	Yes								
Quorum by GES:	Yes								
Meeting Date:		9/15/2014							

Public Forum

Vice Chair 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. No members of the public were present.

2. Update Regarding Self-Scheduling and Operations

Ken Speer kicked off the discussion to advise the Project Participants about how the plant has operated over the past week and about its profitability. Bob Caracristi discussed the operating and projected settlement results through September 14. George Morrow suggested that weekly updates would be appreciated to report about the plant's operation and projected settlement results. It was agreed Special meetings would be held each Monday morning at 10:00 a.m. through October for this purpose and as may be necessary. Tony Zimmer noted for the discussion that based on feedback he has received, RA will not be claimed for any of the Participants for November.

Mike DeBortoli said much of the work that was planned for the May 2015 scheduled outage will be done during the upcoming November outage so the May outage will be of a shorter duration. Mike will also keep the Committee updated regarding the line upgrade.

Adjournment.

Vice Chairman Morrow adjourned the special meeting at 10:40 a.m.

Lodi Energy Center Project Participant Committee SPECIAL Meeting September 22, 2014 - MEETING MINUTES Location: Lodi Energy Center 12745 N. Thornton Rd, Lodi CA 95242 and by teleconference 10:00 A.M.

1. <u>Call Meeting to Order and Roll Call</u>

The PPC special meeting was called to order at 10:01 p.m. by Chairman Michael Werner. He asked that roll be called as listed below.

PPC Mee	nmary	
Participant	Attendance	Particulars / GES
Azusa - Morrow	Present	2.7857%
BART - Lloyd	Present	6.6000%
Biggs - Sorenson	Present	0.2679%
CDWR - Werner	Present	33.5000%
Gridley - Stiles	Present	1.9643%
Healdsburg - Crowley	Absent	1.6428%
Lodi - Cadek	Absent	9.5000%
Lompoc - Hostler	Absent	2.0357%
MID - Caballero	Present	10.7143%
Plumas-Sierra - Brozo	Absent	0.7857%
PWRPA - Palmerton	Absent	2.6679%
SVP - Hance	Present	25.7500%
Ukiah - Grandi	Absent	1.7857%
Summary		
Present	7	81.5822%
Absent	6	18.4178%
Quorum by #:	Yes	
Quorum by GES:	Yes	
Meeting Date:	\$)/22/2014

Marty Hostler of Lompoc and Melissa Cadek of Lodi subsequently joined the meeting.

Public Forum

Chairman Werner 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. No members of the public were present.

2. Update Regarding Self-Scheduling and Operations

Bob Caracristi discussed the operating and projected settlement results through September 21.

Mike DeBortoli said the repair parts for the control valve and emergency stop valve are now on site. He noted that from additional calculations performed, it is quite possible there is a blockage or obstruction in the pilot valve. Staff continues to investigate the issues. The updated information from Siemens is that the RAC should arrive on site on October 18. Also the combuster inspection has been moved from May to November. Those parts are set to arrive on October 3. Mike said water strains not seen before are evident with the plant running 24/7. Two clarifiers failed but the water system is back up and functioning well.

Adjournment.

Chairman Werner adjourned the special meeting at 10:16 a.m.

Lodi Energy Center Project Participant Committee SPECIAL Meeting September 29, 2014 - MEETING MINUTES Location: Lodi Energy Center 12745 N. Thornton Rd, Lodi CA 95242 and by teleconference 10:00 A.M.

1. <u>Call Meeting to Order and Roll Call</u>

The PPC special meeting was called to order at 10:03 p.m. by Chairman Michael Werner. He asked that roll be called as listed below.

PPC Meeting Attendance Summary									
Participant	Attendance	Particulars / GES							
Azusa - Morrow	Present	2.7857%							
BART - Lloyd	Present	6.6000%							
Biggs - Sorenson	Present	0.2679%							
CDWR - Werner	Present	33.5000%							
Gridley - Stiles	Present	1.9643%							
Healdsburg - Crowley	Absent	1.6428%							
Lodi - Cadek	Absent	9.5000%							
Lompoc - Hostler	Present	2.0357%							
MID - Caballero	Present	10.7143%							
Plumas-Sierra - Brozo	Absent	0.7857%							
PWRPA - Palmerton	Present	2.6679%							
SVP - Kinnear	Present	25.7500%							
Ukiah - Grandi	Absent	1.7857%							
Summary									
Present	9	86.2858%							
Absent	4	13.7142%							
Quorum by #:	Yes								
Quorum by GES:	Yes								
Meeting Date:		9/29/2014							

Public Forum

Chairman Werner 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. No members of the public were present.

2. Update Regarding Self-Scheduling and Operations

Bob Caracristi discussed the operating and projected settlement results through September 28.

Ken Speer advised that the schedule for delivery of the RAC continues to slip. Ken said he is sending someone every week to physically inspect the progress at the Peerless facility in Texas to assess the progress on fabrication of the RAC. The committee discussed GHG estimates based on the assumption that the plant will continue to be self-scheduled through October 31, then have a 16 day outage, and resume self-scheduling through the balance of November. It was noted there is an increase in GHG estimates when self-scheduling.

3. Update Planned Maintenance Outage Schedule for Calendar Year 2015

In light of the outage planned for November, 2014, the outage planned for 2015 will be of a shorter duration. The LEC PPC considered the following motion:

Date:9/29/2014Motion:The PPC approves a revised planned maintenance outage for 2015 including one
planned outage from May 1 through May 9. This schedule reduces the number of
days for this outage previously approved by the PPC on August 11 which had
contemplated the outage from May 1 through May 24.

Moved by:	Lompoc	
Seconded by:	BART	

Discussion: There was no further discussion.

Vote Summary on Motion									
Participant	Vote	Particulars / GES							
Azusa	Yes	2.7857%							
BART	Yes	6.6000%							
Biggs	Yes	0.2679%							
CDWR	Yes	33.5000%							
Gridley	Yes	1.9643%							
Healdsburg	Absent	1.6428%							
Lodi	Absent	9.5000%							
Lompoc	Yes	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	9	86.2858%							
Total Noes	0	0.0000%							
Total Abstain	0	0.0000%							
Total Absent	4	13.7142%							
Result:	Motion passed.								

Adjournment.

Chairman Werner adjourned the special meeting at 10:25 a.m.

Lodi Energy Center Project Participant Committee SPECIAL Meeting October 6, 2014 - MEETING MINUTES Location: Lodi Energy Center 12745 N. Thornton Rd, Lodi CA 95242 and by teleconference 10:00 A.M.

1. <u>Call Meeting to Order and Roll Call</u>

The PPC special meeting was called to order at 10:04 p.m. by Chairman Michael Werner. He asked that roll be called as listed below.

PPC Meeting Attendance Summary									
Participant	Attendance	Particulars / GES							
Azusa - Lehr	Present	2.7857%							
BART - Lloyd	Present	6.6000%							
Biggs - Sorenson	Present	0.2679%							
CDWR - Werner	Present	33.5000%							
Gridley - Stiles	Absent	1.9643%							
Healdsburg - Crowley	Absent	1.6428%							
Lodi - Cadek	Absent	9.5000%							
Lompoc - Hostler	Present	2.0357%							
MID - Caballero	Present	10.7143%							
Plumas-Sierra - Brozo	Absent	0.7857%							
PWRPA - Palmerton	Present	2.6679%							
SVP - Hance	Present	25.7500%							
Ukiah - Grandi	Absent	1.7857%							
Summary									
Present	8	84.3215%							
Absent	5	15.6785%							
Quorum by #:	Yes								
Quorum by GES:	Yes								
Meeting Date:		10/6/2014							

Public Forum

Chairman Werner 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. No members of the public were present.

2. Update Regarding Self-Scheduling and Operations

Bob Caracristi discussed the operating and projected settlement results through the end of September and also for the first five days in October. The plant is showing strong results with a great start for October.

Mike DeBortoli said a steam bypass valve is leaking which normally would be repaired during off hours however it is not affecting operations. The timing for receipt of the RAC is still having challenges. Ken Speer said NCPA will continue to monitor the RAC schedule and progress on a weekly basis.

Adjournment.

Chairman Werner adjourned the special meeting at 10:11 a.m.



12745 N. Thornton Road Lodi, CA 95242

phone (209) 333-6370 fax (209) 333-6374 web www.ncpa.com

Lodi Energy Center Project Participant Committee

Operational Report

Date: 10/13/2014

To: Lodi Energy Center Project Participant Committee

<u>Safety</u>

• OSHA Recordable: 0 Accidents

Notice of Violations

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

Outage Summaries:

- High Level (9/1/14 and 9/2/14) 13.3 Hours) During start-up a high Sump Pump water level initiated a trip on boiler feed pumps. Operators drained sump pump and returned unit to service.
- High Pressure Steam Turbine Control Valve and Emergency Stop Valve (11.1 Hours) LEC experienced a failure within the High Pressure Steam Turbine Control Valve (HPCV) and the High Pressure Steam Turbine Emergency Stop Valve (HP ESV) assembly. Excessive steam leak-by around the HPCV caused an excessive differential pressure around the HP-ESV disallowing the HP-ESV to open.

Planned Outage Summaries:

• 2015, May 1st @ 0001 thru May 9th @ 2359 for a Combustion Inspection

Agenda Item: 3

erating Unit Statistics:				LEC	Report Date: Start Date	9/1/2014
. Monthly Production		178,809	MWH		End Date	10/1/2014
. Productivity Factor						
a. Service Hours		684	Hours			
b. Service Factor		95.02	%			
c. Capacity Factor @	280MW Pmax	88.69	%			
d. Capacity Factor @	9 302MW Pmax	82.23	%			
. Equivalent Operating	g Availability (EOA)	96.99	%			
. Forced Outage Rate	(FOR)					
a. Combustion Turb	ine Generator	3.07	%			
b. Steam Turbine Ge	enerator	3.44	%			
. Heat Rate Deviation	(HRD)					
a. Fuel Cost (Not Cu	rrent Market Price)	4.00	\$/mmBTU			
MW Range		Average HR	PMOA HR	Deviation	Production	Cost
		BTU/kW-Hr	BTU/kW-Hr	%	MWH	\$
Seg. 1	296 - 302	6,850	6850	0.00%	0	\$0
Seg. 2	284 - 296	6,915	6870	0.66%	11,451	\$2,069
Seg. 3	275 - 284	6,908	6971	-0.91%	102,277	-\$25,922
Seg. 4	250 - 275	6,930	7081	-2.13%	38,035	-\$22,913
Seg. 5	225 - 250	6,995	7130	-1.89%	9,822	-\$5,306
Seg. 6	200 - 225	7,098	7315	-2.96%	6,320	-\$5,480
Seg. 7	175 - 225	7,270	7711	-5.72%	5,955	-\$10,503
Seg. 8	165 - 175	7,608	7856	-3.16%	4,274	-\$4,246
					178,134	-\$72,301
AGC Control Deviation	n					
MW Range		High Dev	Low Dev	Absolute Dev	Cost	
		MWH	MWH	MWH	\$	
Seg. 1	296 - 302	0	0	0	\$0	
Seg. 2	284 - 296	52	0	52	\$1,443	
Seg. 3	275 - 284	238	-304	542	\$14,974	
Seg. 4	250 - 275	153	-95	248	\$6,885	
Seg. 5	225 - 250	57	-34	92	\$2,560	
Seg. 6	200 - 225	40	-25	65	\$1,836	
Seg. 7	175 - 225	28	-16	44	\$1,289	
Seg. 8	165 - 175	16	-2	18	\$543	
		584	-476	1,061	\$29,530	
. Starting Reliability			•	•		=
Start Type			Hot Starts	Warm Starts	Cold Starts	
Number of Starts			3	0	0	
Start Time Benchma	ark (Minutes)		85	160	235	
Start Time Actual (A	verage Minute)		157.0	160.0	235.0	
Start Time Deviation	n (%)		84.7%	0.0%	0.0%	
Start Fuel Benchma	rk PMOA (mmBTU)		1,967	5.200	5,430	
Start Fuel Actual (Av	verage mmRTLI		2,55	5,200	5,750	
Fuel Deviation			<u>2,000</u>	0.0%	0.0%	
Costs of Eucl Doviet	ions (\$)		4J.2/0	0.0%	0.0%	
Costs of Fuel Deviat	(ג) נווטו		30,005	Şυ	ŞΟ	=

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 x 100%
 - c. Capacity Factor = Production / 302MW x PH
 - d. Capacity Factor = Production / 280MW x PH
- 3. Monthly Equivalent Availibility Factor (EAF) = (AH EPDH EFDH) / PH x 100%
- 4. Forced Outage Rate = (FOH/(FOH+SH) * 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 x 100%
 - d. Production = The Sum of Production for the given Range
 - e. Costs of Heat Rate Deviations = (Average Heat Rate Expected Heat Rate) x Production x 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) x Cost of Fuel

Lodi I Montl	Energy Center hly Budget Analysis						Means Actual or I Means Forecaste	Estimated values 1 values	5		Г									
		July	August	August (Estimate)	August (Diff)	August Estimate vs Actual (Diff %)	September	October	November	December	January	February	March	April	May	June	Year End Projection	FY2015 Budget	Percent Used Comments	
VOM		5,013,750	3,005,870	6,606,537	3,600,667	55%	6,687,874	5,953,779	3,677,032	4,810,244	5,621,720	3,920,493	2,477,584	3,049,936	2,187,498	2,255,237	52,759,541	51,681,547	102.1%	
	Capacity Factor	57%	33%	87%	54%	62%	80%	76%	46%	47%	66%	52%	24%	41%	29%	30%	53%	52%		
	Fuel Consumed (mmBTU, estimated)	841,281	498,061	1,257,763	759,702	60%	1,118,571	1,126,517	674,095	747,102	1,026,726	711,009	356,885	574,051	426,203	440,925	9,301,128	9,123,040	102.0%	
	Avg Fuel Cost (\$/mmBTU)	5.23	5.05	4.39	-0.67	-15%	4.37	4.44	4.62	4.78	4.67	4.68	4.59	4.45	4.44	4.42	4.59	4.51		
	Power Produced (MWHr, estimated)	118,475	69,005	181,225	112,220	62%	161,600	158,240	93,280	97,095	136,789	98,060	49,845	82,775	58,422	60,777	1,296,583	1,274,807	101.7%	
	Avg Power Price (\$/MWHr)	51.48	48.21	48.71	0.50	1%	45.07	44.45	42.88	43.41	44.87	43.67	39.47	38.16	39.14	3817%	43.29	43.88	22.237	
	Operations / Variable / LSTA	33,177	143,351	176,553	33,202	19%	988,134	154,160	90,876	753,474	133,263	95,532	586,632	80,642	56,916	440,941	3,590,300	3,651,332	98.3%	
	AP22 CHC Offect (estimated)	4,396,696	2,515,699	3,310,673	5,000,976	54%	4,865,512	5,002,521	3,110,101	3,307,333	4,799,241	3,330,662	1,039,600	2,332,229	1,095,157	202 005	42,051,023	41,107,130 6 274 025	100.8%	
	CA ISO Charges (estimated)	49,127	31,851	6,984	-24,867	-356%	6,228	6,098	3,595	3,742	5,271	3,779	1,921	3,190	2,251	2,342	94,528	489,050	19.3%	
Routi	ne O&M (Fixed)	552,933	791,135	769,777	-21,358	-3%	769,777	769,777	839,777	1,263,527	819,724	827,724	827,724	769,777	1,193,527	767,777	8,932,120	8,935,879	100.0%	
	Maintenance / Fixed	31,638	191,168	130,000	-61,168	-47%	130,000	130,000	200,000	200,000	179,947	187,947	187,947	130,000	130,000	128,000	1,765,479	1,765,358	100.0%	
	Administration	106,163	96,717	104,068	7,351	7%	104,068	104,068	104,068	104,068	104,068	104,068	104,068	104,068	104,068	104,068	1,250,911	1,250,914	100.0%	
	Mandatory Costs	27,186	10,162	18,333	8,171	45%	18,333	18,333	18,333	18,333	18,333	18,333	18,333	18,333	18,333	18,333	228,849	220,000	104.0%	
	Inventory Stock	0	91,974	36,364	-55,610	-153%	36,364	36,364	36,364	36,364	36,364	36,364	36,364	36,364	36,364	36,364	400,004	400,000	100.0%	
	Labor	286,415	284,596	364,797	80,201	22%	364,797	364,797	364,797	364,797	364,797	364,797	364,797	364,797	364,797	364,797	4,299,182	4,299,182	100.0%	
	Insurance	0	0	12,745	12,745	100%	12,745	12,745	12,745	436,495	12,745	12,745	12,745	12,745	436,495	12,745	987,695	1,000,425	98.7%	
	Power Management & Settlements Other Costs	98,993 2,538	98,993 17,525	98,993 4,477	0 -13,048	0% -291%	98,993 4,477	98,993 4,477	98,993 4,477	98,993 4,477	98,993 4,477	98,993 4,477	98,993 4,477	98,993 4,477	98,993 4,477	98,993 4,477	1,187,916 51,785	1,187,916 51,781	100.0% 1	
Proje	cts	150,000	155,088	603,751	448,663	74%	603,751	603,751	603,751	603,751	603,751	603,751	603,751	603,751	603,751	603,751	6,791,261	6,791,260	100.0%	
	Maintenance Reserve	150,000	150,000	150,000	0	0%	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	1,800,000	1,800,000	100.0%	
	Operations & Maintenance Projects	0	0	30,227	30,227	100%	30,227	30,227	30,227	30,227	30,227	30,227	30,227	30,227	30,227	30,227	332,497	332,500	100.0%	
	Capital Projects	0	5,088	423,524	418,436	99%	423,524	423,524	423,524	423,524	423,524	423,524	423,524	423,524	423,524	423,524	4,658,764	4,658,760	100.0%	
A&G		104,462	121,410	187,422	66,012	35%	187,422	187,422	187,422	187,422	187,422	187,422	187,422	187,422	187,422	187,422	2,166,104	2,166,107	100.0%	
	Administrative & General (Allocated)	86,419	101,714	149,294	47,580	32%	149,294	149,294	149,294	149,294	149,294	149,294	149,294	149,294	149,294	149,294	1,728,653	1,728,654	100.0%	
	Generation Services Shared	18,043	19,696	38,128	18,432	48%	38,128	38,128	38,128	38,128	38,128	38,128	38,128	38,128	38,128	38,128	437,451	437,453	100.0%	
Total	0&M Cost	5,821,145	4,073,503	8,167,487	4,093,984	50%	8,248,824	7,514,729	5,307,982	6,864,944	7,232,617	5,539,390	4,096,481	4,610,886	4,172,198	3,814,187	70,649,026	69,574,793	101.5%	
Debt	Service	2,203,158	2,203,158	2,203,158	0	0%	2,203,158	2,203,158	2,203,158	2,203,158	2,203,158	2,203,158	2,203,158	2,203,158	2,203,158	2,203,157	26,437,895	26,437,890	100.0%	
Rever	nues	6,099,407	3,326,855	8,827,258	5,500,403	62%	7,282,818	7,033,970	3,999,554	4,214,720	6,137,284	4,281,916	1,967,579	3,158,814	2,286,648	2,320,082	57,610,050	55,938,024	103.0%	
	ISO Energy Sales (estimated)	6,098,942	3,326,733	8,827,258	5,500,525	62%	7,282,818	7,033,970	3,999,554	4,214,720	6,137,284	4,281,916	1,967,579	3,158,814	2,286,648	2,320,082	57,609,585	55,938,024		
	Other Income	465	122	0	-122	#DIV/0!	0	0	0	0	0	0	0	0	0	0	465	-		
Net		(\$1,924,896)	(\$2,949,806)	(\$1,543,387)	\$1,406,419	-91%	(\$3,169,164)	(\$2,683,917)	(\$3,511,586)	(\$4,853,382)	(\$3,298,491)	(\$3,460,632)	(\$4,332,060)	(\$3,655,230)	(\$4,088,708)	(\$3,697,262)	(\$39,476,872)	(\$40,074,659)	Below budget by xx%	



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LEC Treasurer's Report

AGENDA ITEM NO .: ___

Date: October 7, 2014

To: LEC Project Participant Committee

Subject: Treasurer's Report for the Month Ended September 30, 2014

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 \$0.

The cash balance held at U.S. Bank includes outstanding checks that have not yet cleared.

<u>Investments</u> - The carrying value of the LEC's investment portfolio totaled \$31,342,952 at month end. The current market value of the portfolio totaled \$31,276,411.

The overall portfolio had a combined weighted average interest rate of 0.476% with a bond equivalent yield (yield to maturity) of 0.495%. Investments with a maturity greater than one year totaled \$17,340,000. During the month \$6 million was invested.

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

<u>Interest Rates</u> - During the month, rates on 90 day T-Bills decreased 2 basis points (from 0.03% to 0.01%) and rates on one year T-Bills decreased 1 basis points (from 0.11% to 10%).

To the best of my knowledge and belief, all securities held by LEC as of October 13, 2014, 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,

then

DONNA STEVENER Assistant General Manager/CFO Administrative Services/Finance

Attachments

Prepared by:

KEVIN W. WALLACE Treasurer-Controller

LODI ENERGY CENTER

TREASURER'S REPORT

SEPTEMBER 30, 2014

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DETAIL REPORT OF INVESTMENTS	APPENDIX

Northern California Power Agency/Lodi Energy Center Treasurer's Report Cash & Investment Balance September 30, 2014

	-		~~~~					INVESTMENTS
	<u> </u>	ASH	INV	ESTMENTS		TOTAL	PERCENT	at MARKET
MANDATORY FUNDS	•		•		•	.	0.0440/	0.444
Construction Revolving	\$	-	\$	3,441	\$	3,441	0.011% \$	3,441
Debt Service Account		-		8,846,767		8,846,767	28.226%	8,847,240
Debt Service Reserve		-		11,772,385		11,772,385	37.560%	11,719,883
O & M Reserve				10,649,534		10,649,534	33.977%	10,635,022
	·	<mark>ب</mark> .		31,272,127		31,272,127	99.774%	31,205,586
ADDITIONAL PROJECT FUNDS								
GHG-Cash Account				70,825		70,825	0.226%	70,825
	\$		\$	31,342,952	\$	31,342,952	100.000% \$	31,276,411

NOTE A -Investment amounts shown at book carrying value.

Northern California Power Agency/Lodi Energy Center Treasurer's Report Cash Activity Summary September 30, 2014

	RECEIPTS			EXPENDITURES		CASH
OPS/CONSTR	INTEREST (NOTE B)	INVESTMENTS (NOTE A)	OPS/CONSTR	INVESTMENTS (NOTE B)	INTER-COMPANY/ FUND TRANSFERS	INCREASE / (DECREASE)
	¢	*	¢	¢	¢	¢
-	» - 0	ə -	φ = -	پ (2,211,498)	ء 2,211,498	- 4
-	87	-	-	(87)	-	-
	10,667	5,978,934	#	(5,989,601)		
-	10,754	5,978,934	-	(8,201,186)	2,211,498	-
DS						
-	-	-	-	-	-	-
·	\$ 10,754	\$ 5,978,934	\$-	\$ (8,201,186)	\$ 2,211,498	\$
)PS/CONSTR - - - - - - - - - - - - - - - - - - -	RECEIPTS INTEREST)PS/CONSTR (NOTE B) - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	RECEIPTS INTEREST INVESTMENTS)PS/CONSTR (NOTE B) (NOTE A) - \$ - \$ - \$ - \$ - - \$ - \$ - - \$ - \$ - - \$ - \$ - - \$ - \$ - - \$ - \$ - - \$ 10,667 \$ 5,978,934 DS - - - - - \$ 10,754 \$ \$ - \$ 10,754 \$ \$	RECEIPTS INTEREST INVESTMENTS)PS/CONSTR (NOTE B) (NOTE A) OPS/CONSTR - \$ - \$ - - \$ - \$ - - \$ - \$ - - \$ - \$ - - \$ - \$ - - \$ - \$ - - \$ 10,667 5,978,934 - - 10,754 5,978,934 - - DS - - - - - - \$ 10,754 \$ 5,978,934 \$	RECEIPTS EXPENDITURES INTEREST INVESTMENTS INVESTMENTS)PS/CONSTR (NOTE B) (NOTE A) OPS/CONSTR (NOTE B) - \$ - \$ - \$ - - \$ - \$ - \$ - - \$ - \$ - \$ - - \$ - \$ - \$ - - \$ - \$ - \$ - - \$ - \$ - \$ - - \$ - \$ - \$ - - \$ 10,667 5,978,934 - \$ (8,201,186) DS - - - - - - - - \$ 10,754 \$ 5,978,934 \$ \$ \$ (8,201,186)	RECEIPTS EXPENDITURES INTEREST INVESTMENTS INVESTMENTS /PS/CONSTR (NOTE B) (NOTE A) OPS/CONSTR (NOTE B) - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - - \$ - \$ - \$ - \$ - \$ 10,667 \$,978,934 - \$ (8,201,186) \$ 2,211,498 DS - - - - - - - - - - \$ 10,754 \$ \$,978,934 - \$

NOTE A -Investment amounts shown at book carrying value.

NOTE B -Net of accrued interest purchased on investments.

Northern California Power Agency/Lodi Energy Center Treasurer's Report Investment Activity Summary September 30, 2014

					ION-CASH)	(NON-CASH)			INVEST	AEN	ENTS		
		S	OLD OR	DISC/(PREM)			N/(LOSS)			INCREASE /			
	PURCHASED	Μ	ATURED		AMORT	0	N SALE	TR	RANSFERS	(DECREASE)		
MANDATORY FUNDS													
Construction Revolving		\$	-	\$	-	\$	-	\$	-	\$	-		
Debt Service Account	2,211,498		-		332		-		-		2,211,830		
Debt Service Reserve	87		-		(159)		-				(73)		
O & M Reserve	5,989,601		(5,978,934)		(810)		-				9,858		
·	8,201,186	•	(5,978,934)		(637)		-		-		2,221,615		
ADDITIONAL PROJECT F	UNDS												
GHG Cash Account			-		-		-				-		
TOTAL	\$ 8,201,186	\$	(5,978,934)	\$	(637)	\$		\$	· · ·	\$	2,221,615		

Less Non- Cash Activity Disc/(Prem) Amortization & Gain/(Loss) on Sale

Net Change in Investment --Before Non-Cash Activity

<u>637</u> \$ 2,222,252

NOTE A -Investment amounts shown at book carrying value.

NORTHERN CALIFORNIA POWER AGENCY LODI ENERGY CENTER INTEREST RATE/YIELD ANALYSIS September 30, 2014

	WEIGHTED	
	AVERAGE	BOND
	INTEREST	EQUIVALENT
	RATE	YIELD
OVERALL COMBINED	0.476%	0.495%
Construction Revolving Acct	0.221%	0.221%
Funds:		
Debt Service Account	0.070%	0.071%
Debt Service Reserve	0.545%	0.571%
O & M Reserve	0.739%	0.764%
GHG Cash Account	0.221%	0.221%

KEY INTEREST RATES												
	PRIOR YEAR											
Fed Fds (Ovrnight)	0.09%	0.09%										
T-Bills (90da.)	0.01%	0.03%										
Agency Disc (90da.)	0.02%	0.03%										
T-Bills (1yr.)	0.10%	0.11%										
Agency Disc (1yr.)	0.13%	0.14%										
T-Notes (3yr.)	1.06%	0.61%										



Lodi Energy Center Total Portfolio Investment Maturities Analysis September 30, 2014

	0-7	8-90	91-180	181-270	271-360	1-5	5-10		
Туре	Days	Days	Days	Days	Days	Years	Years	Total	Percent
US Government Agencies		\$7.266	\$0	\$0	\$0	\$17.340	\$0	\$24.606	78.50%
US Bank Trust Money Market	5,631	+ · ,=			1 -	••••••	1 –	5,631	17.96%
Investment Trusts (LAIF)	1,107							1,107	3.53%
U.S.Treasury Market Acct. *	0							0	0.00%
U.S.Treasury Bill								0	0.00%
Certificates of Deposit	0							0	0.00%
Total Dollars	\$6,737	\$7,266	\$0	\$0	\$0	\$17,340	\$0	\$31,343	100.00%
Total Percents	21.50%	23.18%	0.00%	0.00%	0.00%	55.32%	0.00%	100.00%	

Investment are shown at Face Value, in thousands.

* The cash balance held at US Bank includes outstanding checks that have not yet cleared. This cash balance is invested nightly in a fully collateralized (U.S. Government Securities) repurchase agreement.

** Cash held by Union Bank of California is invested nightly in fully collateralized U.S. Treasury Securities.

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 09/30/2014

LEC Construction Revolving

lssuer	Trustee / Custodian	State	d Value	Interest Rate	Purchase Date	Purcha: Pric	sed ce	Maturity Date	Days to Maturity	Bond* Equiv Yield	Marke	t Value	CUSIP	Investment #	Carry	ing Value
Local Agency Investm			3,441	0.221	07/01/2013		3,441		1	0.221		3,441	SYS70040	70040		3,441
	Fund Total and Average	\$	3,441	0.221		\$	3,441		1	0.221	\$	3,441			\$	3,441
	GRAND TOTALS:	\$	3,441	0.221		\$	3,441		1	0.221	\$	3,441.			\$	3,441

*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 09/30/2014



Northern California Power Agency

Treasurer's Report

09/30/2014

LEC Issue#1 2010A DS Fund

EE0 13506#1 2010A	bollana								Bond*						
			Interest	Purchase	Purc	hased	Maturity	Days to	Equiv	Ma	rkot Voluo	CUSID	Investment #	Carryin	ng Value
Issuer	Trustee / Custodian	Stated Value	Raie	Date	r	rice	Date	Maturity	Tield	INIC	Ket value	CUSIF	Investment #	Carryn	ily value
US Bank Trust	USB	694,040	0.100	07/01/2013		694,040		1	0.100		694,040	SYS79003	79003	e	694,040
Federal Home Loan Ba	USBT	694,000	0.050	08/25/2014		693,906	12/01/2014	61	0.050		693,979	313385R57	26153	6	693,941
Federal National Mtg	USB	693,000	0.069	06/26/2014		692,787	12/01/2014	61	0.070		692,979	313589R54	26138	6	692,918
Federal National Mtg	USBT	693,000	0.060	07/25/2014		692,851	12/01/2014	61	0.060		692,979	313589R54	26142	6	692,930
	Fund Total and Average	\$ 2,774,040	0.070		\$	2,773,584		46	0.071	\$	2,773,977			\$2,	773,829
LEC Issue #1 2010E	3 DS Fund												-		
US Bank Trust	USB	732,380	0.100	07/01/2013		732,380		1	0.100		732,380	SYS79004	79004	7	732,380
Federal Home Loan Ba	USBT	733,000	0,050	08/25/2014		732,900	12/01/2014	61	0.050		732,978	313385R57	26154	7	732,938
Federal National Mtg	USB	732,000	0.070	06/26/2014		731,775	12/01/2014	61	0.070		731,978	313589R54	26139	7	731,913
Federal National Mtg	USBT	732,000	0.060	07/25/2014		731,843	12/01/2014	61	0.060		731,978	313589R54	26143		731,926
	Fund Total and Average	\$ 2,929,380	0.070		\$	2,928,898		46	0.071	\$	2,929,314		· · · · · · · · · · · · · · · · · · ·	\$2,	929,157
LEC Issue #2 2010/	A DS Fund														
US Bank Trust	USB	434,386	0.100	07/01/2013		434,386		1	0.100		434,386	SYS79011	79011		434,386
Federal Home Loan Ba	USBT	434,000	0.050	08/25/2014		433,941	12/01/2014	61	0.050		433,987	313385R57	26155		433,963
Federal National Mtg	USB	434,000	0.069	06/26/2014		433,867	12/01/2014	61	0.070		433,987	313589R54	26140		433,949
Federal National Mtg	USBT	434,000	0.060	07/25/2014		433,907	12/01/2014	61	0.060	•	433,987	313589R54	26144		433,956
	Fund Total and Average	\$ 1,736,386	0.070		\$	1,736,101	•	46	0.071	\$	1,736,347			\$1,	736,254
LEC Issue #2 2010	3 DS Fund														
US Bank Trust	USB	352,635	0.100	07/01/2013		352,635		1	0.100		352,635	SYS79012	79012	;	352,635
Federal Home Loan Ba	USBT	352,000	0.050	08/25/2014		351,952	12/01/2014	61	0.050		351,989	313385R57	26156	. :	351,970
Federal National Mtg	USB	351,000	0.069	06/26/2014		350,892	12/01/2014	61	0.070		350,989	313589R54	26141	:	350,958
Federal National Mtg	USBT	352,000	0.060	07/25/2014		351,924	12/01/2014	61	0.060		351,989	313589R54	26145	:	351,964
	Fund Total and Average	\$ 1,407,635	0.070		\$	1,407,403		46	0.071	\$	1,407,602			\$1,	407,527

	GRAND TOTALS:	\$	8,847,441	0.070	\$	8,845,986	46	0.071	\$ 8,847,240.	\$ 8,846,767
*Bond Equivalent Yield to Ma	aturity is shown based on a 365 (day year t oximate i	to provide a basis method, all others	s for comparison between a s use an exact method.	all types.					
Current Market Value is based	d on prices from Trustee/ Custo	dian State	ements or bid pri	ces from the Wall Street Jo	urnal as	of 09/30/2014				
									¢	



Northern California Power Agency Treasurer's Report

09/30/2014

LEC Issue #1 2010 DSR Fund

lssuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purcha Pric	sed ce	Maturity Date	Days to Maturity	Bond* Equiv Yield	Ma	rket Value	CUSIP	Investment #	Ca	arrying Value
US Bank Trust	USB	70,133	0.100	07/01/2013		70,133		1	0.100		70,133	SYS79005	79005		70,133
Federal Home Loan Mt	USB	4,181,000	0.580	05/30/2014	4	,183,927	08/26/2016	695	0.548		4,160,764	3134G56B6	26135		4,183,487
Federal National Mtg	USB	4,170,000	0.875	05/30/2014	4	,171,960	08/28/2017	1,062	0.977		4,141,978	3135GOMZ3	26136		4,171,757
	Fund Total and Average	\$ 8,421 <u>,13</u> 3	0.722		\$8	,426,020		871	0.757	\$	8,372,875			\$	8,425,377
LEC Iss#1 2010B E	BABS Subs Resv														
US Bank Trust	USB	2,260,692	. 0.100	07/01/2013	2	,260,692		1	0.100		2,260,692	SYS79006	79006		2,260,692
<u> </u>	Fund Total and Average	\$ 2,260,692	0.100		\$ 2	.,260,692		1	0.100	\$	2,260,692			\$	2,260,692
LEC Issue #2 2010	B DSR BABS														
US Bank Trust	USB	1,086,316	i 0.100	07/01/2013	. 1	,086,316		1	0.100		1,086,316	SYS79013	79013		1,086,316
	Fund Total and Average	\$ 1,086,316	0.100		\$ 1	,086,316		1	0.100	\$	1,086,316	i		\$	1,086,316
	GRAND TOTALS:	\$ 11,768,14	1 0.545		\$ 11	,773,028		624	0.571	\$	11,719,883.			\$	11,772,385

*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 09/30/2014


Northern California Power Agency Treasurer's Report

09/30/2014

LEC O & M Reserve

			Interact	Purchase	Purchased	Maturity	Days to	Bond*				
lssuer	Trustee / Custodian	Stated Value	Rate	Date	Price	Date	Maturity	Yield	Market Value	CUSIP	Investment #	Carrying Value
Local Agency Investm		1,032,613	0.221	07/01/2013	1,032,613		1	0.221	1,032,613	SYS70047	70047	1,032,613
Union Bank of Califo	UBOC	0	0.002	07/18/2013	0		1	0.002	O	SYS70041	70041	0
Federal Home Loan Mt	UBOC	632,000	0.140	10/31/2013	631,127	10/21/2014	20	0.142	631,994	313397L41	26066	631,951
Federal Home Loan Mt	UBOC	3,000,000	0.500	10/25/2013	2,992,800	06/06/2016	614	0.592	2,990,760	3134G46A1	26052	2,995,371
Federal Home Loan Mt	UBOC	2,992,000	0.800	09/23/2014	2,991,102	12/23/2016	814	0.813	2,988,559	3134G5HP3	26162	2,991,111
Federal Farm Credit	UBOC	2,997,000	1.220	09/23/2014	2,998,499	09/18/2017	1,083	1.202	2,991,096	3133EDV74	26161	2,998,487
	Fund Total and Average	\$ 10,653,613	0.739		\$ 10,646,141		708	0.764	\$ 10,635,022			\$ 10,649,533
	GRAND TOTALS:	\$ 10,653,613	0.739		\$ 10,646,141		708	0.764	\$ 10,635,022.			\$ 10,649,533

*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 09/30/2014



Northern California Power Agency

Treasurer's Report

09/30/2014

LEC GHG Auction Acct

			Interest	Purchase	Purchased	Maturity	Days to	Bond* Equiv Vield	Market Molue	CUSIB	investment#	Carol	ing Value
Issuer	Trustee / Custodian	Stated Value	Rate	Date	Price	Date	waturity	neiu	Warket value	CUSIF	investment#	Carry	ily value
Local Agency Investm		70,825	0.221	07/01/2013	70,825		1	0.221	70,825	SYS70046	70046		70,825
	Fund Total and Average	\$ 70,825	0.221		\$ 70,825		1	0.221	\$ 70,825			\$	70,825
	GRAND TOTALS:	\$ 70,82	5 0.221		\$ 70,825		1	0.221	\$ 70,825.			\$	70,825

*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 09/30/2014



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LEC Financial Reports

AGENDA ITEM NO.: _____

Date: October 8, 2014

Subject: September 30, 2014 Financial Reports (Unaudited)

NORTHERN CALIFORNIA POWER AGENCY LODI ENERGY CENTER STATEMENT OF NET POSITION UNAUDITED

	Septer	nber 30	
ASSETS	2014		2013
CURRENT ASSETS			
Cash and cash equivalents	\$ 70,825	\$	86,392
Interest receivable	8,683		6,188
Inventory and supplies - at average cost	1,307,240		990,780
Due from (to) Agency, net	14,367,613		15,680,337
TOTAL CURRENT ASSETS	15,768,246		16,763,697
RESTRICTED ASSETS			
Cash and cash equivalents	8,317,475		11,657,235
Investments	23,865,685		21,767,482
Interest receivable	6,585		16,078
TOTAL RESTRICTED ASSETS	32,189,745		33,440,795
ELECTRIC DI ANT			
ELECIRIC FLANI	122 272 867		122 254 800
	425,572,607		423,354,090
	(20,784,117)		(12,185,485)
IUIAL ELECIRIC PLANI	390,388,730		411,109,405
OTHER ASSETS			
Regulatory assets	13,389,713		11,559,738
TOTAL OTHER ASSETS	13,389,713		11,559,738
TOTAL ASSETS	\$ 457,936,454	\$	472,933,635

NORTHERN CALIFORNIA POWER AGENCY LODI ENERGY CENTER STATEMENT OF NET POSITION UNAUDITED

	Septer	nber 30	er 30		
	2014		2013		
LIABILITIES & NET POSITION					
CURRENT LIABILITES					
Accounts and retentions payable	\$ 32,259	\$	3,955,978		
Operating reserves	11,874,923		11,050,354		
Current portion of long-term debt	9,025,000		8,640,000		
Accrued interest payable	5,794,795		6,467,137		
TOTAL CURRENT LIABILITIES	26,726,977		30,113,469		
NON-CURRENT LIABILITIES					
Operating reserves and other deposits	981,859		86,392		
Regulatory liability	45,605,761		47,394,287		
Long-term debt, net	372,591,478		382,662,530		
TOTAL NON-CURRENT LIABILITIES	419,179,098		430,143,209		
TOTAL LIABILITIES	445,906,075		460,256,678		
NET POSITION					
Invested in capital assets, net of related debt	(5,495,040)		(13,477,131)		
Restricted	13,664,355		10,749,186		
Unrestricted	3,861,064		15,404,902		
TOTAL NET POSITION	12,030,379		12,676,957		
TOTAL LIABILITIES AND NET POSITION	\$ 457,936,454	\$	472,933,635		

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

	 Three Months Ended 2014	September 30 2013
SALES FOR RESALE		
Participants	\$ 9,252,574 \$	11,057,876
Other	15,744,057	14,539,250
TOTAL SALES FOR RESALE	 24,996,631	25,597,126
OPERATING EXPENSES		
Operations	13.582.243	9,169,716
Depreciation	3,649,762	3,649,611
Maintenance expenses	872,201	1,410,620
Administrative and general	1,005,043	1,179,265
Transmission	108,050	312,950
Intercompany (sales) purchases	 37,739	68,427
TOTAL OPERATING EXPENSES	 19,255,038	15,790,589
NET OPERATING REVENUES	 5,741,593	9,806,537
OTHER REVENUES (EXPENSES)		
Interest expense	(4,117,212)	(4,193,349)
Interest income	57,951	21,088
Amortization	-	(19,065)
Other	 (31,371)	356,060
TOTAL OTHER REVENUES (EXPENSES)	 (4,090,632)	(3,835,266)
FUTURE RECOVERABLE AMOUNTS	771,565	1,226,692
REFUNDS TO PARTICIPANTS	 65	0
INCREASE IN NET POSITION	2,422,591	7,197,963
NET POSITION		
Beginning of year	 9,607,788	5,478,994
End of period	\$ 12,030,379 \$	12,676,957

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Lodi Energy Center FY 2015 Operating Costs As of September 30, 2014

Notes

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	An	nual Budget		Actual		Remaining	YTD % Remaining
Routine O&M Costs							
Variable	\$	3,651,332	\$	252,000	\$	3,399,332	93%
Fixed		1,765,358		371,254	-	1,394,104	79%
Administration		1,250,914		304,062		946,852	76%
Mandatory Costs		220,000		44,971		175,029	80%
Inventory Stock		400,000		135,883		264,117	66%
Routine O&M Costs without Labor		7,287,604		1,108,170		6,179,434	85%
Labor		4,299,182		859,287		3,439,895	80%
Total Routine O&M Cost		11,586,786		1,967,457		9,619,329	83%
Other Costs							
Fuel		41,167,130		12,178,288		28,988,842	70%
CA ISO Charges		489,050		108,050		381,000	78%
Debt Service		26,437,890		6,609,474		19,828,416	75%
Insurance Other Cente		1,000,425		13,885		986,540	99%
Concration Services Shared		21,701		23,077		27,904	070/
Administrative & General (Allocated)		437,455		206 355		1 /32 200	83%
Power Management Allocated Costs		1,187,916		296,979		890,937	75%
Total O&M Cost		84,087,085		21,552,104	-	62,534,981	74%
Projects							
Operations & Maintenance		332,500		-		332,500	100%
Capital		4,658,760		5,088		4,653,672	100%
Maintenance Reserve		1,800,000		450,000		1,350,000	75%
Total Projects		6,791,260		455,088		6,336,172	93%
Annual Cost		90,878,345		22,007,192		68,871,153	76%
Less: Third Party Revenue							
Interest Income		44,489		13,379		31,110	70%
ISO Energy Sales		54,517,593		15,522,704		38,994,889	72%
Ancillary Services Sales		1,420,431		221,353		1,199,078	84%
		55 982 513		15 758 123		40 224 390	72%
Net Annnual Cost to Participants	\$	34,895,832	\$	6,249,069	\$	28,646,763	82%
Total Variable Costs		45 307 512		7 057 850		38 249 662	
Total Fixed Costs		45 570 833		6 382 300		39 188 434	
	\$	90,878,345	\$	13,440,249	\$	77,438,096	
	<u> </u>					, ,	
Net Cumulative Generation (MWh)		1,207,542		366,312			
Total O&M Cost Per MWh	\$	69.63	\$	58.84			
Net Annual Cost Per MWh	ŝ	28 90	ŝ	17.06			
	Ψ	20.90	Ψ	17.00			

Footnotes:

A - Expenditures for critical spare parts. Costs are expected to level out during the year.

B - Actual gas costs per mmBtu were higher than budgeted for September.

C - Insurance is paid annually in November.

D - Payments for annual bank trust fees.





Annual Budget LEC Generation Analysis Planned vs. Actual FY 2015



In MWh

			2013 NCP/	A All Resou	urces Bill Ll	EC GHG Co	mpliance In	strument D	etail Report					
					for the	Lodi Energy	/ Center							
							Actua	I						Compliance Year 2013
IDENTIFIER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	Total
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	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	
Monthly MT Emissions (MT)	0	31,455	38,321	47,417	50,484	12,175	30,721	46,128	35,720	34,463	36,697	39,114	51,160	453,856
Cumulative MT Obligation (MT)	0	31,455	69,776	117,193	167,677	179,852	210,573	256,701	292,421	326,884	363,581	402,696	453,856	453,856
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	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)	(113,590)	(75,269)	(41,496)	(96,012)	(134,469)	(134,376)	(89,848)	(156,328)	(134,459)	(97,762)	(58,647)	(53,777)	(53,777)

		2014 NCPA All Resources Bill LEC GHG Compliance Instrument Detail Report for the Lodi Energy Center														
				Act	ual					Estim	ated		Compliance Year 2014	Cumulative Totals		
IDENTIFIER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	Total	Total	Charge Code	Source
Energy (MWh)	136,604	156,089	120,489	55,378	71,210	51,037	118,473	69,006	100,100	107,885	96,207	103,992	1,186,469	2,397,413		Forecast/Meter
Gas Schedule (MMBtu)	951,700	1,092,730	858,805	391,272	512,068	371,695	836,762	496,327	700,697	755,195	673,447	727,946	8,368,644	16,931,968		Forecast/Meter
Emissions Factor (MT/MMBtu)	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053				MARS
Monthly MT Emissions (MT)	50,440	57,915	45,517	20,737	27,140	19,700	44,348	26,305	37,137	40,025	35,693	38,581	443,538	897,394		derived
Cumulative MT Obligation (MT)	504,296	562,211	607,728	628,465	655,605	675,304	719,653	745,958	783,095	823,120	858,813	897,394		897,394		derived
Compliance Instrument Participant Transfers (to LEC)																
Auction Allowances	102,347	50,000	48,066	25,000	1,290	138,448	0	0	13,586	0	0	0	378,737	839,370		CITSS
Secondary Market Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0	0		CITSS
Reserve Sale Allowances	0	0	0	0	0	0	0	0	0	0	0	0	0	0		CITSS
Offsets	0	0	0	0	0	0	0	0	0	0	0	0	0	0		CITSS
Total Compliance Instrument Participant Transfers (MT)	102,347	50,000	48,066	25,000	1,290	138,448	0	0	13,586	0	0	0	378,737	839,370		
NCPA Compliance Instrument Purchases (for LEC)																
Auction Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	47,000		CITSS
Secondary Market Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	0		CITSS
Reserve Sale Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	0		CITSS
Offset Purchases	0	0	0	0	0	0	0	0	0	0	0	0	0	0		CITSS
Total NCPA Compliance Instrument Purchases (MT)	0	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	0		CITSS
Total Monthly Activity (MT)	102,347	50,000	48,066	25,000	1,290	138,448	0	0	13,586	0	0	0	378,737	886,370		derived
Cumulative MT Account Balance [MTA] (MT)	609,980	659,980	708,046	733,046	734,336	872,784	872,784	872,784	886,370	886,370	886,370	886,370		886,370		derived
MTA Shortfall (MT)	(105,684)	(97,769)	(100,318)	(104,581)	(78,731)	(197,480)	(153,131)	(126,826)	(103,275)	(63,250)	(27,557)	11,024		11,024	MTA SHORTFALL	derived

Forecast for July-December 2014 has been updated.

NCPA All Resources Bill LEC GHG Obligation Detail Report (Cumulative) October 2014																
IDENTIFIER	AZUSA	BART	BIG	CDWR	GRI	HEA	LOD	LOM	MID	PLU	PWRPA	SNCL	UKI	TOTAL	Charge Code	Source
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%		MARS
Obligation Accounts																
Current MT Compliance Obligation (MTO) Balance (MT)	22,930	54,326	2,205	275,745	16,169	13,522	78,196	16,756	88,192	6,467	21,960	211,954	14,698	823,120		derived
Current MT Compliance Instrument Account (MTA) Balance (MT)	26,000	82,200	2,403	325,000	17,709	14,602	83,578	24,200	95,000	7,000	24,787	220,000	16,192	938,671		derived
MTA Shortfall (MT)	(3,070)	(27,874)	(198)	(49,255)	(1,540)	(1,080)	(5,382)	(7,444)	(6,808)	(533)	(2,827)	(8,046)	(1,494)	(115,551)	MTA SHORTFALL	Derived
Monthly GHG Price \$/MT	12.02	12.02	12.02	12.02	12.02	12.02	12.02	12.02	12.02	12.02	12.02	12.02	12.02	12.02	MTA SHORTFALL	ICE Index
GHG Minimum Cash Compliance Obligation (\$)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MTA SHORTFALL	Derived
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	Accounting
Net GHG Obligation (\$)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NET GHG OBLIG	Derived

* 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.: 9

Date: October 13, 2014

To: Lodi Energy Center Project Participant Committee

Subject: Control Components, Inc. Agreement for valve/vent maintenance/inspection services and valve spare part purchases

Proposal

Approve a Multi-Task General Services Agreement with Control Components, Inc. for an amount not-to-exceed \$400,000 over two years to be used for valve/vent maintenance/inspection services and valve spare part purchases as needed at all facility locations.

Background

Various valve/vent maintenance/inspection services and vale spare parts are required at the NCPA locations from time to time for operations and maintenance. Control Components, Inc. is a provider of these services and parts.

Control Components, Inc. is the original equipment manufacturer for the valves/vents covered under this agreement. Therefore, NCPA does not have additional agreements in place for similar services.

Fiscal Impact

Total cost of the agreement is not-to-exceed \$400,000 over two 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.

Recommendation

Staff recommends that the PPC pass a motion approving the Multi-Task General Services Agreement with Control Components, Inc., with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$400,000 over two years.

Prepared by:

MELISSA C. PHILPOT Material Procurement/Warehouse Coordinator Lodi Energy Center

Attachments: (1)

• Multi-Task General Services Agreement with Control Components, Inc.



MULTI-TASK GENERAL SERVICES AGREEMENT AND AGREEMENT FOR PURCHASE OF EQUIPMENT, MATERIALS AND SUPPLIES BETWEEN THE NORTHERN CALIFORNIA POWER AGENCY AND CONTROL COMPONENTS, INC.

This agreement for general services and purchase of equipment, materials, and supplies ("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 Control Components, Inc., a corporation with its office located at 22591 Avenida Empresa, Rancho Santa Margarita, CA 92688 ("Contractor") (together sometimes referred to as the "Parties") as of ______, 2014 ("Effective Date") in Roseville, California.

<u>Section 1.</u> <u>SCOPE OF WORK</u>. 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 (both services and goods collectively referred to as "Work" herein). Contractor shall be responsible at its sole expense for delivering the Goods, as further specified herein, to Agency's Project Site, DDP, and title shall not pass until the Agency accepts delivery at this Site. In the event of a conflict or inconsistency between the terms of this Agreement and Exhibit A, this Agreement shall prevail.

- **1.1** <u>**Term of Agreement.**</u> The term of this Agreement shall begin on the Effective Date and shall end when Contractor completes the Work, or no later than two (2) years from the date this Agreement was signed by Agency, whichever is shorter.
- **1.2** <u>Standard of Performance.</u> 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** <u>Assignment of Personnel.</u> 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 and shall have a reasonable time, but no longer than two (2) days, to replace any reassigned personnel.
- 1.4 <u>Request for Work to be Performed.</u> 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.

<u>Section 2.</u> <u>COMPENSATION.</u> Agency hereby agrees to pay Contractor an amount NOT TO EXCEED FOUR HUNDRED THOUSAND dollars (\$400,000.00) 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 <u>Invoices.</u> For Services: 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.

For Equipment: Contractor shall submit an invoice upon delivery of the Goods per the delivery terms of this Agreement.

Invoices shall be sent to:

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

- 2.2 <u>Monthly Payment.</u> Agency shall make payments, based on invoices received, for Work satisfactorily performed and for authorized reimbursable costs incurred, or for delivery of the Goods, per the delivery terms of this Agreement. 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. Prices of Goods specified in the applicable Purchase Order do not include taxes, duties or customs fees, which Contractor will itemize separately on its invoices. If Agency wishes to claim a tax exemption, Agency must provide Contractor with a tax exemption certificate acceptable to the relevant taxing authority for exemption from applicable state sales and use taxes. Except as otherwise specified under this Section 2.3, Contractor is solely responsible for the payment of all federal, state and local taxes, including employment taxes, incurred under this Agreement.

- 2.4 <u>Authorization to Perform Work.</u> 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 <u>Timing for Submittal of Final Invoice.</u> 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, or an additional thirty (30) day grace 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 <u>Workers' Compensation.</u> 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 <u>Commercial General and Automobile Liability Insurance.</u>

- **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, with a self-insured retention or deductible of no more than \$100,000. No endorsement shall be attached limiting the coverage.
- **4.2.2** <u>Automobile Liability</u>. 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, with a self-insured retention or deductible of no more than \$100,000. 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** <u>General Liability/Umbrella Insurance.</u> 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 Intentionally left blank.

4.4 <u>All Policies Requirements.</u>

- **4.4.1** <u>Verification of coverage.</u> 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 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 reduction in scope or amount, cancellation, or modification adverse to Agency of the policies referenced in Section 4.
- **4.5** <u>Waiver of Subrogation.</u> Contractor agrees to waive subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss except for Worker's Compensation Insurance. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation.
- **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 ensues 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 <u>Effect of Insurance.</u> 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 <u>Scope.</u> Contractor shall indemnify, defend, and hold harmless the Agency, and its officials, commissioners, officers, employees, and agents 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 to the percentage extent directly caused by any acts or omissions by Contractor, its officers, officials, agents, and employees, except as caused by the sole or gross 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.

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 <u>Contractor Not Agent.</u> 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** <u>Assignment and Subcontracting.</u> 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. The Agency shall consider any assignment request by Contractor in good faith. 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 and such written approval shall not be unreasonably withheld. 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 <u>Certification as to California Energy Commission.</u> If requested by the Agency, Contractor shall, at the same time it executes this Agreement, execute Exhibit C.

Section 7. LEGAL REQUIREMENTS.

- 7.1 <u>Governing Law.</u> The laws of the State of California shall govern this Agreement.
- 7.2 <u>Compliance with Applicable Laws.</u> Contractor and its subcontractors and agents, if any, shall comply with all laws applicable to the performance of the work hereunder.
- **7.3** <u>Licenses and Permits.</u> 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 <u>Work Requiring Payment of Prevailing Wages.</u> 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 <u>Termination</u>. 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, as well as compensation for

work performed prior to the notice of termination, including Agency's actual, direct, unavoidable costs resulting from such termination. "Actual, direct, unavoidable costs" include staff hours expended and materials acquired as of the date of termination, expenses incurred by reason of termination or cancellation of agreements between Contractor and its sub-suppliers, and other similar costs, but shall not include profit or overhead expenses of Contractor. Contractor shall make every reasonable effort to minimize such costs upon termination. In no event shall the compensation of Contractor provided for in this Section exceed the cost of the applicable Purchase Order(s).. Agency may condition payment of the compensation provided for in this Section 9.1 hereof).

- **8.2** <u>Amendments.</u> The Parties may amend this Agreement only by a writing signed by all the Parties.
- 8.3 <u>Survival.</u> 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 <u>Options upon Breach by Contractor.</u> 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 <u>Agency's Records.</u> 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, provided by Agency to Contractor 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 belonging to

Agency. Notwithstanding the preceding in this Section 9.1, all reports, in electronic or any other form, that Contractor prepares for Agency pursuant to a Purchase Order issued by the Agency, and that relate to the matters covered hereunder, which may include, but not be limited to, service reports, shall be the property of the Agency. Contractor hereby agrees to deliver these documents to the Agency upon completion of the Work in the corresponding Purchase Order.

- **9.2** <u>Contractor's Books and Records.</u> 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 by a third party auditor, 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 <u>Confidential Information and Disclosure.</u>

- **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 confident; 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.
- **9.5 Intellectual Property.** The intellectual property and any other proprietary information of Contractor incorporated into, or provided in conjunction with, the Work shall remain the exclusive property of the Contractor. Contractor hereby grants to Agency an irrevocable, royalty-free, non-transferable, non-exclusive license to such Contractor intellectual property and other proprietary information identified as or used in deliverables under the Purchase Order for the use, operation, maintenance, and repair of the Work and all parts or portions thereof. Any use of such intellectual property or other proprietary information, except for its intended use under this Agreement, shall be at the Agency's sole risk and without liability to Contractor.

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** <u>Use of Agency Equipment.</u> 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 <u>Nature of Work.</u> In addition to any and all warranties provided or implied by law or public policy, Contractor warrants that all Work shall be free from defects in design and workmanship, for a period of one hundred eighty (180) days from the completion of the Work 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. This Warranty expressly does not cover bolts, gaskets, packing, or similar goods required to inspect or maintain any part of the Work ("Soft Goods") to the extent damage to the Soft Goods occurs more than thirty (30) days after installation of the Soft Goods and results from (1) failure to keep the Work in good repair or (2) normal wear and tear.
- **11.2** <u>Deficiencies in Work.</u> In addition to all other rights and remedies which Agency may have, 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 one hundred eighty (180) day 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. In the event of a defect, Agency shall provide clear access to the Work at the installation site (including scaffolding) and any information available to support detecting the cause of the defect; provided, however, that Contractor shall be responsible for any cost related to uncovering, disassembly or reassembly of parts or hardware required for Contractor to perform its warranty obligations.

11.3 <u>Assignment of Warranties.</u> 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.

<u>Section 12.</u> <u>HEALTH AND SAFETY PROGRAMS.</u> 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** <u>Attorneys' Fees.</u> 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** <u>Venue.</u> 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** <u>Severability.</u> 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 <u>No Implied Waiver of Breach.</u> 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** <u>Successors and Assigns.</u> 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** <u>Conflict of Interest.</u> 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** <u>Contract Administrator.</u> 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 <u>Notices.</u> Any written notice to Contractor shall be sent to:

Control Components, Inc. Attention: Gil Ramirez 22591 Avenida Empresa Rancho Santa Margarita, CA 92688

Any written notice to Agency shall be sent to:

James H. Pope 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** <u>Integration; Incorporation.</u> 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** <u>Alternative Dispute Resolution</u>. 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** <u>Controlling Provisions</u>. 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** <u>Counterparts.</u> 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** <u>Construction of Agreement.</u> 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** <u>No Third Party Beneficiaries.</u> This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any non-signator third parties.
- **13.16** <u>Limitation of Liability.</u> Notwithstanding any other clause in this Agreement to the contrary, and except in the case of Contractor's gross negligence and/or willful misconduct, claims for personal injury including death, violation of laws or intellectual property infringement, Contractor's maximum aggregate liability for any and all other damages and losses shall not exceed the value of this Agreement as specified in Section 2.

Notwithstanding any other clause in this agreement to the contrary, neither Agency nor Contractor shall be liable to the other party for incidental, consequential or punitive damages or indirect losses of any kind, such as, but not limited to, loss of profit or revenue, loss of energy or production, loss of product or use, any costs of business interruption, loss of customers or contracts, costs of substitute energy and similar costs, regardless of which party caused any such damages or losses.

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

NORTHERN CALIFORNIA POWER AGENCY

CONTROL COMPONENTS, INC.

Date_____

Date _____

JAMES H. POPE, General Manager

SUKHJIT PUREWAL, Chief Financial Officer

Attest:

Assistant Secretary of the Commission

Approved as to Form:

Ruthann G. Ziegler, Assistant General Counsel

EXHIBIT A

SCOPE OF WORK

Control Components, Inc. ("Contractor") shall provide valve and vent maintenance services as requested by the Northern California Power Agency ("Agency").

Services to include, but not be limited to the following:

- System Valve Design & Performance Evaluations
- Inspections of Bypass System
- Conduct Root Cause Analysis on Valve Failures
- Onsite Training
- Miscellaneous Maintenance Services

At the request of Agency, Contractor shall also supply valve spare parts within agreed upon timeframe based upon approved detailed list of items on Purchase Order(s).

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 of this Agreement. The hourly rates and or compensation break down and an estimated amount of expenses is as follows:

This rates will remain valid through the end of 2014 and then a new rate sheet will be provided at the beginning of each New Year while this agreement is still effective.

Technician - DAILY:

	Rate - Supervisor	Rate - Technician
M-F (up to 8 hours)	\$1,735/day	\$1,475/day
Saturday (up to 8 hours)	\$2,335/day	\$1,985/day
Sunday & Holidays (up to 8 hours)	\$3,239/day	\$2,753/day

Technician – STAND BY:

	Rate - Supervisor	Rate - Technician
M-F (up to 8 hours)	\$1,335/day	\$1,135/day
Saturday (up to 8 hours)	\$1,735/day	\$1,475/day
Sunday & Holidays (up to 8 hours)	\$2,335/day	\$1,985/day

All inclusive <u>DAILY RATE</u> shall include all salary and overhead, local lodging, travel between the job site and local lodging, meals, and miscellaneous expenses. A day of service shall be defined as one, eight (8) hour onsite workday in which all CCI personnel are working normal shifts. A one day minimum applies. <u>An immediate service call under 48 hours is an additional 15% for all labor rates.</u> Hours over 12 will be charged as double time.

Hourly Rate Over 8 Hours Working Onsite:

	Rate - Supervisor	Rate - Technician
M-F (beyond 8 hours)	\$225/hour	\$192/hour
Saturday (beyond 8 hours)	\$338/hour	\$288/hour
Sunday & Holidays (beyond 8 hours)	\$495/hour	\$421/hour

** Second or more technicians will incur the Technician rate.

Round Trip	Mondays – Saturday	\$3,840
Round Trip	Sunday or Holiday	\$4,340

All inclusive <u>ROUND TRIP RATE</u> shall include all expenses traveling to and from the Field Service Technician's home base. It shall include all transportation (air and/or ground), parking, tolls, meals, and salary/overhead while traveling, and other miscellaneous associated with one round trip. CCI holidays applicable to holiday rates: New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving, Christmas Day, Day after Christmas.

Tool Box Freight: \$2,000 - \$3,000 Estimate

Specialty Tool Rentals: BTG Grinding Tool - \$150/day Seat Cut Out Tool - \$500/day

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,

(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

(Company name)

for contract work at

(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 ______, 20 _____, 20 _____,

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.

2308418.7



Lodi Energy Center Project Participant Committee

Staff Report

AGENDA ITEM NO.: 10

Date: October 13, 2014

To: Lodi Energy Center Project Participant Committee

Subject: Environex, Inc. Five (5) Year Multi-Task General Services Agreement for Catalyst Testing Services

Proposal

Approve a five year Multi-Task General Services Agreement with Environex, Inc. for an amount not to exceed Two Hundred Sixty Thousand Dollars (\$260,000) to be used for catalyst testing services at any of the NCPA Generation Services locations.

Background

Catalyst testing services are required at the plant facilities from time to time for operations and maintenance. Environex, Inc. provides these services.

NCPA has agreements in place with other contractors that provide some similar services including HRST, Inc. and Tetra Engineering. NCPA also routinely includes other consultants, with whom we do not have a preexisting agreement, on (RFP or bid) solicitations. NCPA will issue purchase orders based on cost and availability of the service(s) needed at the time.

Fiscal Impact

Total cost of the agreement is not-to-exceed \$260,000 over five years; all Purchase Orders issued pursuant to this agreement will be charged against existing and future approved Annual Operating 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 of the California Environmental Quality Act. No environmental review is necessary.

Recommendation

NCPA staff recommends that the PPC pass a motion approving the Multi-Task General Services Agreement with Environex, Inc., with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$260,000 over five years.

Prepared by:

MELISSA C. PHILPOT Material Procurement/Warehouse Coordinator Lodi Energy Center

Attachment: Multi-Task General Services Agreement with Environex, Inc.



MULTI-TASK GENERAL SERVICES AGREEMENT BETWEEN THE NORTHERN CALIFORNIA POWER AGENCY AND ENVIRONEX, INC.

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 Environex, Inc., a corporation, with its office located at 1 Great Valley Parkway, Suite 4, Malvern, PA 19355 ("Contractor") (together sometimes referred to as the "Parties") as of ______, 2014 ("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 <u>Term of Agreement.</u> 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** <u>Standard of Performance.</u> 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** <u>Assignment of Personnel.</u> 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 <u>**Request for Work to be Performed.</u>** 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.</u>

<u>Section 2.</u> <u>COMPENSATION.</u> Agency hereby agrees to pay Contractor an amount NOT TO EXCEED TWO HUNDRED SIXTY THOUSAND dollars (\$260,000.00) 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 <u>Invoices.</u> 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 <u>Monthly Payment.</u> 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 <u>Authorization to Perform Work.</u> 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 <u>Timing for Submittal of Final Invoice</u>. 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 <u>Workers' Compensation.</u> 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 <u>Commercial General and Automobile Liability Insurance.</u>

- **4.2.1** <u>Commercial General Insurance</u>. 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, with a self-insured retention or deductible of no more than \$100,000. No endorsement shall be attached limiting the coverage.
- **4.2.2** <u>Automobile Liability</u>. 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, with a self-insured retention or deductible of no more than \$100,000. 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** <u>General Liability/Umbrella Insurance.</u> 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.** I Contractor shall maintain professional liability insurance appropriate to Contractor's profession performing work in connection with this Agreement in an amount not less than one million dollars (\$1,000,000.00) and two million dollars (\$2,000,000) aggregate covering the Contractor's errors and omissions. Any deductible or self-insured retention shall not exceed two hundred fifty thousand dollars (\$250,000.00) per claim.

4.4 <u>All Policies Requirements.</u>

- **4.4.1** <u>Verification of coverage.</u> 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 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 reduction in scope or amount, cancellation, or modification adverse to Agency of the policies referenced in Section 4.
- **4.4.3** <u>Higher Limits.</u> If Contractor maintains higher limits than the minimums specified herein, the Agency shall be entitled to coverage for the higher limits maintained by the Contractor.
- **4.5** <u>Waiver of Subrogation.</u> 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 ensues 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 <u>Effect of Insurance.</u> 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 of every nature arising out of or in connection with any acts or omissions by Contractor, its officers, officials, agents, and employees, except as caused by the sole or gross 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.

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 <u>Contractor Not Agent.</u> 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** <u>Assignment and Subcontracting.</u> 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 <u>Certification as to California Energy Commission.</u> If requested by the Agency, Contractor shall, at the same time it executes this Agreement, execute Exhibit C.

Section 7. LEGAL REQUIREMENTS.

- 7.1 <u>Governing Law.</u> The laws of the State of California shall govern this Agreement.
- 7.2 <u>Compliance with Applicable Laws.</u> Contractor and its subcontractors and agents, if any, shall comply with all laws applicable to the performance of the work hereunder.
- **7.3** <u>Licenses and Permits.</u> 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 <u>Work Requiring Payment of Prevailing Wages.</u> 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 <u>Termination</u>. 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** <u>Amendments.</u> The Parties may amend this Agreement only by a writing signed by all the Parties.
- 8.3 <u>Survival.</u> 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 <u>Options upon Breach by Contractor.</u> 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** <u>Records Created as Part of Contractor's Performance.</u> 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.</u>
- **9.2** <u>Contractor's Books and Records.</u> 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 <u>Confidential Information and Disclosure.</u>

- **9.4.1** <u>Confidential Information.</u> 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 confident; 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 <u>Handling of Confidential Information</u>. 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** <u>Use of Agency Equipment.</u> 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** <u>Nature of Work.</u> In addition to any and all warranties provided or implied by law or public policy, 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.
- **11.2** Deficiencies in Work. In addition to all other rights and remedies which Agency may have, 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.
- **11.3** <u>Assignment of Warranties.</u> 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.

<u>Section 12.</u> <u>HEALTH AND SAFETY PROGRAMS.</u> 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** <u>Attorneys' Fees.</u> 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** <u>Venue.</u> 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** <u>Severability.</u> 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** <u>No Implied Waiver of Breach.</u> 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** <u>Successors and Assigns.</u> 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** <u>Conflict of Interest.</u> 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** <u>Contract Administrator.</u> 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** <u>Notices.</u> Any written notice to Contractor shall be sent to:

Environex, Inc. Attn: Joe Otto 1 Great Valley Parkway, Suite 4 Malvern, PA 19355

Any written notice to Agency shall be sent to:

James H. Pope 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** <u>Integration; Incorporation.</u> 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** <u>Alternative Dispute Resolution</u>. 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** <u>Controlling Provisions</u>. 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** <u>Counterparts.</u> 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** <u>Construction of Agreement.</u> 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** <u>No Third Party Beneficiaries.</u> 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_____

JAMES H. POPE, General Manager

DANIEL W. OTT, President

Date

ENVIRONEX, INC.

Attest:

Assistant Secretary of the Commission

Approved as to Form:

Ruthann G. Ziegler, Assistant General Counsel

EXHIBIT A

SCOPE OF WORK

Environex, Inc. ("Contractor") shall provide catalyst testing services on as requested by the Northern California Power Agency ("Agency") at any of its facilities.

Services to include, but not be limited to the following:

- SCR & CO Catalyst Testing
- System Inspection & Sampling
- Reporting

EXHIBIT B

COMPENSATION SCHEDULE AND HOURLY FEES

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

- Consulting \$200/hr
- Engineering \$95/hr
- Administrative \$60/hr
- Field Work/Time On-site \$1,500 per day plus expenses

*Travel expenses are billed at cost.

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, DANIEL W. OTT, President

(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 Environex, Inc

(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 ______, 20 _____, 20 _____,

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.





October 13, 2014

Lodi Energy Center Northern California Power Agency Operational Insurance Program Overview

Marsh Risk and Insurance Services Brian Cooney San Francisco, CA 94014



Lodi Energy Center Operating Insurance Programs



Lodi Energy Center Operating Insurance Property Program

NAMED INSURED Lodi Energy Center

POLICY PERIOD November 20, 2014 to November 20, 2015

PROPOSED"All Risk" of Property Damage including
Earth Movement, Flood, Boiler & Machinery

Terrorism (Optional)

Extra Expense/Replacement Cost Power (Optional)

Lodi Energy Center Operating Insurance Property Program

PROPERTY POLICY LOSS LIMIT

\$325,000,000 Per occurrence (excludes Time Element & Terrorism)

PRIMARY SUBLIMITS

\$25,000,000 Earth Movement per occurrence/annual aggregate

- \$25,000,000 Flood per occurrence/annual aggregate
- \$22,452,675 Extra Expense/Replacement Cost Power

Lodi Energy Center Operating Insurance Property Program

DEDUCTIBLES/TIME QUALIFERS

- \$1,000,000 Turbine Generator
- \$500,000 Each occurrence for "All Risk" Property Damage
- \$100,000 Flood
- 5% or \$250,000 Earthquake
- Min Greater of.
- \$50,000 Transit
- 12 Hours Service interruption



 VALUATION
 Property Damage – Replacement Cost

 Time Element/Replacement Cost Power—Actual Loss Sustained

 No Coinsurance or Margin Clauses

PREMIUM

PROPERTY	\$560,968				
	(.167 per \$100 Total Insured Value of \$335,306,524				
TIME ELEMENT	\$98,795				
	(.837 per \$100 Total Insured Value of \$11,810,555)				

Lodi Energy Center Operating Insurance Property Program Structure





Scope of Casualty Insurance

3rd Party Bodily Injury and Property Damage

Insurance coverage includes:

- ✓ General Liability
- ✓ Pollution Liability
- ✓ Automobile Liability
- ✓ Employer's Liability
- ✓ Employment Practices Liability

Lodi Energy Center Operating Insurance Casualty Program

Self Insured Retention

Limit of Liability

Each Occurrence General Aggregate - Annual \$35,000,000* \$70,000,000

*erodes General Aggregate



Lodi Energy Center Operating Insurance Casualty Program

CASUALTY PREMIUMS

Primary: \$ 35,000,000

\$93,183

Optional excess coverage indications from EIM:

LODI	AEGIS \$35M		EIM \$15M		\$35M		\$65M	
Premium**	\$	93,183	\$	60,000	\$	140,000	\$	260,000
Terrorism**	\$	1,864						
Total:**	\$	95,047	\$	60,000	\$	140,000	\$	260,000
**Surplus lines taxes and fees is 3.2% and is in addition to the above numbers								

Lodi Energy Center Operating Insurance Casualty Program Structure





Lodi Energy Center Project Participant Committee

Staff Report

AGENDA ITEM NO.: 11

Date: October 13, 2014

To: Lodi Energy Center Project Participant Committee

Subject: LEC Insurance Renewal

Background

The Agency utilizes the insurance brokerage services of Marsh, Inc., San Francisco, California to market and place the Agency's insurance programs. Each insurance policy and the related insurance market conditions are reviewed prior to the renewal date and remarketed as required to qualified insurers experienced in underwriting the applicable insurance risk.

<u>Proposal</u>

LEC Property Insurance Renewal

The replacement cost Property Insurance program renewal was successfully negotiated and secured for another year at the same limits for a premium (including taxes) of \$560,968, a decrease of \$21,484 or 5% compared to last year. Insured property values increased 1.4%.

Optional Business Interruption (Extra Expenses) coverage is also obtained at \$0.837 per \$100. It will incur additional premium of \$98,795 for the coverage of \$11,810,555 extra expenses for the replacement power during a covered loss.

LEC Excess Liability Insurance Renewal

The \$35 million Excess Liability Insurance program renewal was also secured for another year as expiring with the same insurer, American Electric & Gas Insurance Services (AEGIS), who continues to provide the best program at the most competitive pricing. The premium (including taxes and fees) was \$96,165, almost flat compared to last year premium of \$95,944.

LODI	AEGIS \$35M		EIM \$15M		\$35M		\$65M	
Premium**	\$	93,183	\$	60,000	\$	140,000	\$	260,000
Terrorism**	\$	1,864						
Total:**	\$	95,047	\$	60,000	\$	140,000	\$	260,000
**Surplus lines taxes and fees is 3.2% and is in addition to the above numbers								

Quotes for optional excess limits were also obtained. See below:

Excess limit coverage shown above is very expensive. Staff does not recommend increased coverage at this time.

Fiscal Impact

LEC insurance renewals have been accomplished within the Insurance Program budget. Total cost of the LEC project insurance is \$659,057. This project was included in the current fiscal year budget. Funds are available in the 924-009-000-190-070-010 (property insurance) and 925-009-000-190-070-010 (Liability insurance) accounts to fund this project. Cost allocation will be based on generation entitlement share.

Environmental Analysis

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

Recommendation

Approve the proposed insurance renewals. Accept and file this report.

Respectfully submitted,

Prepared by:

DONNA STEVENER Assistant General Manager/CFO Administrative Services/Finance RUI DAI Energy Risk Manager

Attachment

- LEC NCPA Insurance Program Overview 2015



PROPOSED

LEC PROJECT PARTICIPANT COMMITTEE

MEETING SCHEDULE 2015

January 12

February 9

March 9

April 13

May 11

June 8

July 13

August 10

September 14

October 12 (Columbus Day)

November 9

December 14

These dates are the second Monday of each month.

Technical Summary Report

of

Pacific Gas & Electric's

Planned Compressed Air Energy Storage Injection Well System

Near

Lodi, California

For

Northern California Power Agency

Prepared by:

Michael W. Bennett Professional Geologist Principal Hydrogeologist AECOM Technical Services, Inc.

August 21, 2014

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Purpose

The purpose of this technical review is to identify potential impacts to Northern California Power Agency's current Class I injection well system based on Pacific Gas & Electric proposed plans to construct and test a Class V Compressed Air injection well in the Lodi California area.

Background

The Northern California Power Agency (NCPA) owns and operates a Class I non-hazardous deep injection well system at the STIG Combustion Turbine Project #2 & Energy Center located in Lodi, California. The EPA-issued UIC Permit CA10910003 allows NCPA to construct and operate a Class I non-hazardous waste injection well facility consisting of two (2) new injection wells, known as the LEC-1 and LEC-2 wells and one (1) existing injection well known as the STIG-1 well for a maximum of three (3) injection wells. All three injection wells are to be on Northern California Power Agency's facilities. The permitted injection horizon for NCPA's injection wells is the lower sand member of the Domengine Formation at depths between approximately 4,234 and 4,507 feet below ground surface.

Pacific Gas & Electric (PG&E) has recently submitted an Underground Injection Control permit application to the EPA Region 9 office to install and operate a Class V test injection-withdrawal well associated with the PG&E's Compressed Air Energy Storage (CAES) feasibility project. This project is planned to be located at the King Island Gas Field approximately 2 miles southwest of the NCPA's Lodi Energy Center. Figure 1 shows the location of the proposed PG&E Class V injection well system in relation to completed gas wells and NCPA's Class I Injection Well system in the Lodi California area.

The proposed CAES project consists of a feasibility level investigation into the design, performance and reliability associated with using a depleted natural gas reservoir for compressed air storage. The proposed PG&E Class V injection/withdrawal well will be used to inject oxygen-depleted air < 5% oxygen, consisting mostly of nitrogen into the King Island natural gas reservoir consisting of the upper sand units of the Mokelumne River Formation to build an air bubble as part of a "Compression Test." During and after building the air bubble, a series of injection, shut in, and flow tests will be conducted for a period of up to 90 days to investigate the reservoir's performance for CAES application.

As part of the underground injection control (UIC) permitting process, PG&E's submitted application and supporting documents indicated that this project does not include construction of a permanent CAES facility, or a full-scale or long-term air injection and recovery well; rather, the project is a short term, scaled test to assess the properties of the proposed storage reservoir completed in the upper sand units of the Mokelumne River Formation and to evaluate the test results. Once these series of tests are completed the gas reservoir will be monitored

for approximately 6 to 9 months to determine post injection pressure conditions. This is a standard monitoring requirement for UIC regulated systems once the injection well is taken out-of-service or plugged and abandoned. Based on review and evaluation of the compression test and post monitoring data; the proposed Class V injection well will be shut-in and made inactive or plugged and abandoned in accordance with EPA requirements.

Scope

Based on PG&E's proposed CAES Compression Test using the upper sand units of the Mokelumne River Formation (a depleted gas reservoir) and its close proximity to NCPA's existing Class I injection well system; NCPA commissioned AECOM to provide a technical review of the planned CAES compression test and its potential impact on their existing injection well system. The following documents were part of the technical review of NCPA's existing Class I injection well system and PG&E's planned CAES feasibility project:

- NCPA's Permit application and supporting geologic and hydrogeologic information submitted to the EPA as part of the UIC Permit CA10910003.
- The general and specific conditions and minor modifications related EPA-issued UIC Permit CA10910003 to NCPA
- NCPA's final engineering and completion report submitted to EPA for STG-1 and LEC-1
- NCPA's Well Testing Report Lodi Facility Injection Wells (May 22, 2014)
- PG&E CAES Revised 1,444 page UIC Application and supporting documents dated April 18, 2014
- PG&E's Phase 1 Comment Response Matrix
- PG&E's Phase 2 Comment Response Matrix

Local Geology and Targeted Injection Zones

The targeted injection horizon identified for PG&E's Compression Test is the permeable sand units of the upper Cretaceous Mokelumne River Formation that occur at an elevation between 4,675 feet and 4,800 feet below ground surface. These sands are depleted-gas (water invaded) units that form the King Island gas reservoir with a net composite thickness ranging from about 80 to 220 feet. These permeable sand units occur at the top of an elliptical shaped erosional remnant of the upper Mokelumne River Formation that is approximately 230 acres in planview. The erosional remnant is surrounded on all sides by low permeable shales of the Paleocene Meganos Channel Fill and capped by the Eocene Capay Shale, which form impermeable (low permeability) boundaries along the top and flanks of the King Island erosional remnant (Figure 2). Underlying these productive sand units that define the gas reservoir are lower permeable inter-bedded sands, shales and siltstones of the Mokelumne River Formation that extend 1,000 feet vertically and grades into the H&T Shale Formation, which is considered a lower impermeable seal in this area.

The permitted injection horizon for NCPA's injection well system is the lower sand member of the Domengine Formation at depths between 4,234 and 4,507 feet below ground surface. The Domengine Formation overlies the Mokelumne River Formation separated by the low permeability sediments of the Capay Shale Formation.

The structure of the King Island reservoir and its interrelationship to surrounding rock units and NCPA's injection horizon completed in the overlying Domengine Formation is shown in Figure 3.

King Island Reservoir Gas Development History

The King Island reservoir had an estimated original gas in place of 13.8 billion standard cubic feet (Bscf) based on long-term gas production data. Natural gas production started in 1985 and continued to 2003 with 10.5 Bscf produced from this reservoir. The initial reservoir pressure (before gas production started) was approximately 2,080 pound per square inch (psi) and is believed to represent the normal hydrostatic gradient (pressure) for the upper reservoir sands of the Mokelumne River Formation. Information derived for California Department of Conservation, Division of Oil and Gas and Geothermal Resource (DOGGR) and included in PG&E's permit application indicate that reservoir pressure fell approximately 1,000 psi during gas production, which has allowed groundwater to migrate (invade) these reservoir sand units. Pressure data from proximal gas wells indicate the reservoir pressure is slowly increasing as a result of ground water movement suggests the upper sand units are hydraulically connected to a regional aguifer system within the Mokelumne River sedimentary units underlying the depleted gas reservoir sands. Information provided also indicates pressure within the reservoir sand units is steadily increasing from water invasion but remain below initial hydrostatic pressure at approximately 1,910 psi or 170 psi below initial reservoir pressure. The Capay Shale created an impermeable seal in which natural gas (methane) collected and stored under pressure for millions of years prior to extraction by natural gas production activities that occurred between 1980 and the present.

Proposed CAES Injection Pilot Project

The proposed CAES injection/withdrawal well will be constructed using multiple steel casings and completed using a tubing and packer design into the upper sand units of the Mokelumne River Formation. The lower completion will consist of 5 ½ inch premium stainless steel wirewrapped screen and back-filled with an artificial gravel pack. The upper completion will consist of 5 ½ inch carbon steel casing (J-55) threaded and coupled injection tubing and a Baker SC-1 packer installed within the 9 $^{5}/_{8}$ inch carbon steel injection casing (J-55). The annulus between the injection casing and tubing will be filled with a 4% KCL solution with corrosion inhibitor and biocide with annular pressure controlled using a nitrogen blanket. The proposed CAES injection/withdrawal well conforms to UIC requirements and is similar in design to NCPA's LEC-1 injection well (refer to Figure 4).

The CAES injection trial is expected to have injection flow rates up to 14 million standard cubic feet per day (Mscfd). During testing operations, approximately 560 Mscf of non-hazardous oxygen-depleted air will be injected. An additional 80 Mscf of ambient air may also be injected if favorable results from the oxygen-depleted air injection phase are determined. The net volume of air injected during testing operations considering volume of air withdrawn will be approximately 500 Mscf. Based on PG&E's volume calculations and assumed injection pressures, this would create a cone-shape air bubble with a maximum area of 27.8 acres and radius of 621 feet. The air bubble created during the compression test would occupy approximately 4 percent of the volume previously occupied by the natural gas in this reservoir.

The laboratory data provided for the air and oxygen depleted air indicate they are non-toxic and relatively chemically inert consisting primarily of nitrogen. The proposed compressed ambient air has the potential to oxidize metal (iron) bearing mineral present in the injection horizon sediment that could cause trace metal mobilization. PG&E indicates that the mineralogy of the Mokelumne River Formation consists of sands and clays and oxidization and trace metal mobilization "is not to be a significant process". However, further geochemical reaction modeling should be completed to evaluate mobilization of trace metals and dissolution and re-precipitation of minerals that may cause a reduction in porosity and/or permeability effecting pressure and injection capacity of the injection horizon.

Based on PG&E's submitted injection/withdrawal testing plan, the anticipated maximum bottom-hole pressure will not to exceed 2,500 psi (2,200 wellhead pressure). In addition, PG&E's modeling and permeability data indicate that the actual reservoir pressure associated with the proposed 14 Mscf/d flow rate are not expected to exceed a maximum bottom-hole pressure of 2,350 to 2,465 psi (2,050 to 2,165 psi wellhead pressure). Because the reservoir pressure has been reduced as a result of previous natural gas production; the anticipated injection well pressures within the reservoir are anticipated to be 60 to 130 psi over normal hydrostatic pressure. PG&E modeling also indicate that the duration of pressure increase within the injection horizon is expected to be limited because some of the pressure would be transmitted and equalized with the hydrostatic pressure of the underlying aquifers in the Mokelumne River Formation. As part of PG&E's supporting documents to their UIC permit application, the modeling simulations completed for the 90 day injection trial period assuming the most likely geologic scenario indicate short-term pressure increases above ambient

reservoir pressure at existing gas wells completed into the gas reservoir. These increases in pressure range from 175 psi (15 psi above normal hydrostatic gradient) at the Moresco A well to 250 psi (89 psi above normal hydrostatic gradient) at Piacentine 1-27 (see Figure 5). PG&E data collected during the drilling and testing of King Island Piacentine 2-27 well indicates that the Mokelumne River Formation sands located below the Capay Shale are under a different pressure domain than the overlying Domengine Formation sands (NCPA's Injection Horizon). These data suggests the Capay Shale currently forms an effective pressure barrier, which hydraulically isolates the upper sand units of the Mokelumne River Formation (PG&E's injection target) from the Domengine Formation (NCPA's injection horizon) and other overlying units.

PG&E's data shows that the Capay Shale that overlies the proposed injection zone is regionally extensive and consists of competent and lower permeability mudstone/claystone, which range in thickness from 90 to 120 feet in the vicinity of King Island. In addition, PG&E supporting documents suggests the Capay Shale has proven sealing capabilities because it has allowed natural gas accumulation in the upper sand units of the Mokelumne River Formation and held intact for millions of years. Therefore, they indicate it can also effectively isolate the planned injection of compressed air into the same sand units.

Additional core samples from the Capay Shale were obtained during the drilling of the Piacentine 2-27 well. The results from the laboratory tests show limited vertical permeability with a calculated harmonic mean value of 0.05 millidarcy (mD). In addition, the cap rock threshold pressure tests completed by Core Laboratories on three Capay Shale core samples at a confining stress of 2,600 psi showed no brine breakthrough occurred at a maximum injection pressure differential of 2,000 psi, which indicates it can act as an effective seal.

Lateral seals of the King Island reservoir are created by the Capay Shale that is draped over the Mokelumne River erosional island and by the Paleocene Meganos Channels shales that are laterally juxtaposed to the upper sand units of the Mokelumne River Formation. Shut-in tubing head pressure data taken in September 2005 from the King Island 1-28 well completed in the Meganos Channel gas reservoir sands are different than those from the Piacentine 1-27 well completed in the reservoir sands of the Mokelumne River Formation suggesting that these units are not hydraulically connected laterally.

The above information indicates the Capay Shale is a competent, impermeable overlying seal and differing pressure conditions exist between the Mokelumne River sands and lower sand member of the Domengine Formation. Also pressure data suggests that the Meganos Channel gas reservoir sand units are isolated laterally from the upper sand units of the Mokelumne River Formation. Therefore, the King Island reservoir, which will serve as the injection target for the CAES injection test is effectively sealed. Based on this assumption all pressure modeling simulations submitted to EPA in support of PG&E's Class V UIC Permit does not include model layers for the overlying Domengine Formation and "no flow" boundaries at the lateral edges of the upper sand units of the Mokelumne River Formation that form the proposed injection horizon.

CAES Injection Well System and Testing Plan

The proposed construction and testing plan includes the construction of a Class V injection well completed to a proposed depth of 4,675 to 4,800 feet in the upper 40 feet of the water invaded reservoir sands of the King Island reservoir. The proposed injection well will be located in the northern part of the King Island gas reservoir near the existing gas well identified as Piacentine 1-27. A core well identified as Piacentine 2-27 was drilled and tested in March 2013 to gather additional data on the proposed injection horizon and overlying rock formations. PG&E completed extensive petrophysical, geochemical and geomechanical analyses from core obtained from Piacentine 2-27 to better understand the site geology and determine ranges of values for use in their analytical and 3-D ground water flow/pressure analysis models.

Additional testing of the overlying Capay Shale and upper sand units of the Mokelumne River Formation are proposed during the drilling of the injection/withdrawal well to confirm hydraulic and water quality properties and to meet standard Federal UIC requirements. These tests include:

- Formation Property Testing that will include testing 30 sidewall cores for routine reservoir parameters
- Formation Fluid Testing to determine the physical and chemical/radiological properties of the formation of the injection horizon
- Step Rate Test to determine the formation parting/fracture pressure of the injection horizon and overlying seal.
- Fall-off Test to determine the in-situ reservoir characteristics that is used to determine in the calculation/confirmation of the Zone of Endangering Influence (ZEI)

The injection well system plans will also include surface conveyance piping, compression equipment and monitoring and safety instrumentation. Once the temporary surface facilities are installed, several months of compression and withdrawal cycling would occur to simulate the operation of a CAES facility.

The proposed compression testing program will inject oxygen-depleted air over a 65 day period in order to build an air bubble that is approximately 560 Mscf in size. The testing plan includes a series of sequential injection, pressure build-up, shut-in, pressure fall-off and potentially flow tests. The intent is to use collected test data to further assess the reservoir properties of the injection horizon and to refine computer models developed to support this project.

Operating conditions set maximum and minimum limit on injection flow and pressure. The ranges of injection flow and wellhead pressures are 4 to 14 Mscf per day and 1,650 to 2,200 psig, respectively. The maximum pressure will be monitored by a wellhead pressure sensor connected to a high pressure shut-down interlock system integrated in the operating control system. The maximum injection pressure is below the anticipated Maximum Allowable Injection Pressure (MAIP) of 3,150 psi using a fracture gradient of 0.67 psi/foot at a depth of 4,700 feet (top of the injection horizon) as compared to 0.70 psi/foot reported by the California Department of Conservation of Oil and Gas for wells completed at depths of 3,000 and 5,000 feet in the San Joaquin Valley. After the compression test is completed, the air bubble left in place in the injection horizon will not exceed 500 Mscf, which is 3 to 4 percent of the total volume of natural gas (13.8 Bscf) that previously occupied this reservoir.

The annular pressure will be monitored continuously during the 90 day trial and subsequent monitoring period to identify potential leaks in the injection tubing.

After the air bubble is created a series of pressure tests will be conducted and data collected from the injection well, and two proximal monitoring wells (Piacentine 1-27 and 2-27) will be used to assess the response of the injection horizon. During the 90 day compression test trial; the lateral and vertical bubble development will be monitored by performing periodic pulsed neutron logs in the proximal monitoring wells identified as Piacentine 1-27 and 2-27.

Potential Effects to NCPA's Class I Injection Well System

Based on the information provided in the reports reviewed as part of this task order, it appears that PG&E's planned 90 day compression trial to evaluate the application of CAES will pose only limited potential impacts to the operation of NCPA's existing Class I injection well system. The limited potential impacts to NCPA's injection wells system are summarized as follows;

- PG&E proposed injection well will be completed in the upper sand units of the Mokelumne River Formation. Based on a review of the data presented as part of the permit application indicates the Mokelumne River Formation is hydraulically isolated from the overlying Domengine Formation where NCPA's injection wells are completed.
- The King Island reservoir is an erosional remnant overlain by the Capay Shale and surrounded on all sides by the Meganos Canyon Fill consisting of low permeability sediments that provides an upper and lateral seal. The Capay Shale and Meganos Canyon Fill has effectively trapped and stored approximately 13.8 Bscf of natural gas
over several million years within the King Island reservoir. These seals would minimize the potential for upward and lateral migration of fluids as a result of the CAES injection trial.

- Gas production from the King Island reservoir has reduced the reservoir pressure below initial formation pressure by approximately 170 psi. Based on modeling presented under various reservoir conditions bottom-hole pressure at the injection well will increase 60 to 130 psi above the normal hydrostatic pressure for this unit.
- If the planned injection pressure is limited to a bottom-hole pressure of 2,500 psi; this pressure is below the estimated parting/fracture pressure of 3,150 psi reducing the potential to induce fracturing within the injection horizon and overlying seal to create a hydraulic connection to the overlying Domengine Formation.
- Based on an injection volume of 560 Mscf the resulting cone shaped air bubble within the Mokelumne River Formation would have a maximum area of 27.8 acres and radius of 621 feet from the injection well. The outer edge of this air bubble would remain within the boundaries of the erosional remnant that forms the King Island reservoir.
- The plugged and abandoned oil and gas wells within the Area of Review were identified and the cement plugs and abandonment fluids were evaluated. This evaluation concluded that the plugging material would have excess hydrostatic pressure to disallow upward fluid migration based on the modeled pressures as a consequence of the proposed 90 day injection trial at the King Island site. Based on this analysis, no correction action was submitted to EPA as part of PG&E's permit application.
- The Capay Shale which provides the upper seal to the King Island reservoir was evaluated using geophysical and laboratory core data. These data indicate the Capay Shale should provide an effective upper seal to the King Island reservoir based on the modeled pressure curves over the 90 day injection trial. Minor faulting and thinning of the Capay Shale were also evaluated related to the potential for upward fluid migration. The data submitted indicate that the thinning & faulting did not significantly reduce the seal capacity of the Capay Shale because under these geologic conditions it provided a sufficient seal for 13.8 Bscf of natural gas to accumulate and reside within the King Island reservoir.
- The modeled hydraulic pressure within the King Island reservoir as a result of the 90 day injection trial would be dissipated via underlying aquifers within the Mokelumne

River Formation limiting the potential for excess pressure build-up and upward movement of fluids into the overlying Domengine Formation.

Recommendations

- 1. Submit a request to EPA Region 9 to receive a draft of the PG&E injection/withdraw well construction and testing permit for review and comment prior to the issuance of the final permit.
- 2. Submit a request to EPA Region 9 to receive a copy of the EPA-issued Class V injection well construction and testing permit to determine general and specific conditions of the permit and to receive draft copies of proposed testing plans and schedules.
- 3. Submit a Request to EPA Region 9 for NCPA or its representative to receive drilling and testing data for review to ensure conformance with the general and specific conditions of the EPA-issued Class V injection well permit. Information received will also allow NCPA to determine if reservoir testing results are in general agreement with PG&E's pressure simulation models.
- 4. NCPA should monitor static pressure readings from one of their injection wells during PG&E's initial injection phase used to develop the 560 Mscf air bubble to determine if pressure effects are observed within the Domengine Formation.

Figures



Figure 1: Completed Wells in the vicinity of PG&E's planned CAES Injection Test Site (Source: PG&E's UIC Permit application submitted to EPA Region 9)



Figure 2: Stratigraphic Column for the King Island Reservoir (Source: PG&E's UIC Permit application submitted to EPA Region 9)



Figure 3: Stratigraphic and Structural East-West Cross Section of the King Island Reservoir and location of PG&E's injection/withdrawal well (Source: PG&E's UIC Permit application submitted to EPA Region 9)



ATTACHMENT M-1 - CONSTRUCTION DETAILS

Figure 4: Proposed CAES Injection/Withdrawal Well Design Details (Source: PG&E's UIC Permit application submitted to EPA Region 9)



Figure 5: Calculated Pressure Build-up Curves under a range of hydraulic conditions within the proposed injection horizon – Upper Sand Units of King Island Reservoir (Source: PG&E's UIC Permit application submitted to EPA Region 9)



LEC Raw Water Storage Report

- Raw Water Overview
 - Raw water supplied from White Slough Wastewater
 - Raw water is Title 22, tertiary treated
 - Currently there is no raw water storage tank at LEC
 - However, a 3 4 hour curtailment may be accommodated
 - Reliable supply for 2 Years, initial curtailments ended after COD
- NCPA Evaluation
 - Budgeted an Engineering Review for FY2014
 - Retained Worley Parsons for Evaluation

October 10, 2014



- Identify potential locations within plant boundaries
 - Determine maximum storage
 - Determine conceptual piping and electrical routing
 - Identify Pros and Cons
- Identify potential offsite locations
 - Evaluate various storage types such as tanks and ponds
 - Determine conceptual piping and electrical routing
 - Identify Pros and Cons
- Cost
 - Develop a +/-50% cost estimate for each option



Raw Water Storage Options

Tank Option	Location	Site	Gallons	Hours	Cost
A	West of Injection Well	Onsite	650k	6.1	\$1.2m
В	North of Storm Drain	Onsite	650k	6.1	\$1.1m
С	Southwest of Switchyard	Onsite	1.3m	12.1	\$2.1m
D	Southeast of Plant	Offsite	2m	18.2	\$3.0m
E	West of Switchyard	Offsite	2.6m	24.2	\$2.7m
F	Northeast of Plant	Offsite	2.6m	24.2	\$2.3m
G	Southease of Plant	Offsite	2.6m	24.2	\$2.7m
Pond Option	Location	Site	Gallons	Hours	Cost
A	West of Switchyard	Offsite	2.4m	24	\$1.7m
В	Northeast of White Slough	Offsite	2.4m	24	\$1.5m



Raw Water Storage Tank Options



October 10, 2014



Raw Water Storage Pond Options



October 10, 2014



Raw Water Storage Economics

- Assumptions
 - Build a 24 Hour Raw Water Capacity System, \$3M Cost
 - 30 Year Life, 5% Discount, 3% Inflation, \$1000 O&M Increase per Year
 - Potential Opportunity Cost Based is \$88k/Day, (May 2014)

Economic Evaluations

	Description	Yearly Lost Opportunity	NPV	IRR	Ave Annual Benefit	Payback	B/C Ratio
1	Twice/Year, High Revenue	\$176,000	\$385,979	6.0%	\$113,597	14	1.1
2	Twice/Year, Medium Revenue	\$80,000	(\$1,472,875)	0.4%	\$51,635	28	0.5
3	Once/Year, High Revenue	\$88,000	(\$1,317,970)	1.0%	\$56,798	26	0.6
4	Once/Year, Medium Revenue	\$40,000	(\$2,247,397)	-3.5%	\$25,817	30	0.3
5	Every Other Year, High Revenue	\$44,000	(\$2,169,945)	-3.0%	\$28,399	30	0.3
6	Every Other Year, Medium Revenue	\$20,000	(\$2,634,658)	-6.8%	\$12,909	30	0.1



Raw Water Storage Recommendation

- Low Risk 2 Years without raw water curtailment
- Low to Zero Economic Benefit
- Do not install additional raw water storage



EcoNomics

NORTHERN CALIFORNIA POWER AGENCY

Lodi Energy Center

Title 22 Water Storage Study

108010-00636 - LODI-2-LI-511-0001

September 2014

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PROJ	PROJECT 108010-00636 - LODI ENERGY CENTER WATER STORAGE STUDY											
REV	DESCRIPTION	ORIG	REVIEW	WORLEY- PARSONS APPROVAL	DATE	CLIENT APPROVAL	DATE					
0 ls	Issued for Information	NSSheh.			9/26/2014							
		N. Shah	R. Hill	R. Hill								



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APPENDIX 1 — LAYOUT DRAWINGS



1 PROJECT SCOPE

1.1 Project Overview & Scope of Work

Northern California Power Agency (NCPA) has asked WorleyParsons (WP) to perform conceptual level engineering and develop a budgetary cost estimate for additional raw water (Title 22) storage at Lodi Energy Center (LEC).

Raw water is currently supplied from the White Slough Wastewater facility adjacent to LEC. In the past, the waste water facility interrupted LEC operation due to water curtailments. With the potential of future curtailments, NCPA is seeking various conceptual alternatives and associated budgetary installed cost estimates for each alternative.

WorleyParsons (WP) scope of work includes:

- Identify potential locations within plant boundaries for water tank storage. Determine maximum storage capacity, determine conceptual pipe and electrical routing, and identify pros and cons for each potential tank location.
- Identify potential off-site locations for water storage on adjacent properties. Evaluate various storage types such as welded tanks or ponds. Determine maximum storage capacity, determine conceptual pipe and electrical routing, and identify pros and cons for each potential water storage type and location.

Scope also includes developing a +/-50% total installed cost estimate for each option described above.



2 STORAGE OPTIONS

2.1 Onsite Water Storage

The main benefit of onsite storage location is the logistics and pipe routing. However, onsite locations will have limited storage space and hence will have limited retention time. Based on discussion with NCPA, it was suggested that WP should target for 12 hours storage, where possible, at an assumed 1700 GPM flow rate for any onsite options.

Three potential onsite options for welded water storage tanks were considered as part of this study. Pros and cons of each option along with other technical details are listed below. Refer to Appendix A for details of these locations and preliminary pipe routing.

Tank Option A:

- Location: West of Injection Well
- One Tank 45' Dia. X 55' High
- Existing Raw Water pressurized pipeline will branch off near the existing storm drain oil/water separator and continue to new storage tank using 12" HDPE SDR 11 pipe. Valves will be added at this Tie-in Point (TP-2).
- Tank location is 20 feet west of well injection and 5 feet south of property boundary.
- Total 6 hour storage (for 1700 GPM flow rate)
- During water outage, new pumps (1 Operating + 1 Spare, 100 HP each) located near tank will provide water to existing mix water tanks at required pressure.
- Two new NEMA Size 4 FVNR Starters (1 for Operating Motor + 1 for Spare Motor) to be installed in spaces in 480V BOP MCC, 19BJA10GS001.

Tank Option B:

- Location: North of Storm Drain Oil/Water Separator
- One Tank 45' Dia. X 55' High
- Existing Raw Water pressurized pipeline will branch off near storm drain oil/water separator and continue to storage tank using 12" HDPE SDR 11 pipe. Valves will be added at this Tie-in Point (TP-2).



- This location was previously identified as future storage tank and best suited for this study.
- Total 6 hour storage (for 1700 GPM flow rate)
- During water outage, new pumps (1 Operating + 1 Spare, 100 HP each) located near tank will provide water to existing mix water tanks at required pressure.
- Two new NEMA Size 4 FVNR Starters (1 for Operating Motor + 1 for Spare Motor) to be installed in spaces in 480V BOP MCC, 19BJA10GS001.

Tank Option C:

- Location: Southwest of Switchyard
- Two Tanks 45' Dia. X 55' High each
- Existing Raw Water pressurized pipeline will branch off near raw water mix tank and continue to storage tanks using 12" HDPE SDR 11 pipe. Valves will be added at this Tiein Point (TP-4).
- This location is currently used as parking lot.
- Total 12 hour storage (for 1700 GPM flow rate)
- During water outage, new pumps (1 Operating + 1 Spare, 100 HP each) located near tanks will provide water to existing mix water tanks at required pressure.
- Two new NEMA Size 4 FVNR Starters (1 for Operating Motor + 1 for Spare Motor) to be installed in spaces in 480V BOP MCC, 19BJA10GS001.

NCPA can choose to have any combination of above options based upon onsite storage needs.

2.2 Offsite Water Storage

Another option is to have NCPA purchase or lease land outside of LEC plant boundaries for construction of raw water storage.

The main benefit of offsite storage is maximum storage capacity. However, offsite locations will have longer pipe and electrical runs and possibly logistical concerns such as right-of-ways for underground easements. Based on discussion with NCPA, it was suggested that WP should target for 24 hours storage at an assumed 1700 GPM flow rate for any offsite options.

Sections below outline tank and pond options for potential offsite locations.



2.2.1 Offsite Tank Storage

Four potential offsite options for welded water storage tanks were considered as part of this study. Pros and cons of each option along with other technical details are listed below. Refer to Appendix A for details of these locations and conceptual pipe routing.

Tank Option D:

- Location: Southeast of LEC Plant and South of White Slough Wastewater Plant
- Three Tanks 45' Dia. X 55' High
- Existing Raw Water pressurized pipeline will branch off near cooling water pumps and continue to storage tanks using 12" HDPE SDR 11 pipe. Valves will be added at this Tiein Point (TP-3).
- Total 18 hour storage (for 1700 GPM flow rate)
- During water outage, new pumps (1 Operating + 1 Spare, 100 HP each) located near tanks will provide water to existing mix water tanks at required pressure.
- Two new NEMA Size 4 FVNR Starters (1 for Operating Motor + 1 for Spare Motor) to be installed in spaces in 480V CT1 MCC, 19BJA30GS001.

Tank Option E:

- Location: West of Switchyard
- One Tank 100' Dia. X 45' High
- Existing Raw Water pressurized pipeline will branch off near raw water mix tank tie-in point and continue to storage tank using 12" HDPE SDR 11 pipe. Valves will be added at this Tie-in Point (TP-4).
- Total 24 hour storage (for 1700 GPM flow rate)
- During water outage, new pumps (1 Operating + 1 Spare, 100 HP each) located near tank will provide water to existing mix water tanks at required pressure.
- Two new NEMA Size 4 FVNR Starters (1 for Operating Motor + 1 for Spare Motor) to be installed in spaces in 480V BOP MCC, 19BJA10GS001.

Tank Option F:

- Location: Northeast of LEC Plant and Northeast of White Slough Wastewater Plant
- One Tank 100' Dia. X 45' High



- Existing Raw Water pumps will deliver water to this tank location using 12" HDPE SDR 11 pipe. Valves will be added at this Tie-in Point (TP-1).
- Total 24 hour storage (for 1700 GPM flow rate)
- During water outage, storage tank will provide water to existing raw water pump suction via gravity. This assumption needs to be further evaluated and confirmed during future phase of the project.

Tank Option G:

- Location: Southeast of LEC Plant and South of White Slough Wastewater Plant
- One Tank 100' Dia. X 45' High
- Existing Raw Water pressurized pipeline will branch off near cooling water pumps and continue to storage tanks using 12" HDPE SDR 11 pipe. Valves will be added at this Tiein Point (TP-3).
- Total 24 hour storage (for 1700 GPM flow rate)
- During water outage, new pumps (1 Operating + 1 Spare, 100 HP each) located near tank will provide water to existing mix water tanks at required pressure.
- Two new NEMA Size 4 FVNR Starters (1 for Operating Motor + 1 for Spare Motor) to be installed in spaces in 480V CT1 MCC, 19BJA30GS001.

Table 1 below summarizes both onsite and offsite tank storage options.

Table 2 represents preliminary calculations of new pump horsepower requirements for each option discussed above. WP has assumed 50% pump efficiency for this preliminary calculation.

Table 3 summarizes the electrical power circuits and routing required for each option.

Table 4 summarizes the instrumentation circuits and routing required for each option.



	TABLE 1: TANK STORAGE LOCATIONS (ONSITE AND OFFSITE)											
Tank Option	Site	Tank Location	No. of Tanks	Tank Dia. (ft)	Tank Height (ft)	Actual Water level, ft (3 ft Freeboard)	Total Water Volume, Gallons	Tank Volume, Gallons	Storage Time, hrs Based on 1700 gpm	Pipe Length to nearest Tie-In, ft	Pipe Diameter, inches	
А	Onsite	West of Injection Well	1	45	55	52	618,614	654,303	6.1	390	12	
В	Onsite	North of Storm Drain Oil/Water Separator	1	45	55	52	618,614	654,303	6.1	70	12	
с	Onsite	Southwest of Switchyard	2	45	55	52	1,237,228	1,308,607	12.1	280	12	
D	Offsite	Southeast of Plant near I-5	3	45	55	52	1,855,842	1,962,910	18.2	1080	12	
E	Offsite	West of Switchyard	1	100	45	42	2,467,407	2,643,650	24.2	520	12	
F	Offsite	Northeast of Plant near I-5	1	100	45	42	2,467,407	2,643,650	24.2	410	12	
G	Offsite	Southeast of Plant near I-5	1	100	45	42	2,467,407	2,643,650	24.2	1080	12	





	TABLE 2: PRELIMINARY PUMP CALCULATION (ONSITE AND OFFSITE)										
Route	GPM	Pipe Length, ft (New + Existing)	Pipe Diameter, inches	Elevation Difference, ft	Pressure Req'd at Mix Tank, psig	Friction Loss, ft 1.6 ft/ 100 ft	Pump TDH, ft	Pump Power, HP	Motor HP		
A-Raw Water Mix Tank	1700	940	12" HDPE	0	30	15.04	84.34	72	100		
B-Raw Water Mix Tank	1700	670	12" HDPE	0	30	10.72	80.02	69	100		
C-Raw Water Mix Tank	1700	280	12" HDPE	0	30	4.48	73.78	63	100		
D-Raw Water Mix Tank	1700	1230	12" HDPE	0	30	19.68	88.98	76	100		
E-Raw Water Mix Tank	1700	520	12" HDPE	0	30	8.32	77.62	67	100		
F-Pit	1700	410	12" HDPE	-5	0	6.56	0	0	0		
G-Raw Water Mix Tank	1700	1230	12" HDPE	0	30	19.68	88.98	76	100		





		TABLE	B: REQUIRED PUMP MOTOR P	OWER CIRCUI	TS FOR EACH OPTION
Option	Circuit	Cable	МСС	Compartment	Cable Routing
	Pump Motor 1 Power	3/C -#1/0 AWG	480V BOP MCC - 19BJA10GS001	06FA, 06FC	PU0231034, EMH-02, PU0211002*, Existing NCPA Vault, New U/G in piping trench to pump location
Δ	Pump Motor 1 Space Heater Power	3/C -#12 AWG	480V BOP MCC - 19BJA10GS001	06FA, 06FC	CU0231020, EMH-02, CU0111018, Field Route A/G conduit to new pipe trench, New U/G in piping trench to pump location
	Pump Motor 2 Power	3/C -#1/0 AWG	480V BOP MCC - 19BJA10GS001	08FH, 08FK	PU0231034, EMH-02, PU0211002*, Existing NCPA Vault, New U/G in piping trench to pump location
	Pump Motor 2 Space Heater Power	3/C -#12 AWG	480V BOP MCC - 19BJA10GS001	08FH, 08FK	CU0231020, EMH-02, CU0111018, Field Route A/G conduit to new pipe trench, New U/G in piping trench to pump location
	Pump Motor 1 Power	3/C -#1/0 AWG	480V BOP MCC - 19BJA10GS001	06FA, 06FC	PU0231034, EMH-02, PU0111027, Field Route A/G conduit
В	Pump Motor 1 Space Heater Power	3/C -#12 AWG	480V BOP MCC - 19BJA10GS001	06FA, 06FC	CU0231020, EMH-02, CU0111018, Field Route A/G conduit
	Pump Motor 2 Power	3/C -#1/0 AWG	480V BOP MCC - 19BJA10GS001	08FH, 08FK	PU0231034, EMH-02, PU0111027, Field Route A/G conduit
	Pump Motor 2 Space Heater Power	3/C -#12 AWG	480V BOP MCC - 19BJA10GS001	08FH, 08FK	CU0231020, EMH-02, CU0111018, Field Route A/G conduit
	Pump Motor 1 Power	3/C -#1/0 AWG	480V BOP MCC - 19BJA10GS001	06FA, 06FC	PU0231034, EMH-02, PU0211002*, Existing NCPA Vault, New U/G to pump location
C	Pump Motor 1 Space Heater Power	3/C -#12 AWG	480V BOP MCC - 19BJA10GS001	06FA, 06FC	CU0231020, EMH-02, CU0111018, Field Route A/G conduit to new U/G duct bank, new U/G to pump location
	Pump Motor 2 Power	3/C -#1/0 AWG	480V BOP MCC - 19BJA10GS001	08FH, 08FK	PU0231034, EMH-02, PU0211002*, Existing NCPA Vault, New U/G to pump location
	Pump Motor 2 Space Heater Power	3/C -#12 AWG	480V BOP MCC - 19BJA10GS001	08FH, 08FK	CU0231020, EMH-02, CU0111018, Field Route A/G conduit to new U/G duct bank, new U/Gto pump location
D	Pump Motor 1 Power	3/C -#1/0 AWG	480V CT1 MCC - 19BJA30GS001	17FA, 17FD	PU0511014, EMH-05, PU0521020, EMH-06, PU0631015, New U/G in piping trench to pump location





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	Pump Motor 1 Space Heater Power	3/C -#12 AWG	480V CT1 MCC - 19BJA30GS001	17FA, 17FD	CU0511007, EMH-05, CU0521011, EMH-06, CU0631008, New U/G in piping trench to pump location
	Pump Motor 2 Power	3/C -#1/0 AWG	480V CT1 MCC - 19BJA30GS001	17FG, 17FJ	PU0511014, EMH-05, PU0521020, EMH-06, PU0631015, New U/G in piping trench to pump location
	Pump Motor 2 Space Heater Power	3/C -#12 AWG	480V CT1 MCC - 19BJA30GS001	17FG, 17FJ	CU0511007, EMH-05, CU0521011, EMH-06, CU0631008, New U/G in piping trench to pump location
E	Pump Motor 1 Power	3/C -#1/0 AWG	480V BOP MCC - 19BJA10GS001	06FA, 06FC	PU0231034, EMH-02, PU0211002*, Existing NCPA Vault, New U/G to pump location
	Pump Motor 1 Space Heater Power	3/C -#12 AWG	480V BOP MCC - 19BJA10GS001	06FA, 06FC	CU0231020, EMH-02, CU0111018, Field Route A/G conduit to new U/G trench, new U/G to pump location
	Pump Motor 2 Power	3/C -#1/0 AWG	480V BOP MCC - 19BJA10GS001	08FH, 08FK	PU0231034, EMH-02, PU0211002*, Existing NCPA Vault, New U/G to pump location
	Pump Motor 2 Space Heater Power	3/C -#12 AWG	480V BOP MCC - 19BJA10GS001	08FH, 08FK	CU0231020, EMH-02, CU0111018, Field Route A/G conduit to new U/G trench, new U/G to pump location
F - Pit	Not Required				
	Pump Motor 1 Power	3/C -#1/0 AWG	480V CT1 MCC - 19BJA30GS001	17FA, 17FD	PU0511014, EMH-05, PU0521020, EMH-06, PU0631015, New U/G in piping trench to pump location
G	Pump Motor 1 Space Heater Power	3/C -#12 AWG	480V CT1 MCC - 19BJA30GS001	17FA, 17FD	CU0511007, EMH-05, CU0521011, EMH-06, CU0631008, New U/G in piping trench to pump location
0	Pump Motor 2 Power	3/C -#1/0 AWG	480V CT1 MCC - 19BJA30GS001	17FG, 17FJ	PU0511014, EMH-05, PU0521020, EMH-06, PU0631015, New U/G in piping trench to pump location
	Pump Motor 2 Space Heater Power	3/C -#12 AWG	480V CT1 MCC - 19BJA30GS001	17FG, 17FJ	CU0511007, EMH-05, CU0521011, EMH-06, CU0631008, New U/G in piping trench to pump location

*Conduit is listed as 0.3% filled on duct bank drawings.





	TABLE 4: REQUIRED PUMP MOTOR INSTRUMENTATION CIRCUITS FOR EACH OPTION										
Option	Circuit	Cable	DCS Connection	PDC	Cable Routing						
Δ	Pump Motor 1 Signals	TSP-8P-#16AWG Shielded	CTG PDC Control I/O Cabinet - 10CPC01	CTG PDC	LU0231004, EMH-02, LU0211001*, Existing NCPA Vault, New U/G in piping trench to pump location.						
	Pump Motor 2 Signals	TSP-8P-#16AWG Shielded	CTG PDC Control I/O Cabinet - 10CPC01	CTG PDC	LU0231004, EMH-02, LU0211001*, Existing NCPA Vault, New U/G in piping trench to pump location.						
D	Pump Motor 1 Signals	TSP-8P-#16AWG Shielded	CTG PDC Control I/O Cabinet - 10CPC01	CTG PDC	LU0231004, EMH-02, LU0111008, Field Route A/G conduit						
B	Pump Motor 2 Signals	TSP-8P-#16AWG Shielded	CTG PDC Control I/O Cabinet - 10CPC01	CTG PDC	LU0231004, EMH-02, LU0111008, Field Route A/G conduit						
C	Pump Motor 1 Signals	TSP-8P-#16AWG Shielded	CTG PDC Control I/O Cabinet - 10CPC01	CTG PDC	LU0231004, EMH-02, LU0211001*, Existing NCPA Vault, New U/G to pump location.						
	Pump Motor 2 Signals	TSP-8P-#16AWG Shielded	CTG PDC Control I/O Cabinet - 10CPC01	CTG PDC	LU0231004, EMH-02, LU0211001*, Existing NCPA Vault, New U/G to pump location.						
	Pump Motor 1 Signals	TSP-8P-#16AWG Shielded	Water Treatment Building Control I/O Cabinet - 10CPC02	Wtr Treat Bldg Elect Equip Rm	LU0511002, EMH-05, LU0521004, EMH-06, LU0631001, New U/G in piping trench to pump location						
D	Pump Motor 2 Signals	TSP-8P-#16AWG Shielded	Water Treatment Building Control I/O Cabinet - 10CPC02	Wtr Treat Bldg Elect Equip Rm	LU0511002, EMH-05, LU0521004, EMH-06, LU0631001, New U/G in piping trench to pump location						
F	Pump Motor 1 Signals	TSP-8P-#16AWG Shielded	CTG PDC Control I/O Cabinet - 10CPC01	CTG PDC	LU0231004, EMH-02, LU0211001*, Existing NCPA Vault, New U/G to pump location.						
	Pump Motor 2 Signals	TSP-8P-#16AWG Shielded	CTG PDC Control I/O Cabinet - 10CPC01	CTG PDC	LU0231004, EMH-02, LU0211001*, Existing NCPA Vault, New U/G o pump location.						





F - Pit	Not Required				
C	Pump Motor 1 Signals	TSP-8P-#16AWG Shielded	Water Treatment Building Control I/O Cabinet - 10CPC02	Wtr Treat Bldg Elect Equip Rm	LU0511002, EMH-05, LU0521004, EMH-06, LU0631001, New U/G in piping trench to pump location
G	Pump Motor 2 Signals	TSP-8P-#16AWG Shielded	Water Treatment Building Control I/O Cabinet - 10CPC02	Wtr Treat Bldg Elect Equip Rm	LU0511002, EMH-05, LU0521004, EMH-06, LU0631001, New U/G in piping trench to pump location

*Conduit is listed as 0.05% filled on duct bank drawings.



2.2.2 Offsite Pond Storage

Two potential offsite options for pond storage were considered as part of this study. Pros and cons of each option along with other technical details are listed below. Refer to Appendix A for details of these locations and conceptual pipe routing.

Proposed pond designs include sealed covers. However, there is still risk of animal species entering the ponds and creating a protected habitat. There are also on-going costs associated with chemical treatment of the ponds, in particular chlorination, that would be dependent on the amount of water usage and storage time.

Pond Option A:

- Location: West of Switchyard
- One pond 51,000 sq. ft. x 6.5 ft. deep; water storage volume 2,448,000 gallons
- Existing Raw Water pressurized pipeline will branch off near raw water mix tank tie-in point and continue to pond using 12" HDPE SDR 11 pipe (380' pipe length to tie-in point). Valves will be added at this Tie-in Point (TP-4).
- Total 24 hour storage (for 1700 GPM flow rate)
- During water outage, new pumps (1 Operating + 1 Spare, 100 HP each) located near pond will provide water to existing mix water tanks at required pressure.
- Two new NEMA Size 4 FVNR Starters (1 for Operating Motor + 1 for Spare Motor) to be installed in spaces in 480V CT1 MCC, 19BJA30GS001.
- Pump motor power and instrumentation circuits will be similar to Tank Option E.

Pond Option B:

- Location: Location: Northeast of LEC Plant and Northeast of White Slough Wastewater Plant
- One pond 55,000 sq. ft. x 6.0 ft. deep; water storage volume 2,448,000 gallons
- Existing Raw Water pumps will deliver water to this pond location using 12" HDPE SDR 11 pipe (300' pipe length to tie-in point). Valves will be added at this Tie-in Point (TP-1).
- Total 24 hour storage (for 1700 GPM flow rate)



• During water outage, storage pond will provide water to existing raw water pump suction via gravity through a deep trench. This assumption needs to be further evaluated and confirmed during future phase of the project.



3 COST ESTIMATE

WorleyParsons has prepared a high level budgetary cost estimate (+/- 50%) for the raw water system modifications. The intent of the estimate is to assist NCPA in their efforts to establish estimated project costs and budget data and determine the feasibility of this approach. Permitting and land use costs are not included.

3.1 Tank Pricing Basis and Assumptions

Tanks:	\$0.90/gallon for 45' x 55' welded tank, installed cost
	\$0.60/gallon for 100' x 45' welded tank, installed cost
Tank Foundations:	3' thick reinforced concrete mat foundation on compacted subgrade and 4" thick crushed aggregate base; 1-1/2" diameter x 4'-3" long ASTM F1554 Grade 55 anchors (24 ea. for 45' diameter tanks; 54 ea. for 100' diameter tanks)
Pipes & Trenches:	\$150/linear ft. including 12" HDPE SDR 11 pipe material, fittings, valves, trenching, cement-soil slurry backfill, paving demolition and repairs
Pumps:	\$400/HP + \$30,000 foundation allowance
Electrical Equipment:	Includes 480V motor starters, 600V power cables, twisted shielded pair instrumentation cable, 4" PVC schedule 40 conduit, and trenching (where not shared with pipe trench)

Security Fencing: Lump sum allowance for 6' barbed wire fence and gates

The table below represents budgetary cost estimates for welded tank options.





	TABLE 5: ESTIMATED BUDGETARY TOTAL INSTALLED COSTS FOR WELDED TANK OPTIONS											
Tank Option	Welded Tank	Tank Foundation	Pipe & Trench	Pumps & Foundations	Electrical Equipment	Security Fencing	Engineering Design	Total Cost	Cost per gallon			
A	\$590,000	\$245,000	\$58,500	\$110,000	\$46,754	\$0	\$150,000	\$1,200,254	\$1.94			
В	\$590,000	\$245,000	\$10,500	\$110,000	\$18,635	\$0	\$150,000	\$1,124,135	\$1.82			
с	\$1,180,000	\$490,000	\$42,000	\$110,000	\$171,884	\$0	\$150,000	\$2,143,884	\$1.73			
D	\$1,770,000	\$735,000	\$162,000	\$110,000	\$93,840	\$25,000	\$150,000	\$3,045,840	\$1.64			
E	\$1,590,000	\$540,000	\$78,000	\$110,000	\$164,509	\$25,000	\$150,000	\$2,657,509	\$1.08			
F	\$1,590,000	\$540,000	\$61,500	\$0	\$0	\$25,000	\$130,000	\$2,346,500	\$0.95			
G	\$1,590,000	\$540,000	\$162,000	\$110,000	\$94,684	\$25,000	\$150,000	\$2,671,684	\$1.08			



3.2 Pond Pricing Basis and Assumptions

Water storage ponds are assumed to include an engineered liner system with leak detection and a floating cover. WP included 10 ft. wide gravel-topped access roads at 1 ft. above the 100-year FEMA flood elevation as well as gravel-lined stormwater collection channels around the perimeters. Relocation of existing utilities or structures and groundwater mitigation is not included. Assumed sideslopes are 3H:1V. Permitting, land use, and operating costs such as chlorination are not included.

An engineered liner system will be constructed on the pond bottoms and sideslopes consisting of the following (top to bottom):

- Primary liner: 60-mil HDPE geomembrane, smooth on both sides
- Leak detection layer: HDPE bi-planar drainage net
- Secondary liner: 60-mil HDPE geomembrane; smooth both sides
- Tertiary liner: 12-inch thick low-permeability soil layer
- The liner system will be anchored in a 24-inch deep by 24-inch wide earthen-filled trench located five feet beyond the upper sideslope hinge point around the pond perimeter and inside the perimeter road.

It is anticipated that the low-permeability soil layer can be constructed by over-excavating in-situ soils at depth, moisture conditioning, and re-compacting the soils to a minimum of 95% relative compaction. The surface of the re-compacted soils will be prepared for the secondary liner by removing all rocks and protrusions greater than 0.25-inches and rolling the surface with a steel-drum roller.

The leak detection layer of the liner system will slope 1% to 5' x 5' x 12" deep sumps located around the perimeters. The leak detection layer, secondary liner and tertiary liner will line the sump bottoms. Above the drainage net, the sumps will be backfilled with washed, rounded pea gravel with a maximum size of 3/8-inch. The primary liner will extend over the pea gravel and up the sideslopes.

A 12" SDR 11 HDPE pipe riser will extend from within the gravel backfill (on the base of the sump), up the sideslope and will terminate with a capped end extending two feet above the upper sideslope hinge point. Each riser pipe will be between the primary and secondary geomembrane layers on the sideslopes and will be anchored in place with a sacrificial strip of HDPE geomembrane that extends over the pipe and is extrusion welded to the secondary geomembrane. Leak detection will be performed using a portable pump lowered down the pipe riser, avoiding a permanent pump and associated electrical/mechanical infrastructure.



An engineered cover system will be constructed as a floating cover over each pond. The cover system will be comprised of a CSPE (chlorosulfonated polyethylene) membrane, a polyester scrim-reinforced polypropylene membrane, or a performance-equivalent material. The cover system will be extended into the liner system anchor trench.

The water delivery and discharge system is the means by which the supply and suction pipes will penetrate the engineered cover system and be physically sealed to the membrane. Pipe penetrations will be sealed using prefabricated or field-fabricated pipe "boots" formed to fit around the pipes and also flare out to allow for continuous welding to the adjacent membrane. The pipe boots will be sealed to the pipes by installing a silicon gasket between the pipe and the boot and then installing stainless steel bands around the boots over the gaskets. The use of pipe boots can accommodate a wide range of entry/exit angles (pipe relative to the membrane).

TABLE 6: ESTIMATED BUDGETARY TOTAL INSTALLED COSTS FOR COVERED POND OPTIONS								
Pond Option	Covered Pond	Pipe & Trench	Pumps & Foundations	Electrical Equipment	Security Fencing	Engineering Design	Total Cost	Cost per gallon
A	\$1,150,000	\$57,000	\$110,000	\$164,509	\$75,000	\$180,000	\$1,736,509	\$0.71
В	\$1,200,000	\$45,000	\$0	\$0	\$75,000	\$150,000	\$1,470,000	\$0.60



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Appendix 1 — Layout Drawings


7	6	5	4

3

2

AREA

Α

В

SO.FT.

51,000

55,000

ASSOCIATED PIPE LENGTH TIE POINT TO TIE POINT

TP-4

TP-1

380′

300′

A

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ASSOCIATED PIPE LENGTH TIE POINT TO TIE POINT

TP-2

TP-2

TP-4

TP-3

TP-4

TP-1

TP-3

390′

70′

280′

1080′

520′

410′

1080′

2

TANK

Α

В C1, C2

Е

F

G

D1, D2, D3 45'

DIA

45′

45′

45′

100'

100'

100'