Lodi Energy Center Project Participant Committee

Operational Report

Agenda Item No.: 3

Date: 06/12/2017

To: Lodi Energy Center Project Participant Committee

Safety

- OSHA Recordable: 0 Accidents

Notice of Violations

- Permits: 1 Violations – As issued from the San Juaquin Valley Air Pollution Control District after reviewing the 10/20/2016 test results, "NOx exceeded the permitted emission limit in two of three test runs."
- NERC/WECC: 0 Violations

Outage Summaries:

Planned Outage Summaries:

- 2017 - Completed the planned outage for May. No major findings.

| Generating Unit Statistics: | | | **Report Date:** | 5/1/2017 |

Generating Unit Statistics:

1. Monthly Production   3,440   MWH
2. Productivity Factor
    a. Service Hours   23   Hours
    b. Service Factor   3.0   %
    c. Capacity Factor @ 280MW Pmax   1.7   %
    d. Capacity Factor @ 302MW Pmax   1.5   %
3. Equivalent Operating Availability (EOA)   12.9   %
4. Forced Outage Rate (FOR)
    a. Total LEC Plant FOR   0.0   %

5. Heat Rate Deviation
    a. Fuel Cost (Not Current Market Price)   4.00 $/mmBTU

MW Range		PMOA HR BTU/kW-Hr	Average HR BTU/kW-Hr	Deviation %	Production MWH	Cost $
Seg. 1	296 +	6850	0	0.00%	0	$0
Seg. 2	284 - 296	6870	0	0.00%	0	$0
Seg. 3	275 - 284	6971	7,013	0.60%	0	$0
Seg. 4	250 - 275	7081	7,023	-0.81%	0	$0
Seg. 5	225 - 250	7130	7,105	-0.35%	0	$0
Seg. 6	200 - 225	7200	7,185	-0.22%	0	$0
Seg. 7	175 - 225	7450	7,489	0.53%	0	$0
Seg. 8	165 - 175	7760	7,744	-0.21%	0	$0
		7,164	7,260	0.56%	**0**	**$0**

6. AGC Control Deviation

MW Range			High Dev MWH	Low Dev MWH	Total Dev MWH	Cost $
Bad AGC Data for May						
Seg. 1	296 +		0	0	0	$0
Seg. 2	284 - 296		0	0	0	$0
Seg. 3	275 - 284		0	0	0	$0
Seg. 4	250 - 275		0	0	0	$0
Seg. 5	225 - 250		0	0	0	$0
Seg. 6	200 - 225		0	0	0	$0
Seg. 7	175 - 225		0	0	0	$0
Seg. 8	165 - 175		0	0	0	$0
			0	**0**	**0**	**$0**

7. Starting Reliability

Start Type	Hot Starts	Warm Starts	Cold Starts
Number of Starts	0	1	2
Start Time Benchmark (Minutes)	75	110	200
Start Time Actual (Average Minute)	0	178	176
Start Time Deviation (%)	0%	62%	-12%
Start Fuel Benchmark PMOA (mmBTU)	1,300	1,800	3,500
Start Fuel Actual (Average mmBTU)	1,300	3,554	3,463
Fuel Deviation (%)	0%	97%	-1%
Costs of Fuel Deviations ($)	**$0**	**$7,017**	**-$148**

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