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MONTHLY REPORT AUGUST 2011

REPAIR AND REHABILITATION OF MUZAFFARGARH THERMAL POWER STATION

September 2011

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REPAIR AND REHABILITATION OF MUZAFFARGARH THERMAL POWER STATION

Contract No: AID-EPP-I-00-03-00004

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CONTENTS

- 1. [SUMMARY](#) 4
- 2. [PROGRESS ON MONITORING AND SUPPORT](#) 5
- 3. [CRITICAL ISSUES AND USAID/AEAI SUPPORT REQUIRED](#) 9
- 4. [ACTION ITEMS FOR NEXT MONTH](#) 9
- 5. [ANNEXURE](#) 9

1. SUMMARY

The report presents the progress on the repair and rehabilitation of Northern Power Company Limited (NPGCL) for the months of August 2011. A Senior Energy Expert from AEAI is in close contact with the Management of Muzaffargarh Power plant to get the current status of Repair and Rehabilitation works and provide support wherever needed in the implementation phase.

After a slow start, procurement of required items is accelerating after the amendment to the FARA that made the GENCO fully responsible for procurement. Rehabilitation work of the Boiler super heater tubes of Unit 1 & 2 has been completed on Apr 23, 2011. A total gain of 170 MW has been achieved on these two units. The work on unit 3 is in progress and is scheduled to be completed by September 15, 2011. A minimum gain of 60 MW is expected on this unit making a total gain on three units to 230 MW because of further de-rating of units prior to rehabilitation of these units.

Upon receipt of Air Pre-heater Elements for Unit No. 4 (FARA Line Item 11) at power station, Muzaffargarh requested to verify their claim for 90% amount. AEAI Expert visited the plant and inspected the material on August 5, 2011. But due to certain discrepancies found in the material received and the specifications given in FARA, NPGCL claim was not forwarded to USAID.

EMMPs for Muzaffargarh Thermal Power Plant Rehabilitation works has been prepared and sent to USAID for review.

A first reimbursement \$167,616 was paid in February 2011. A second reimbursement of \$3,734,384 was approved by USAID/ENR on 2/4/11 and disbursed on March 29, 2011, while the third reimbursement of \$562,500 was approved by USAID/ENR on 3/29/11 and has been deposited in GENCO's account on April 27, 2011. However total reimbursement claim of \$4,464,500 have been submitted and reimbursed in GENCO's account.

USAID Mission Director (Dr. Andrew Sisson) visited Muzaffargarh Thermal Power station on August 17, 2011. GTIP experts prepared a briefing memo, fact sheet, talking points, press release, and easel signs and banners for the visit. Mission Director checked the progress of the ongoing rehab works and discussed the problems. The newspaper report and the pictures are in Annexure.

There were complaints about the tendering process for fuel additives which were addressed to WAPDA, PPRA and Transparency International Pakistan. OIG requested USAID to assess the situation. GTIP experts assisted USAID to analyze the complaints and now the tender has been cancelled and is being re-invited.

In all, material of six lots has been received and five LOI and three POs have been issued. Twelve tenders have been opened and are in the process of evaluation. The tenders for the rest of the lots are either to be floated is floated.

2. PROGRESS ON MONITORING AND SUPPORT

Lot no.	Description of Work	COMPLETION DATES				Remarks
		FARA	NPGCL Scheduled	Last Month	Current Month	
1	Rehabilitation of Boiler Super Heater Tubes to Overcome Failure of Tubes Units 1,2&3	1-Jun-2011	21-May-2011	31-Oct-2011	31-Oct-2011	Equipment received at site in November 2010. Rehabilitation of Boiler No. 1&2 has been completed while Installation/Commissioning on no.3 will be completed by the September 15, 2011. A gain of 170 MW has already been achieved on two units. 90% Reimbursement Processed and received by NPGCL for US\$ 3,672,000 on March 29, 2011.
2	Replacement of Cold layer element for RAH for units 2&3 (item # 4)	30-Nov-2010	31-Aug-2011	30-Sep-10	30-Sep-10	Equipment received at site on July 9, 2010 and installed and tested in Sept 2010. Reimbursement processed and received by NPGCL for US\$170,000.
3	Air Pre-Heater Elements (Intermediate) 2 sets for Unit 4 (item # 11)	30-Sep-2010	3-Feb-2011	31-Aug-2011	01-Oct-2011	Material arrived at site. AEAI Expert visited the plant and inspected the material. But due to some discrepancies found in the material received and the specifications given in FARA, NPGCL claim was not forwarded to USAID.
4	I.D. Fan Rotor/Impeller along with Housing and Dampers (04 Set). Units 5&6 (item # 20)	31-Dec-2010	21-Jan-2011	01-Aug-2011	December, 2011	Material received at site on Feb 23, 2011. 90% reimbursement processed and received by NPGCL for US\$562,500.
5	MK Breakers, Seal Oil Coolers, PMG. Units 5&6 (item # 37)	28-Feb-2011	11-Jan-2011	30-Sep-2011	31 Oct, 2011	Consignments of 2PO's have been received and for one PO it is still remaining. NPGCL is considering to lodge partial claim as the third vendor is not responding.
Lot no.	Description of Work	COMPLETION DATES				Remarks
		FARA	NPGCL Scheduled	Last Month	Current Month	

6	Special Cooling Water Treatment. Units 1,2&3	31-Dec-2010	29-Jan-2011	Mar 01, 2012	May 31, 2012	Tender is to be opened on 03.10.2011
	Special Cooling Water Treatment as being used at IPP's. Unit 4	15-Nov-2010				
	Special Cooling Water Treatment as proposed for Units 5&6	15-Nov-2010				
7	Use of Fuel Oil Additive as on Unit-4 (200 Tons). Units 1,2&3	31-Dec-2010	6-Feb-2011	Jan 31, 2012	June 30, 2012	Previous tender has been cancelled and the new one, T-02 is to be opened on 08.10.2011
	Use of Fuel Oil Additive (100 Ton). Unit 4	31-Dec-2010	6-Feb-2011			
	Use of Fuel Oil Additive (150 Ton). Units 5&6	15-Nov-2010	6-Feb-2011			
8	Electric motor for C.T. Fan (02 No). Units 1,2&3	1-Apr-2011	8-Apr-2011	01-Mar-2012	31-May-2012	Tender No.1727 opened on 22.07.2010. L.O.I. has been issued on 30.06.2011.
	Electric motor for GRC fan. (01 No). Units 1,2&3	1-Feb-2011		01-Mar-2012	31-May-2012	
9	Re-blading of LP. Rotor (LP Turbine Rotor blades of row 6&7, pins & locking device) Item # 10	1-Sep-2011	1-May-2011	31-Mar-2012	30-Apr-2012	Purchaser Order for T-1730(A&B) issued on 27.08.2011 & 16.08.2011.
10	Training and Software/Hardware Cost for CMMS and Off-line Efficiency Monitoring System. All Units	30-Jun-2011	30-Jun-2011	31-Dec-2011	30-June-2012	Approval of MD PEPCO is being sought to float tenders.
11	IP Turbine Rotor (01 No). Units 5&	31-Aug-2011	7-Aug-2011	01-Mar-2012	01-April-2012	T-ICB-08 opened on 14.07.2011
	Turbo-Generator Bearings (09 Nos). Units 5&6 (One set of bearing for Turbine, Generator and Exciter consists of nine bearings	31-Aug-2011		31-Mar-2012	31-April-2012	T-ICB-11 opened on 30.07.2011.
Lot no.	Description of Work	COMPLETION DATES				Remarks
		FARA	NPGL Scheduled	Last Month	Current Month	

12	Modification of Excitation system (1 set). Unit 1,2&3 (Modification/up-gradation is required as the spare cards and components of electronic control circuitry have become obsolete)	31-May-2011	21-Mar-2011	31-Mar-2012	31-April-2012	T-ICB-09 Opened on 26.08.2011
	Up-gradation of AVR System (01 set). Unit 4	31-Aug-2011	21-Mar-2011			
	Modification of Excitation System (02 set) Units 5&6	July 31,2011	31-May-2011			
13	a. Procurement of Cooling Tower Fan Gear Box & its Parts. (06 No. gear box). Units 5&6	31-May-2011	31-May-2011	31-Oct-2011	31-March-2012	LOI No.1723 issued on 27.08.2011 Purchaser Order for Tender No.T-1747(A&B) issued on 02.8.2011 & 15.08.2011
	b. Procurement of 0.4KV Motors for Cooling Towers Fan and APH (02 No) Units 5&6	31-May-2011	31-May-2011		31-March-2012	
14	Up-gradation of Furnace safety Supervisory System (FSSS) (01 set). Unit 4	30-Sep-2011	23-May-2011	31-Mar-2012	31-April-2012	Demand sent to G.M.(Thermal) for Admn. approval of M.D. MZF-29 opened on 27.07.2011.
	Rehabilitation of Furnace safety Supervisory System (FSSS) including Furnace Camera, Flame Monitoring & Ignition System, Units 5&6	31-Jul-2011				
15	D.C. Storage Batteries (01 Set). Units 1,2&3 (item # 8)	31-Dec-2010	15-Oct-2010	30-Sept-10	30-Sept-10	Equipment received, and also installed/tested in Sept 2010. 100% Reimbursement made
Lot no.	Description of Work	COMPLETION DATES				Remarks
		FARA	NPGCL Scheduled	Last Month	Current Month	
16	220Kv Circuit Breaker SF6 type (06 No). Units 1,2&3	31-Dec-2010	17-Apr-2011	31-Mar-2012	31-May-2012	Tender opened on Aug 30, 2010. LOI has been issued on 30.7.2011.
17	Changing of UPS 1&2. (01 set), Unit 4	30-Apr-2011	21-Nov-2010	31-Mar-2012	30-June-2012	Previous tender scraped and new Tender No.ICB-18 to be opened on 12.10.2011.
18	Digital Electro Hydraulic System (DEH) (01 set). Unit 4	1-Sep-2011	9-Sep-2011	31-Mar-2012	31-Mar-2012	Demand sent to GM Thermal for Admn approval from MD PEPCO to float tenders.

19	Up-gradation of Turbine Supervisory Instrument System BNC 3300 (Turbine Supervisory Instrument) (01 set). Unit 4	30-Sep-2011	30-Sep-2011	31-Mar-2012	31-Mar-2012	Demand sent to GM Thermal for Admn approval from MD PEPCO to float tenders..
20	Air Preheater Elements Hot end, Intermediate & Cold End Layers along with Seals for both Units (04 Set). Units 5&6	1-Jul-2011	26-May-2011	31-Mar-2012	31-Mar-2012	T-ICB-07 opened on 05.07.2011 and the bids are under evaluation.
21	Procurement of G.R.C. Fan Impeller/Rotor (01 Set). Units 5&6	1-Jul-2011	25-Mar-2011	31-Jan-2012	31-Jan-2012	Tender opened on July 06, 2010. LOI issued on May 24, 2011. Purchase Order has been issued on 13.08.2011.
22	Economizer Tubes for both Units (02 Set). Units 5&6	31-Aug-2011	31-Aug-2011	15-Apr-2012	15-Apr-2012	Tender No. MZF-27 , Opened on 22.02.2011. and the file received after evaluation from RE-II on 1.8.2011 in Procurement Cell.
23	Replacement of Damaged Exhaust Flue Gas Ducts of Material Russian Grade Steel sheets (50 M.T), Units 5&6	31-Aug-2011	3-Aug-2011	31-Jan-2012	29-Feb-2012	T-ICB-03 retendered and tender was to be opened on 3.8.2011 but no firm participated in 2 nd opening. Now it is to be opened on 27.09.2011
24	Conversion of Boiler Ignition System from Natural Gas to HSD/Furnace Oil. Units 5-6	31-Aug-2011	30-June-2011	1-Mar-2012	1-Mar-2012	Tender opened on Jun 28, 2011 and is under evaluation.
Lot no.	Description of Work	COMPLETION DATES				Remarks
		FARA	NPGCL Scheduled	Last Month	Current Month	
25	Hydraulic coupling of Boiler Feed Water Pumps (01 No). Units 5&6	31-Mar-2011	6-Mar-2011	01-Mar-2012	01-Mar-2012	Tender No. T-ICB-04 opened on 06.08.2011.
26	Procurement of 6.6KV Motor for C.W. Pumps, CP, ID Fan, FD Fan & BFW Pumps (05 No). Units 5&6	31-Jan-2011	23-Apr-2011	01-Oct-2011	01-Jan-2012	Tender No.1738(A) opened on Sept 20, 2010. LOI has been issued on 15.08.2011.
27	Procurement of 6.6/0.4KV Breaker (5 No. 6KV breaker, 18Nos. 0.4Kv Breakers). Units 5&6	30-Apr-2011	30-Apr-2011	31-Mar-2012	31-Mar-2012	Tender T-ICB-10 opened on 23.07.2011
28	Protection Relay for Generators. Units 5&6	30-Apr-2011	1-Apr-2011	31-Mar-2012	31-Mar-2012	Tender T-ICB-05 opened on 7.6.2011 and is under process in procurement cell.

29	Supply, Installation, Commissioning & Testing of Complete Distribution Control system (DCS) including Field Equipment like Sensors, Transmitter & Actuators etc for Turbine Governing System DEH-III and Boiler Turbine Auto Regulation System YEWPACK-II, Units 5&6	31-Jul-2011	23-Apr-2011	31-Mar-2012	31-Mar-2012	Tender No. T-ICB-06 opened on 10.08.2011 and is under evaluation.
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3. CRITICAL ISSUES AND USAID/AEAI SUPPORT REQUIRED

Item no.	Critical Issues	Status/Mitigation Strategy	USAID/AEAI Support
1	Reimbursement of FARA item # 37	Material received at site on Feb 10, 2011 but was not up to the standard mentioned in FARA.	AEAI to inspect the equipment and check the standard of it.
2	Exemption from custom duties on procurement of all equipment under FARA	NPGL is pursuing Federal Board of Revenue for acquiring approval.	AEAI has provided NPGCL with requisite copy of the Assistance Agreement referred to in the FARA which explains the terms for exemption and will be used as the basis for exemption.

4. ACTION ITEMS FOR NEXT MONTH

- ✓ Provide support in conducting a credible baseline audit of NPGCL units to determine benchmark capacity and efficiency (heat rates) which would be utilized for comparison against operational improvements achieved when USAID's rehab assistance is completed.
- ✓ Follow-up on exemption from custom duties on procurement of equipment under FARA.

5. ANNEXURE





THE EXPRESS TRIBUNE - 18th August, 2011

POWER STATION: REPAIR WORK TO INCREASE POWER BY 400MW

Published: August 18, 2011

KARACHI: Power production at the thermal power station in Muzaffargarh will increase by 400 megawatts to its maximum capacity of 1,110MW following a repair project by USAID. The project will provide electricity to more than 500,000 homes in Southern Punjab.

The United States Agency for International Development (USAID) Director for Pakistan, Andrew Sisson, said Muzaffargarh power plant is part of Pakistan's vital infrastructure that will once again generate energy for industries, businesses and homes. "I am happy that the plant has already regained some of its lost capacity," he added.

In addition to Muzaffargarh, USAID is helping to repair the thermal plants in Jamshoro as well the Tarbela hydro-plant. USAID is also funding the completion of the Gomal Zam and Satpara dams, as well as the replacement of 11,000 tube-wells with more energy efficient models. Together, these projects will add an estimated 700MW power to the national grid, which will address nearly 15 percent of Pakistan's current energy shortage by the end of 2012. APP

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