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MONTHLY REPORT JULY 2011

REPAIR AND REHABILITATION OF MUZAFFARGARH THERMAL POWER STATION

August 2011

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REPAIR AND REHABILITATION OF MUZAFFARGARH THERMAL POWER STATION

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1. SUMMARY

The report presents the progress on the repair and rehabilitation of Northern Power Company Limited (NPGCL) for the months of July 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.

After a slow start, procurement of required items are 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 & 3 has been completed on Apr 23, 2011. This gives a gain of 60 MW as before the rehabilitation the unit was running at 120 MW but now unit is sharing 180MW with the system.

Spares for Boiler Auxiliaries, item no.11 of FARA for Unit no 4 have been received at Muzaffargarh power station, on July 22, 2011. GTIP representatives have scheduled the visit for verification of equipment which is delayed because of travel restrictions on foreigners. Either an NOC will be obtained from the GOP or a Pakistani expert will be sent for verification. Further ID Fan for unit 5 & 6 has been installed.

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.

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.

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 completed other Installation/Commissioning and Testing will be completed by the Nov 30, 2011 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	PO placed on Nov 29, 2010 and L/C opened on Feb 8, 2011. Material arrived at site. AEAI expert will visit in the first week of August and certify the equipment.
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-Jul-2011	01-Aug-2011	PO placed on June 21, 2010 and Letter of Credit established in Aug 2010. Material received at site on Feb 23, 2011. 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	31-Aug-2011	30-Sep-2011	Consignment of 2PO's is received and one is remaining.
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	Mar 01, 2012	Tenders to be opened in August 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	Jan 31, 2012	Tenders opened in June 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-Jan-2012	Tender opened on July 22, 2010. File sent to CEO for approval of placing PO.
	Electric motor for GRC fan. (01 No). Units 1,2&3	1-Feb-2011		31-Jan-2012	01-Mar-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	Tender opened on July 15, 2010. File received back from CEO in June 2011 for attending queries.
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	31-Dec-2011	Case is under process by Director (MMS).
11	IP Turbine Rotor (01 No). Units 5&	31-Aug-2011	7-Aug-2011	01-Mar-2012	01-Mar-2012	Tenders to be opened on Jul 14, 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-Mar-2012	
Lot no.	Description of Work	COMPLETION DATES				Remarks
		FARA	NPGCL 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-Mar-2012	Tenders to be opened on Jul 19, 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-Oct-2011	a. Tender opened on July 19, 2010. File received back after attending the observation raised by CEO. b. Tender opened on Nov 30, 2010 and LOI issued on May 25, 2011.
	b. Procurement of 0.4KV Motors for Cooling Towers Fan and APH (02 No) Units 5&6	31-May-2011	31-May-2011		01-Dec-2011	
14	Up-gradation of Furnace safety Supervisory System (FSSS) (01 set). Unit 4	30-Sep-2011	23-May-2011	31-Mar-2012	31-Mar-2012	Demand sent to GM Thermal.
	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. Reimbursement Claim is in process with OFM for US\$ 54,000.
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-Mar-2012	Tender opened on Aug 30, 2010. File sent for financial vetting on Jun 28, 2011.
17	Changing of UPS 1&2. (01 set), Unit 4	30-Apr-2011	21-Nov-2010	31-Mar-2012	31-Mar-2012	Demand is in process.
18	Digital Electro Hydraulic System (DEH) (01 set). Unit 4	1-Sep-2011	9-Sep-2011	31-Mar-2012	31-Mar-2012	Tenders opened by NPGCL in Feb 2011. Demand sent to GM Thermal.
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.
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	Tender to be opened on Jul 05, 2011.
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.
22	Economizer Tubes for both Units (02 Set). Units 5&6	31-Aug-2011	31-Aug-2011	15-Apr-2012	15-Apr-2012	Tender opened in Feb 2011 and is under evaluation with end user.

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	Tender to be opened on Aug 3, 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.
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 to be opened on Aug 6, 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 opened on Sept 20, 2010. Case sent to CEO on Jun 27, 2011 for approval to place PO.
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	Split into two tenders, one opened in Mar 2011 and is under evaluation while the other one will be opened on Jul 23, 2011.
28	Protection Relay for Generators. Units 5&6	30-Apr-2011	1-Apr-2011	31-Mar-2012	31-Mar-2012	Tender opened on Jun 07, 2011.
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 to be opened on Aug 10, 2011.

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	NPGCL 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.

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