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USAID ENERGY POLICY PROGRAM

MONTHLY REPORT - IV DECEMBER 2010

REHABILITATION OF TARBELA HYDROPOWER PLANT

USAID: TARBELA FIXED AMOUNT REIMBURSEMENT AGREEMENT
NO. 391-TDR-FARA-002-00

December 2010

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1. SUMMARY

The report presents progress on monitoring and support for Tarbela Rehabilitation program for the month of December 2010. Overall there are no delays in the critical items like generator windings; however, SCADA system and Governors are on critical path and may be delayed in case the procurement process is not expedited by WAPDA. The first Winding for Unit 4 is scheduled to arrive at Karachi port on Jan 2, 2011 and is expected to arrive at Tarbela by end January 2011. Unit 4 was shutdown on Nov. 22, 2010 and the dismantling of generator stator winding was immediately started. At present, the old winding has been removed and the cleaning of unit is in progress. Shop Testing and Inspection of the winding was carried out in Japan by a team of WAPDA Engineers in September 2010. Tarbela staff got necessary exemption of custom duties from Federal Board of Revenue and the Unit 4 Winding will be released by custom authorities without payment of duties.

The remaining two windings for Unit 1 and Unit 3 are scheduled for shipment in January and March 2011. Purchase orders were issued for the drainage pumps and Relief and bypass valve seals after approval from CCC.

During EP Experts visit to the Tarbela power station on Dec 31, 2010 baseline data for units 1, 3 and 4 was collected to assess the present generation capacity before rehabilitation and the energy gain after the rehabilitation of units 1, 3 and 4, so that the total energy gain after the completion of rehabilitation program can be determined. Based on the data collected, the estimated overall improvements in generation is expected to be 163 MW.

2. PROGRESS ON MONITORING AND SUPPORT

Lot no.	Description of Work	COMPLETION DATES				Remarks
		FARA	Tarbela Schedule	Last Month	Current Month	
1	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#4	May 31, 2011	May 31, 2011	May 31, 2011	May 31, 2011	Unit #4 Winding has arrived at Tarbela on 24 th Jan. The installation of new winding has been started as per schedule. Reimbursement claim is under submission to USAID
2	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#1	Dec 31, 2011	Nov 30, 2011	Nov 30, 2011	Sep 30, 2011	Manufacturing of unit #1 winding completed and was released for shipment. The expected arrival date at Karachi port is first week of Feb 2011. Wapda has requested shutdown to start dismantling of existing winding.
3	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#3	Sept 30, 2011	Dec 31, 2011	Dec 31, 2011	Completion is expected as per FARA schedule. Dec 31, 2011	Shipment from vendor is planned during mid March 2011.
4	Upgrading of the SCADA System, Units 1-14	Dec 31, 2011	Dec 31, 2011	Dec 31, 2011	Completion is expected as per FARA schedule. Dec 31, 2011	Bid evaluation is complete. CCC vetting is currently under progress. WAPDA shall expedite to obtain CCC approval and the case has been sent for L/C approval on 19.01.2011.
5	Spare Seals & Guides for Relief and Bypass Valves on Turbine Side, Units 1-10	Oct 01, 2011	Dec 15, 2011	Dec 15, 2011	Completion is planned by Dec 15, 2011	Purchase Order issued on Nov 24, 2010 for supply of seals.
6	Replacement of Electromechanical Governors by Digital Ones, Unit 1-10	Dec 15, 2011	Dec 15, 2011	Dec 15, 2011	Completion is expected as per FARA schedule. Dec 15, 2011	CCC to expedite and approve the purchase of Digital Governors to meet the completion schedule as per FARA.
7	Replacement of Worn out Station Drainage and Dewatering Pumps, Units 1-10	Dec 15, 2011	Dec 15, 2011	Dec 15, 2011	Completion is expected as per FARA schedule. Dec 15, 2011	Purchase Order to be issued.
8	Training	Dec 15, 2011	Dec 15, 2011	Dec 15, 2011	Completion is expected as per FARA schedule. Dec 15, 2011	Tarbela / WAPDA Staff are currently designing the training program and planning the procurement.

3. CRITICAL ISSUES AND USAID/AEAI SUPPORT REQUIRED

Item no.	Critical Issues	Status/Resolution	USAID/AEAI Support
1	WAPDA needs to acquire a Clearance Certificate from Federal Board of Revenue (FBR) for exemption of taxes and customs duties on procurement of all equipment under FARA.	Federal Board of Revenue (FBR) approved WAPDA request for custom duties exemption for the import of all equipment under FARA.	No further action/ support required from USAID/ AEAI.
2	Shutdown of Tarbela Units for installation of equipment under FARA. This is the most critical issue which could possibly cause delays.	Tarbela has an annual scheduled unit shutdown during six low water months (Nov till Apr) for annual maintenance of equipment. However, shutdown would be required in high water season when the demand is also at its peak (May – Oct) to meet the FARA timelines. WAPDA/Tarbela has already made a formal request to National Power Control Centre (NPCC) along with a shutdown plan, Unit # 4 shutdown was approved from Nov 22, 2010 and dismantling work started and is progressing satisfactorily.	AEAI is providing support to WAPDA / Tarbela Staff in order to optimize the schedule making best use of time and resources for meeting the FARA timelines.
3	In order to expedite the FARA schedule, WAPDA/Tarbela Power Station would require additional staff during the replacement of windings for Units 1 and 3.	Tarbela Chief Engineer has already made a formal request to the offices of Chief Engineers' Mangla, Ghazi Barotha and Warsak hydro-power stations.	On request of AEAI/USAID, WAPDA authorities have agreed to expedite the FARA schedule by adding temporary staff from Mangla, Ghazi Barotha and Warsak hydro-power stations.

4. ACTION ITEMS FOR NEXT MONTH

- I. Check with vendor (Marubeni-Hitachi) regarding the status of windings for Unit-3 which is under manufacturing.
- II. Plan for shop testing of Unit-3 winding after discussing with Marubeni-Hitachi and WAPDA authorities.

5. BASELINE GENERATION DATA FOR UNITS 4, 1 and 3

During site visit of EP Experts on Dec 31, 2010 following generation data was recorded and is summarized below;

Unit No	Present Capacity	Capacity after Winding Replacement	Overall Improvement
4	87 MW	200 MW	113 MW
1	175 MW	200 MW	25 MW
3	175 MW	200 MW	25 MW

Overall Improvement in Generation: 163 MW

