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# USAID ENERGY POLICY PROGRAM

## VISIT REPORT

VERIFICATION OF PROJECT WORKS COMPLETED  
UP TO JUNE 5, 2012 AT TARBELA HYDRO POWER PLANT



**June 2012**

*This program is made possible by the support of the American people through the United States Agency for International Development (USAID)*

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### VERIFICATION OF PROJECT WORKS COMPLETED UP TO JUNE 5, 2012 AT TARBELA HYDRO POWER PLANT

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

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#### **DISCLAIMER**

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## 1. PURPOSE of VISIT

A visit to Tarbela Hydro Power Plant was conducted on June 5, 2012 by AEAI engineers to monitor progress of the Repair and Rehabilitation of Tarbela Power Plant. The purpose of the visit was to (1) expedite the completion of rehabilitation works under the USAID funding; (2) inspect the recently installed equipment; (3) verify WAPDA reimbursement claims under FARA.

## STATUS of WORKS in PROGRESS

On June 5, 2012 Tarbela Power Station's total generation was 2000 MW at a reservoir level of 1390 ft. After the installation of new Class F winding at Unit # 3, it was generating 107 MW at this reservoir level and is capable of generating 195 MW at full reservoir level; hence there is another capacity gain of 10MW. Therefore as of today, 128 MW has been added under the FARA rehabilitation program

Following is the brief summary of the progress:

1. Unit # 4 winding was replaced with new class F winding in May 2011, and the unit is capable of generating additional 108 MW since last summer.
2. Unit # 1 winding was replaced with new Class F winding in Feb 2012, and the unit is capable of generating additional 10 MW in this summer.
3. Unit # 3 installation, testing and commissioning completed on May 25, 2012 under the supervision of Manufacturer's representative. At present the unit is operating at 107 MW at a reservoir level of 1390 feet. All technical parameters and winding temperatures are within technical limits. The unit # 3 is capable of generating additional 10 MW, thus total gain achieved with replacement of three windings is 128 MW. WAPDA/Tarbela will submit 10% invoice for successful installation of Unit 3 winding. Furthermore, WAPDA is finalizing the purchase order for the procurement of one third winding spares from Marubeni Corporation, Japan.
4. New seals for Relief and Bypass Valves Units 1 – 10 arrived at Tarbela in Dec 2011. Replacement of seals completed on all units and WAPDA/Tarbela reimbursement request for 10% remaining payment of \$50,000 was certified by AEAI. WAPDA/Tarbela received this amount in their account on May 21, 2012.
5. New Station Drainage Pumps and unwatering pumps arrived at the plant and WAPDA/Tarbela has started their installation, which is scheduled to be completed by end-June 2012. WAPDA/Tarbela will submit 90% reimbursement invoice for this milestone item with all supporting documents for our review and verification.
6. The manufacturing of Digital Governors completed at GE, USA. Four WAPDA engineers are scheduled to visit USA on June 18, 2012 to inspect the new Governors at GE works, prior to their release for shipment, which is expected in July 2012.
7. New SCADA system is under manufacturing with ABB and shipment is scheduled in Oct 2012.
8. Third and last batch of seven WAPDA engineers from Tarbela have completed training in Switzerland. Total twenty WAPDA engineers have completed training as per FARA. WAPDA invoice for remaining 50% payment was certified by AEAI and payment was received by WAPDA on May 21, 2012

Some photographs from the visit are appended below:

Muhammad Salim Paracha

Senior Energy Expert

USAID Energy Policy Project, Islamabad

### One of the Banners pasted at Tarbela Power Plant



## Inspection of drainage and unwatering pumps



## Discussion with Chief Engineer Tarbela FARA progress and issues



## Verification in Control Room of MW gains and temperatures for Unit-3 winding



### Unit 3 governor readings at the generator flow



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