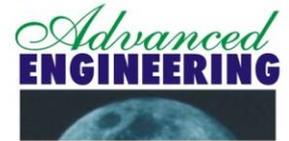


USAID/PAKISTAN: MONITORING & EVALUATION OF POWER PLANTS



ADVANCED
ENGINEERING
ASSOCIATES
INTERNATIONAL

CONTRACTOR OF USAID PAKISTAN

'FARA' MONITORING & SUPPORT FOR TARBELA REHABILITATION PROGRAM

MONTHLY REPORT - I
FOR JULY 2010

Contract: EPP-I-00-03-00004-00, Task Order 08

05 August 2010

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SUMMARY

The report presents progress on monitoring and support for Tarbela Rehabilitation program for the month of July 2010. Several meetings were arranged between AEAI, WAPDA authorities, Central Control Cell (CCC) and Tarbela Staff to discuss the progress and support required to effectively monitor and implement the Tarbela Rehabilitation Program. Also discussed was the implementation schedule (annex-A) prepared jointly by WAPDA, Tarbela Staff and AEAI. Overall there are no major delays in the schedule. Some critical issues that could possibly delay implementation are also highlighted in the report. The main concern is the shutdown of Tarbela units during high water and demand season for installation/commissioning. Further discussions are underway with WAPDA authorities and Tarbela staff to expedite progress in lean water seasons keeping into account availability of technical resources and shipment of equipment on time.

KEY MEETINGS

Key meeting held between WAPDA authorities, Tarbela Staff, CCC and AEAI during the month of July are listed below:

- I. Meeting with Tarbela Chief Engineer and Resident Engineers at Tarbela Power Station on 9th July 2010
- II. Meeting with GM (Hydel) and Director CCC at WAPDA House Lahore on 26th July 2010
- III. Meeting with Resident Engineers at Tarbela Power Station on 23rd July 2010

PROGRESS ON MONITORING AND SUPPORT

This section presents the progress of tasks planned for July and items carried over from previous month(s). A detailed schedule for Tarbela Monitoring and Support is also attached in annex-A. Tasks carried over from previous months are marked (*).

Lot no.	Description of Work	Planned Completion Date	Present Status (Completed/ In progress / delayed)	Reason for Delays and Mitigation Strategy
1	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#4	29 Jan 2010 - 31 May 2011	In progress	Overall no significant delays
*	Equipment Manufacturing	26 Feb 2010 - 02 Sept 2010	Ahead of FARA schedule (Shipment date after shop testing: 01 Nov 2010)	No delays
2	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#1	15 Dec 2009 - 30 Sept 2011	In progress	Overall no significant delays

*	Equipment Manufacturing	30 Apr 2010 - 19 Nov 2010	Ahead of FARA schedule (Shipment date after shop testing: 31 Dec 2010)	No delays
3	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#3	15 Dec 2009 – 31 Dec 2011	In progress	Overall no significant delays
*	Equipment Manufacturing	22 Apr 2010 – 24 Jan 2011	Ahead of FARA schedule (Shipment date after shop testing: 28 Feb 2011)	No delays
4	Upgrading of the SCADA System, Units 1-14	15 Dec 2009 – 31 Dec 2011	In progress	Overall no significant delays
*	Evaluation of Bids and Vendor Selection	30 Jun 2010 – 30 Aug 2010	On time (Evaluation Committee is formed for evaluation of bids)	No delays
5	Spare Seals & Guides for Relief and Bypass Valves on Turbine Side, Units 1-10	27 Nov 2009 – 16 Dec 2011	In progress	Overall no significant delays
*	Evaluation of Bids and Vendor Selection	23 Jun 2010 – 15 July 2010	Completed on time (15 July 2010)	No delays
	Submission for Approval from CCC & Competent Authority	16 Jul 2010 – 16 July 2010	Completed on time (16 July 2010)	No delays
	Authority Approval	17 Jul 2010 – 15 Aug 2010	In progress	No delays
6	Replacement of Electromechanical Governors by Digital Ones, Unit 1-10	25 Dec 2009 – 15 Dec 2011	In progress	Overall no significant delays
*	Evaluation of Bids and Vendor Selection	25 Jun 2010 – 30 Aug 2010	In progress	No delays
7	Replacement of Worn out Station Drainage and Dewatering Pumps, Units 1-10	17 Dec 2009 – 15 Dec 2011	In progress	Overall no significant delays
*	Drainage System: Evaluation of Bids and Vendor Selection	22 April 2010 – 02 Aug 2010	Completed ahead of schedule on 25 July 2010	No delays
	Submission for Approval from CCC & Competent Authority	3 Aug 2010 – 2 Sept 2010	Started ahead of schedule on 26 July 2010	No delays
*	Dewatering Pumps: Publication/Advertisement in the Newspapers	11 Jan 2010 – 02 Aug 2010	In progress (Retendered in the newspaper)	No delay

CRITICAL ISSUES AND USAID/AEAI SUPPORT REQUIRED

Following are list of critical issues highlighted during meetings with WAPDA authorities: Member (Power), GM (Hydel) and Chief Engineer Tarbela.

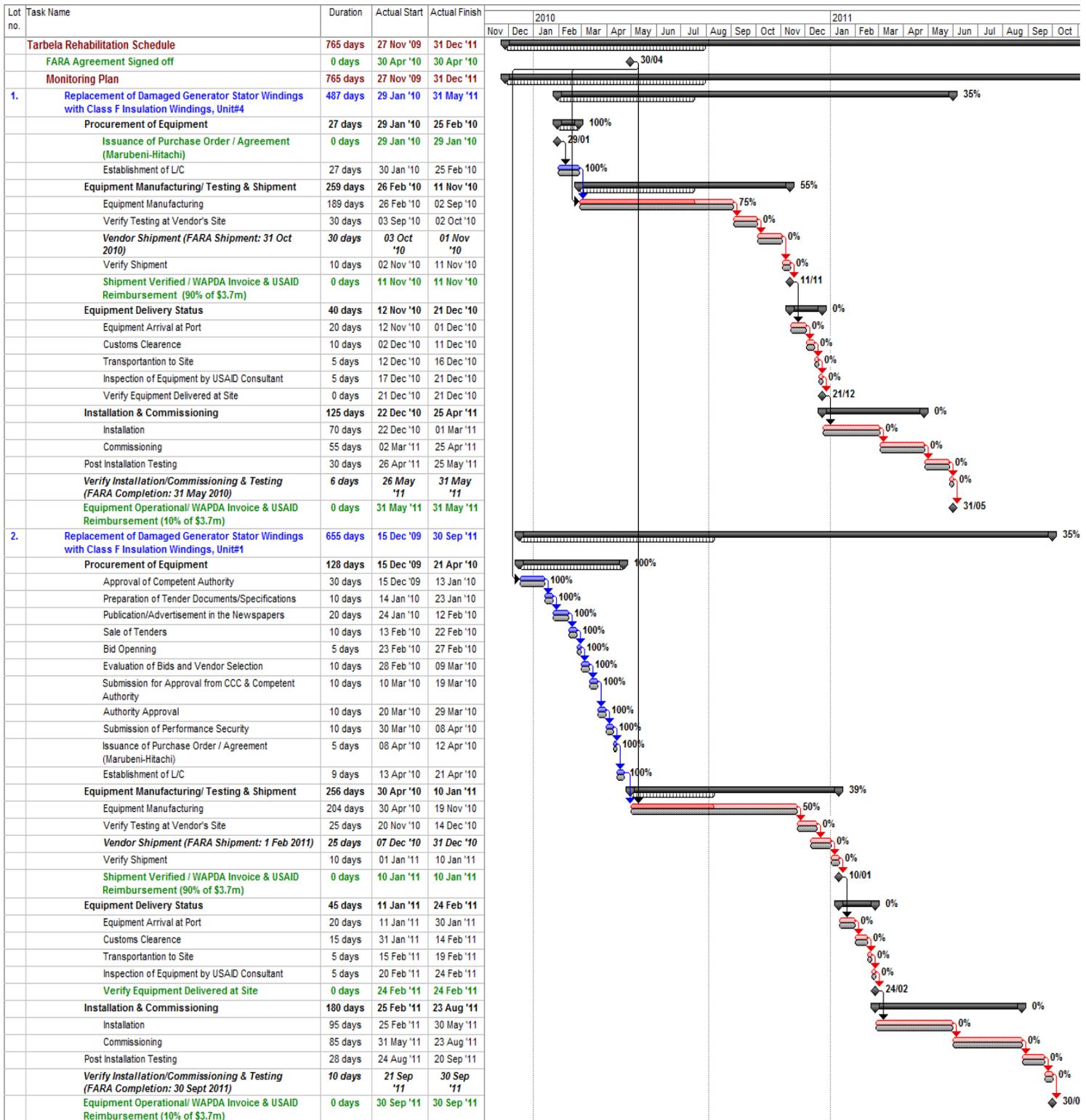
Item no.	Critical Issues	Status/Resolution	USAID/AEAI Support
1	WAPDA needs to acquire a Clearance Certificate from Federal Board of Revenue (FBR) for exemption of taxes and customs duties on procurement of all equipment under FARA.	AEAI discussed the matter with WAPDA authorities, Member (Power), GM (Hydel) and Chief Engineer Tarbela. The Chief Engineer made a formal request to the office of GM (Hydel) on 29 July 2010 to take up the matter with Federal Board of Revenue (FBR). A copy of the letter is attached as reference in Annex-C. GM (Hydel) has approached the office of GM (Finance) who will request FBR for exemption of customs duty and taxes.	AEAI is actively following-up the issue in case any support is required to expedite the process.
2	Approval required from Ministry of Interior for foreign experts' visiting Tarbela Power Station, who would later be involved in installation and commissioning.	WAPDA requested the Ministry of Interior on 7th June 2010 to permit two experts (Singapore nationals) to visit Tarbela Power Station. However, no approval has been granted to date. A copy of the request letter from WAPDA is attached as reference in Annex-C. The presence to experts' visits at Tarbela Power Station is important as they will be involved during installation/commissioning and also earlier for understanding the system design and interfaces.	AEAI discussed the matter with WAPDA authorities, Member (Power), GM (Hydel) and Chief Engineer Tarbela. GM (Hydel) is looking into the matter and will inform AEAI/USAID in case any support is required.

3	<p>Shutdown of Tarbela Units for installation of equipment under FARA. This is the most critical issue which could possibly cause delays.</p>	<p>Tarbela has annual scheduled unit shutdown during six low water months (Nov till Apr) for annual maintenance of equipment. This would be the ideal time to carry out R&M work under FARA since it would be difficult to shutdown Tarbela units during high water season when the demand is also at its peak (May – Oct). It would also be difficult to get approval from National Power Control Centre (NPCC) to shutdown Tarbela Units during high demand season.</p> <p>Between now and end of the FARA agreement on December 31, 2011, WAPDA can utilize two low water periods. WAPDA/Tarbela are therefore looking into possibilities of fully utilizing both the low water periods for replacement of equipment. AEAI is providing full support to WAPDA/Tarbela staff in preparing a plan taking into account the shutdown of units; availability of technical staff and equipment from vendor, and other risks involved.</p>	<p>AEAI is providing support to WAPDA / Tarbela Staff in order optimize the schedule making best use of time and resources for meeting the FARA timelines.</p>
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ACTION ITEMS FOR NEXT MONTH

- I. Provide support to WAPDA / Tarbela Staff in optimizing schedule considering shutdown of units, resource available and FARA timelines. Meeting is already scheduled with GM (hydel) and Chief Engineer in WAPDA House Lahore.
- II. Follow up on status of Customs Clearance Certificate from FBR.
- III. Provide support to WAPDA / Tarbela in acquiring permit from Ministry of Interior for foreign experts' visits.
- IV. Check with vendor (Marubeni-Hitachi) about the status of windings under manufacturing.
- V. Plan for shop testing of Unit-4 winding after discussing with Marubeni-Hitachi and WAPDA authorities.

ANNEX – A: Schedule for Tarbela Monitoring & Support



Lot no.	Task Name	Duration	Actual Start	Actual Finish	2010												2011												2012							
					Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan					
3.	Replacement of Damaged Generator Stator Windings with Class F Insulation Windings, Unit#3	747 days	15 Dec '09	31 Dec '11																																38%
	Procurement of Equipment	128 days	15 Dec '09	21 Apr '10																																
	Approval of Competent Authority	30 days	15 Dec '09	13 Jan '10																																
	Preparation of Tender Documents/Specifications	10 days	14 Jan '10	23 Jan '10																																
	Publication/Advertisement in the Newspapers	20 days	24 Jan '10	12 Feb '10																																
	Sale of Tenders	10 days	13 Feb '10	22 Feb '10																																
	Bid Opening	5 days	23 Feb '10	27 Feb '10																																
	Evaluation of Bids and Vendor Selection	10 days	28 Feb '10	09 Mar '10																																
	Submission for Approval from CCC & Competent Authority	10 days	10 Mar '10	19 Mar '10																																
	Authority Approval	10 days	20 Mar '10	29 Mar '10																																
	Submission of Performance Security	10 days	30 Mar '10	08 Apr '10																																
	Issuance of Purchase Order / Agreement (Marubeni-Hitachi)	5 days	08 Apr '10	12 Apr '10																																
	Establishment of L/C	9 days	13 Apr '10	21 Apr '10																																
	Equipment Manufacturing/ Testing & Shipment	323 days	22 Apr '10	10 Mar '11																																
	Equipment Manufacturing	278 days	22 Apr '10	24 Jan '11																																
	Verify Testing at Vendor's Site	25 days	25 Jan '11	18 Feb '11																																
	Vendor Shipment (FARA Shipment 1 June 2011)	10 days	19 Feb '11	28 Feb '11																																
	Verify Shipment	10 days	01 Mar '11	10 Mar '11																																
	Shipment Verified / WAPDA Invoice & USAID Reimbursement (90% of \$3.7m)	0 days	10 Mar '11	10 Mar '11																																
	Equipment Delivery Status	45 days	11 Mar '11	24 Apr '11																																
	Equipment Arrival at Port	20 days	11 Mar '11	30 Mar '11																																
	Customs Clearance	15 days	31 Mar '11	14 Apr '11																																
	Transportation to Site	5 days	15 Apr '11	19 Apr '11																																
	Inspection of Equipment by USAID Consultant	5 days	20 Apr '11	24 Apr '11																																
	Verify Equipment Delivered at Site	0 days	24 Apr '11	24 Apr '11																																
	Installation & Commissioning	179 days	01 Jun '11	26 Nov '11																																
	Installation	99 days	01 Jun '11	07 Sep '11																																
	Commissioning	80 days	08 Sep '11	26 Nov '11																																
	Post Installation Testing	25 days	27 Nov '11	21 Dec '11																																
	Verify Installation/Commissioning & Testing (FARA Completion 31 Dec 2011)	10 days	22 Dec '11	31 Dec '11																																
	Equipment Operational/ WAPDA Invoice & USAID Reimbursement (10% of \$3.7m)	0 days	31 Dec '11	31 Dec '11																																
4.	Upgrading of the SCADA System, Units 1-14	747 days	15 Dec '09	31 Dec '11																																31%
	Procurement of Equipment	350 days	15 Dec '09	29 Nov '10																																
	Approval of Competent Authority	30 days	15 Dec '09	13 Jan '10																																
	Preparation of Tender Documents/Specifications	60 days	14 Jan '10	14 Mar '10																																
	Publication/Advertisement in the Newspapers	1 day	15 Mar '10	15 Mar '10																																
	Sale of Tenders	43 days	16 Mar '10	27 Apr '10																																
	Bid Opening	63 days	28 Apr '10	29 Jun '10																																
	Evaluation of Bids and Vendor Selection	62 days	30 Jun '10	30 Aug '10																																
	Submission for Approval from CCC & Competent Authority	1 day	31 Aug '10	31 Aug '10																																
	Authority Approval	15 days	01 Sep '10	15 Sep '10																																
	Submission of Performance Security	15 days	16 Sep '10	30 Sep '10																																
	Issuance of Purchase Order / Agreement	30 days	01 Oct '10	30 Oct '10																																
	Establishment of L/C	30 days	31 Oct '10	29 Nov '10																																
	System Development/ Testing & Shipment	193 days	30 Nov '10	10 Jun '11																																
	System Development	130 days	30 Nov '10	08 Apr '11																																
	Verify Testing at Vendor's Site	35 days	09 Apr '11	13 May '11																																
	Vendor Shipment (FARA Shipment: 1 May 2011)	10 days	22 May '11	31 May '11																																
	Verify Shipment	10 days	01 Jun '11	10 Jun '11																																
	Shipment Verified / WAPDA Invoice & USAID Reimbursement (90% of \$1.0m)	0 days	10 Jun '11	10 Jun '11																																
	System Delivery Status	30 days	11 Jun '11	10 Jul '11																																
	System Arrival at Site/Custom Clearance	25 days	11 Jun '11	05 Jul '11																																
	Inspection of Equipment by USAID Consultant	5 days	06 Jul '11	10 Jul '11																																
	Verify System Delivered at Site	0 days	10 Jul '11	10 Jul '11																																
	Installation & Commissioning	134 days	11 Jul '11	21 Nov '11																																
	System Installation	80 days	11 Jul '11	28 Sep '11																																
	System Integration	54 days	29 Sep '11	21 Nov '11																																
	Post Installation Testing	30 days	22 Nov '11	21 Dec '11																																
	Verify Installation/Integration & Testing (FARA Completion: 31 Dec 2011)	10 days	22 Dec '11	31 Dec '11																																
	SCADA System Operational/ WAPDA Invoice & USAID Reimbursement (10% of \$1.0m)	0 days	31 Dec '11	31 Dec '11																																

Lot no.	Task Name	Duration	Actual Start	Actual Finish	2010												2011												2012						
					Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan				
5.	Spare Seals & Guides for Relief and Bypass Valves on Turbine Side, Units 1-10	750 days	27 Nov '09	16 Dec '11																															32%
	Procurement of Equipment	323 days	27 Nov '09	15 Oct '10																															74%
	Approval of Competent Authority	40 days	27 Nov '09	05 Jan '10																															100%
	Preparation of Tender Documents/Specifications	5 days	06 Jan '10	10 Jan '10																															100%
	Publication/Advertisement in the Newspapers	1 day	11 Jan '10	11 Jan '10																															100%
	Sale of Tenders	72 days	12 Jan '10	24 Mar '10																															100%
	Bid Opening (Retendered)	90 days	25 Mar '10	22 Jun '10																															100%
	Evaluation of Bids and Vendor Selection	23 days	23 Jun '10	15 Jul '10																															100%
	Submission for Approval from CCC & Competent Authority	1 day	16 Jul '10	16 Jul '10																															100%
	Authority Approval	30 days	17 Jul '10	15 Aug '10																															25%
	Submission of Performance Security	16 days	16 Aug '10	31 Aug '10																															0%
	Issuance of Purchase Order / Agreement	15 days	01 Sep '10	15 Sep '10																															0%
	Establishment of LIC	30 days	16 Sep '10	15 Oct '10																															0%
	Equipment Manufacturing/ Testing & Shipment	283 days	16 Oct '10	25 Jul '11																															0%
	Equipment Manufacturing	140 days	16 Oct '10	04 Mar '11																															0%
	Verify Testing at Vendor's Site	113 days	05 Mar '11	25 Jun '11																															0%
	Vendor Shipment (FARA Shipment: 31 Jan 2011)	20 days	26 Jun '11	15 Jul '11																															0%
	Verify Shipment	10 days	16 Jul '11	25 Jul '11																															0%
	Shipment Verified / WAPDA Invoice & USAID Reimbursement (90% of \$0.5m)	0 days	25 Jul '11	25 Jul '11																															25/07
	Equipment Delivery Status	46 days	26 Jul '11	09 Sep '11																															0%
	Equipment Arrival at Port	21 days	26 Jul '11	15 Aug '11																															0%
	Customs Clearance	15 days	16 Aug '11	30 Aug '11																															0%
	Transportation to Site	5 days	31 Aug '11	04 Sep '11																															0%
	Inspection of Equipment by USAID Consultant	5 days	05 Sep '11	09 Sep '11																															0%
	Verify Equipment Delivered at Site	0 days	09 Sep '11	09 Sep '11																															09/09
	Installation & Commissioning	68 days	10 Sep '11	16 Nov '11																															0%
	Installation	35 days	10 Sep '11	14 Oct '11																															0%
	Commissioning	33 days	15 Oct '11	16 Nov '11																															0%
	Post Installation Testing	20 days	17 Nov '11	06 Dec '11																															0%
	Verify Installation/Commissioning & Testing (FARA Completion: 1 Oct 2011)	10 days	07 Dec '11	16 Dec '11																															0%
	Equipment Operational/ WAPDA Invoice & USAID Reimbursement (10% of \$0.5m)	0 days	16 Dec '11	16 Dec '11																															16/12
6.	Replacement of Electromechanical Governors by Digital Ones, Unit 1-10	721 days	25 Dec '09	15 Dec '11																															30%
	Procurement of Equipment	341 days	25 Dec '09	30 Nov '10																															63%
	Approval of Competent Authority	20 days	25 Dec '09	13 Jan '10																															100%
	Preparation of Tender Documents/Specifications	61 days	14 Jan '10	15 Mar '10																															100%
	Publication/Advertisement in the Newspapers	17 days	16 Mar '10	01 Apr '10																															100%
	Sale of Tenders	54 days	02 Apr '10	25 May '10																															100%
	Bid Opening	30 days	26 May '10	24 Jun '10																															100%
	Evaluation of Bids and Vendor Selection	67 days	25 Jun '10	30 Aug '10																															50%
	Submission for Approval from CCC & Competent Authority	1 day	31 Aug '10	31 Aug '10																															0%
	Authority Approval	30 days	01 Sep '10	30 Sep '10																															0%
	Submission of Performance Security	15 days	01 Oct '10	15 Oct '10																															0%
	Issuance of Purchase Order / Agreement	16 days	16 Oct '10	31 Oct '10																															0%
	Establishment of LIC	30 days	01 Nov '10	30 Nov '10																															0%
	Equipment Manufacturing/ Testing & Shipment	192 days	01 Dec '10	10 Jun '11																															0%
	Equipment Manufacturing	147 days	01 Dec '10	26 Apr '11																															0%
	Verify Testing at Vendor's Site	25 days	27 Apr '11	21 May '11																															0%
	Vendor Shipment (FARA Shipment: 30 Mar 2011)	10 days	22 May '11	31 May '11																															0%
	Verify Shipment	10 days	01 Jun '11	10 Jun '11																															0%
	Shipment Verified / WAPDA Invoice & USAID Reimbursement (90% of \$3m)	0 days	10 Jun '11	10 Jun '11																															10/06
	Equipment Delivery Status	45 days	11 Jun '11	25 Jul '11																															0%
	Equipment Arrival at Port	20 days	11 Jun '11	30 Jun '11																															0%
	Customs Clearance	15 days	01 Jul '11	15 Jul '11																															0%
	Transportation to Site	5 days	16 Jul '11	20 Jul '11																															0%
	Inspection of Equipment by USAID Consultant	5 days	21 Jul '11	25 Jul '11																															0%
	Verify Equipment Delivered at Site	0 days	25 Jul '11	25 Jul '11																															0%
	Installation & Commissioning	90 days	26 Jul '11	23 Oct '11																															0%
	Installation	50 days	26 Jul '11	13 Sep '11																															0%
	Commissioning	40 days	14 Sep '11	23 Oct '11																															0%
	Post Installation Testing	36 days	24 Oct '11	28 Nov '11																															0%
	Verify Installation/Commissioning & Testing (FARA Completion: 15 Dec 2011)	10 days	06 Dec '11	15 Dec '11																															0%
	Equipment Operational/ WAPDA Invoice & USAID Reimbursement (10% of \$3m)	0 days	15 Dec '11	15 Dec '11																															15/12

Lot no.	Task Name	Duration	Actual Start	Actual Finish	2010												2011												2012						
					Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan				
7.	Replacement of Worn out Station Drainage and Dewatering Pumps, Units 1-10	729 days	17 Dec '09	15 Dec '11																															29%
	De-Watering Pumps	729 days	17 Dec '09	15 Dec '11																															24%
	Procurement of Equipment	426 days	17 Dec '09	15 Feb '11																															42%
	Approval of Competent Authority	20 days	17 Dec '09	05 Jan '10																															100%
	Preparation of Tender Documents/Specifications	5 days	06 Jan '10	10 Jan '10																															100%
	Publication/Advertisement in the Newspapers	204 days	11 Jan '10	02 Aug '10																															75%
	Sale of Tenders	38 days	03 Aug '10	09 Sep '10																															0%
	Bid Opening	2 days	10 Sep '10	11 Sep '10																															0%
	Evaluation of Bids and Vendor Selection	34 days	12 Sep '10	15 Oct '10																															0%
	Submission for Approval from CCC & Competent Authority	31 days	16 Oct '10	15 Nov '10																															0%
	Authority Approval	29 days	16 Nov '10	14 Dec '10																															0%
	Submission of Performance Security	17 days	15 Dec '10	31 Dec '10																															0%
	Issuance of Purchase Order / Agreement	15 days	01 Jan '11	15 Jan '11																															0%
	Establishment of L/C	31 days	16 Jan '11	15 Feb '11																															0%
	Equipment Manufacturing/ Testing & Shipment	191 days	16 Feb '11	25 Aug '11																															0%
	Equipment Manufacturing	140 days	16 Feb '11	05 Jul '11																															0%
	Verify Testing at Vendor's Site	35 days	06 Jul '11	09 Aug '11																															0%
	Vendor Shipment (FARA Shipment: 31 July 2011)	10 days	06 Aug '11	15 Aug '11																															0%
	Verify Shipment	10 days	16 Aug '11	25 Aug '11																															0%
	Shipment Verified / WAPDA Invoice & USAID Reimbursement (90% of \$0.4m)	0 days	25 Aug '11	25 Aug '11																															0%
	Equipment Delivery Status	55 days	26 Aug '11	19 Oct '11																															0%
	Equipment Arrival at Port	30 days	26 Aug '11	24 Sep '11																															0%
	Customs Clearance	15 days	25 Sep '11	09 Oct '11																															0%
	Transportation to Site	5 days	10 Oct '11	14 Oct '11																															0%
	Inspection of Equipment by USAID Consultant	5 days	15 Oct '11	19 Oct '11																															0%
	Verify Equipment Delivered at Site	0 days	19 Oct '11	19 Oct '11																															0%
	Installation & Commissioning	44 days	20 Oct '11	02 Dec '11																															0%
	Installation	24 days	20 Oct '11	12 Nov '11																															0%
	Commissioning	20 days	13 Nov '11	02 Dec '11																															0%
	Post Installation Testing	8 days	03 Dec '11	10 Dec '11																															0%
	Verify Installation/Commissioning & Testing (FARA Completion: 15 Dec 2011)	5 days	11 Dec '11	15 Dec '11																															0%
	Equipment Operational/ WAPDA Invoice & USAID Reimbursement (10% of \$0.4m)	0 days	15 Dec '11	15 Dec '11																															0%
	Drainage System	721 days	25 Dec '09	15 Dec '11																															33%
	Procurement of Equipment	333 days	25 Dec '09	22 Nov '10																															71%
	Approval of Competent Authority	20 days	25 Dec '09	13 Jan '10																															100%
	Preparation of Tender Documents/Specifications	46 days	14 Jan '10	28 Feb '10																															100%
	Publication/Advertisement in the Newspapers	1 day	01 Mar '10	01 Mar '10																															100%
	Sale of Tenders	50 days	02 Mar '10	20 Apr '10																															100%
	Bid Opening	1 day	21 Apr '10	21 Apr '10																															100%
	Evaluation of Bids and Vendor Selection	95 days	22 Apr '10	25 Jul '10																															100%
	Submission for Approval from Competent Authority	31 days	26 Jul '10	25 Aug '10																															75%
	Authority Approval	30 days	26 Aug '10	24 Sep '10																															0%
	Submission of Performance Security	15 days	25 Sep '10	09 Oct '10																															0%
	Issuance of Purchase Order / Agreement	13 days	10 Oct '10	22 Oct '10																															0%
	Establishment of L/C	31 days	23 Oct '10	22 Nov '10																															0%
	Equipment Manufacturing/ Testing & Shipment	200 days	23 Nov '10	10 Jun '11																															0%
	Equipment Manufacturing	140 days	23 Nov '10	11 Apr '11																															0%
	Verify Testing at Vendor's Site	35 days	12 Apr '11	16 May '11																															0%
	Vendor Shipment (FARA Shipment: 31 May 2011)	10 days	22 May '11	31 May '11																															0%
	Verify Shipment	10 days	01 Jun '11	10 Jun '11																															0%
	Shipment Verified / WAPDA Invoice & USAID Reimbursement (90% of \$0.4m)	0 days	10 Jun '11	10 Jun '11																															0%
	Equipment Delivery Status	55 days	11 Jun '11	04 Aug '11																															0%
	Equipment Arrival at Port	30 days	11 Jun '11	10 Jul '11																															0%
	Customs Clearance	15 days	11 Jul '11	25 Jul '11																															0%
	Transportation to Site	5 days	26 Jul '11	30 Jul '11																															0%
	Inspection of Equipment by USAID Consultant	5 days	31 Jul '11	04 Aug '11																															0%
	Verify Equipment Delivered at Site	0 days	04 Aug '11	04 Aug '11																															0%
	Installation & Commissioning	83 days	05 Aug '11	26 Oct '11																															0%
	Installation	50 days	05 Aug '11	23 Sep '11																															0%
	Commissioning	33 days	24 Sep '11	26 Oct '11																															0%
	Post Installation Testing	40 days	27 Oct '11	05 Dec '11																															0%
	Verify Installation/Commissioning & Testing (FARA Completion: 15 Dec 2011)	10 days	06 Dec '11	15 Dec '11																															0%
	Equipment Operational/ WAPDA Invoice & USAID Reimbursement (10% of \$0.4m)	0 days	15 Dec '11	15 Dec '11																															0%
8.	Training	481 days	22 Aug '10	15 Dec '11																															0%
	Tender for Training	206 days	22 Aug '10	15 Mar '11																															0%
	Approval of Competent Authority	25 days	22 Aug '10	15 Sep '10																															0%
	Preparation of Tender Documents/Specifications	20 days	16 Sep '10	05 Oct '10																															0%
	Publication/Advertisement in the Newspapers	30 days	06 Oct '10	04 Nov '10																															0%
	Sale of Tenders	10 days	05 Nov '10	14 Nov '10																															0%
	Bid Opening	10 days	15 Nov '10	24 Nov '10																															0%
	Evaluation of Bids & Vendor Selection for Training Services	20 days	25 Nov '10	14 Dec '10																															0%
	Submission for Approval from Competent Authority	1 day	15 Dec '10	15 Dec '10																															0%
	Authority Approval	30 days	16 Dec '10	14 Jan '11																															0%
	Submission of Performance Security	15 days	15 Jan '11	29 Jan '11																															0%
	Issuance of Purchase Order / Agreement	15 days	30 Jan '11	13 Feb '11																															0%
	Establishment of L/C	30 days	14 Feb '11	15 Mar '11																															0%
	Phase-I Training	77 days	16 Mar '11	31 May '11																															0%
	Training on 4 Modules	60 days	16 Mar '11	14 May '11																															0%
	Verify/Monitor Training on 4 Modules (FARA Completion Date: 31 Jan 2011)	7 days	25 May '11	31 May '11																															0%
	Training Completed/ WAPDA Invoice & USAID Reimbursement (50% of \$0.5m)	0 days	31 May '11	31 May '11																															0%
	Phase-II Training	76 days	01 Oct '11	15 Dec '11																															0%
	Training on Remaining Modules	69 days	01 Oct '11	08 Dec '11																															0%
	Verify/Monitor Training on Remaining Modules (FARA Completion Date: 15 Dec 2011)	7 days	09 Dec '11	15 Dec '11																															0%
	Training Completed/ WAPDA Invoice & USAID Reimbursement (50% of \$0.5m)	0 days	15 Dec '11	15 Dec '11																															0%

ANNEX – B: Meeting Notes

Minutes of Meeting between Tarbela Staff and AEAI held at the Tarbela Power Station on 9th July 2010

The purpose of the meeting was to discuss the draft monitoring plan for Tarbela Rehabilitation program and also identify areas in which USAID could possibly support during the program implementation. The meeting was held in the office of Chief Engineer at Tarbela Power Station.

Participants from Tarbela:

- | | |
|-----------------------|--------------------------------|
| a) Mr. Ahmed Waheed | Chief Engineer Tarbela |
| b) Mr. Zafar Ali Khan | Resident Engineer (Protection) |
| c) Mr Amin Khalil | Resident Engineer (Mechanical) |
| d) Mr Khurshid | Section Head (Electrical) |

Participants from USAID Energy Policy Project:

Mr Talha Javed	Technology Policy Advisor
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Summary of Discussions:

1. Tarbela staff was briefed about the monitoring plan which was shared with them earlier through fax and email. In principle the Staff agreed with the timelines mentioned in the monitoring plan (as per the FARA). However, some activities related to shutdown of plant and dismantling of equipment will be incorporated in the plan. It was agreed that Tarbela Staff will provide AEAI the timelines for activities related to shutdown, dismantling and installation on 24th July 2010 along with any other modifications in the monitoring plan that they consider important during implementation. Any constraints, risks and in particular the support required from USAID during implementation will also be shared with AEAI.
2. For the first activity '*Replacement of Damaged Generator Stator Winding with Class F Insulation Winding for Unit-4*', the Tarbela Staff informed that they would require ~ 2 months for dismantling before the actual installation could start. They plan to start dismantling as soon as the shipment is onboard. This will not affect FARA timelines as the dismantling will be carried out in parallel with shipment. For shutdown, they also need to get prior approval from National Power Control Center (NPCC).
3. In addition, the Staff needs to acquire the *Customs Clearance Certificate* from Federal Board of Revenue (FBR) for claiming exemption from any taxes on procurement of Class-F Winding.
4. Further the Staff informed that they are in correspondence with the Vendor and will inform AEAI about the dates for *Verifying Testing of Class-F Insulation Winding for Unit 4 at the Vendor's site*.
5. In case of activity '*Replacement of Electromechanical Governors with Digital Ones, Unit 1-10*', the Tarbela Staff informed that it a complex task and requires presence of expert(s) from vendor side in order to understand the existing system, design and interfaces before getting involved in installation and commissioning. It is also important to get consent from expert on

timelines for installation/commission. However, due to security reasons the Ministry of Interior is not allowing foreign experts to visit Tarbela site.

6. Bids for Governors and SCADA system were opened on 24th and 29th June 2010. WAPDA is in the process of forming an evaluation committee. Tarbela Staff will inform AEAI about the evaluation dates.

Critical Items:

1. Acquiring Customs Clearance Certificate from FBR.
2. Approval from Ministry of Interior for experts' visits at Tarbela site, who would later be involved in installation and commissioning.
3. Permission from the NPCC for shutting-down Tarbela plant as per the Shutdown plan. No shutdown is required for two activities: (1) Upgrading of SCADA system, Units 1-14; (2) Replacement of worn out station drainage and dewatering pumps, Units 1-10.
4. For replacement of winding on Unit-1, it would be difficult to shutdown the plant and seek approval from NPCC during the high water/demand season. This needs further discussion for considering possibilities of implementing the task during lean period i.e., between 15th Oct – 30th April.

Action Items:

1. Tarbela Staff will write to GM Finance WAPDA and Resident Representative Karachi (RRK) for processing the Customs Clearance Certificate from Federal Board of Revenue (FBR). The certificate will be used for exemption of any taxes on procurement of Class-F Insulation Winding for Unit 4.
2. Tarbela Staff will inform AEAI about the dates for Verifying Testing of Class-F Insulation Winding for Unit 4 at the Vendor's site.
3. It was agreed that Tarbela Staff will provide AEAI the timelines for activities related to shutdown, dismantling and installation on 24th July 2010 along with any other modifications in the monitoring plan that they consider important during implementation. Any constraints, risks and in particular the support required from USAID during implementation will also be shared with AEAI.
4. Seek prior approval from NPCC for shutting-down Tarbela plant during dismantling and installation of winding for Unit 4.

ANNEX – C: Letters from WAPDA

PAKISTAN WATER AND POWER DEVELOPMENT AUTHORITY



OFFICE OF THE CHIEF ENGINEER (POWER)
HYDEL POWER STATION, TARBELA DAM
TEHSIL & DISTRICT : SWABI, N.W.F.P. PAKISTAN
POST CODE : 23470

PHONE 0092 938 272230-32

0092 938 273286

FAX 0092 938 272706

NO. OP/ITR/12(13)U/ 638-39

DATED: 07 / 06 / 2010

Ministry of Interior,
Government of Pakistan,
Islamabad

Attention: Muhammad Rehman, Section Officer (RP)

Subject: PERMISSION OF WOODWARD GOVERNOR EXPERTS TO TARBELA
POWER STATION, PAKISTAN AGAINST UP-GRADATION OF
GOVERNORS SYSTEM AT TARBELA DAM - TENDER NO. OP/ITR-270

Refnce: Your U.O. No. 1/2996-IA/2003-KP dated 11-05-2010.

It is intimated that the following Woodward Governor officials/experts are visiting Tarbela Power Station on **June 21, 2010** in connection with up-gradation of governor system installed at Units 1~10, Tarbela Power Station.

You are requested to accord permission for below named officials/experts, visiting Tarbela on June 21, 2010 as informed by their local agent in Pakistan M/s National Corporation, Lahore (*copies enclosed*) :

Sr. No.	Name of Official/Expert	Passport No.	Nationality
1.	Mr. ANG KENG KOK	E0196669A	Singapore
2.	Mr. TEO HWEE KIANG	E1180829F	Singapore

Yours truly,


CHIEF ENGINEER (POWER)
WAPDA - TARBELA DAM

DA/As above

C.C.

- Attention: Mr. Sohail Anwar, M/s National Corporation, Suite # 4, 1st Floor, Rehman Business Centre, 32/B-III, Gulberg-III, Lahore. Fax No. 042-5874892

(17)

042 - 3587492

PAKISTAN
WATER AND POWER DEVELOPMENT AUTHORITY



OFFICE OF THE CHIEF ENGINEER (POWER)
HYDEL POWER STATION, TARBELA DAM
TEHSIL & DISTRICT : SWABI, N.W.F.P. PAKISTAN
POST CODE : 23470

PHONE 0092 938 272230-32
0092 938 273286
FAX 0092 938 272706

NO. OP/ITR/10(964)/653-57

DATED: 29 / 07 / 2010

FAX MESSAGE

The General Manager (Hydel) Wapda,
186-Wapda House,
Lahore

Subject: **FIXED AMOUNT REIMBURSEMENT AGREEMENT BETWEEN USA AND ISLAMIC REPUBLIC OF PAKISTAN FOR REPAIR AND REHABILITATION OF TARBELA HYDEL POWER STATION**

Ref'nce: This office letter No. OP/ITR/10(964)/632-36 dated 14-07-2010 addressed to C.R.R. Karachi with a copy to your office.

Enclosed please find a copy of the subject re-imbursement agreement signed by **Chairman WAPDA** and **USAID Mission to Pakistan**. The payments of items in Table A-1 of the **FARA** will be reimbursed by **USAID Mission** for works completed in compliance with the conditions and specification outlined in the document. It is worthwhile to mention here that under **Article IX, Miscellaneous, Clause-B**, the terms of the Assistant Agreement with respect to exemptions from taxes, duties and similar charges apply to the assistance provided through this agreement. The document is therefore, forwarded for your perusal of relevant portion pertaining to payments as USAID Mission is pressing for arrangement of clearance certificates for exemption of taxes from FBR prior to arrival of consignment at Karachi.

Vide above referred letter the matter was referred to C.R.R. Karachi for his comments. In response, a fax has been received (copy enclosed) wherein the office has advised that the case for special exemption may be taken up with Federal Board of Revenue (F.B.R.) at your own level under the provision of the Contact Agreement.

In the light of the above, it is requested that the office of General Manager Finance (Power) may please be approached for acquiring taxes and duties exemption certificate from F.B.R. prior to the arrival of 1st shipment of Class-F insulation winding of Unit No. 4 as this office is not in a position to deal directly with the Ministry of Finance or F.B.R. please.

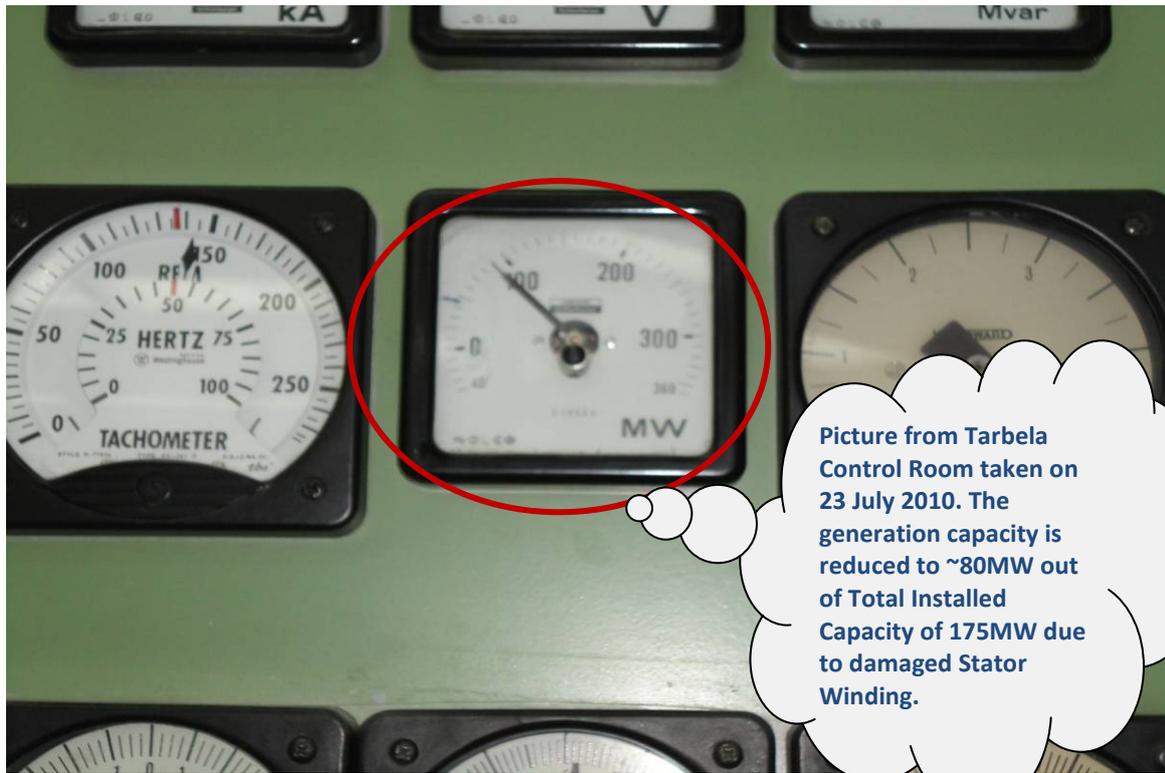

CHIEF ENGINEER (POWER)
WAPDA - TARBELA DAM

DA/As above

C.C.

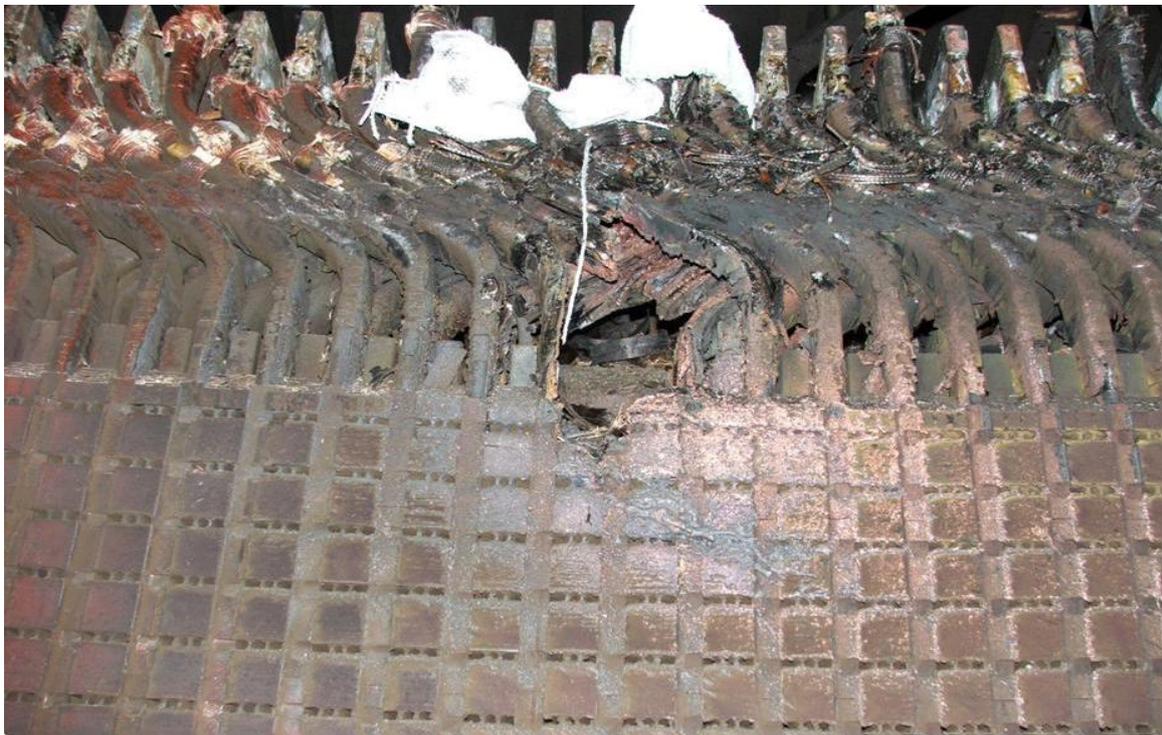
- General Manager/Project Director, TD, Tarbela Dam.
- General Manager Finance (Power) Wapda, Wapda House Lahore.
- PA to Member (Power), Wapda House, Lahore.
- Mr. Talha Javed, USAID Mission, Energy Policy Project, Islamabad.

ANNEX – D: Pictures of Unit-4 Damaged Winding / Rotor Lifting



Picture from Tarbela Control Room taken on 23 July 2010. The generation capacity is reduced to ~80MW out of Total Installed Capacity of 175MW due to damaged Stator Winding.

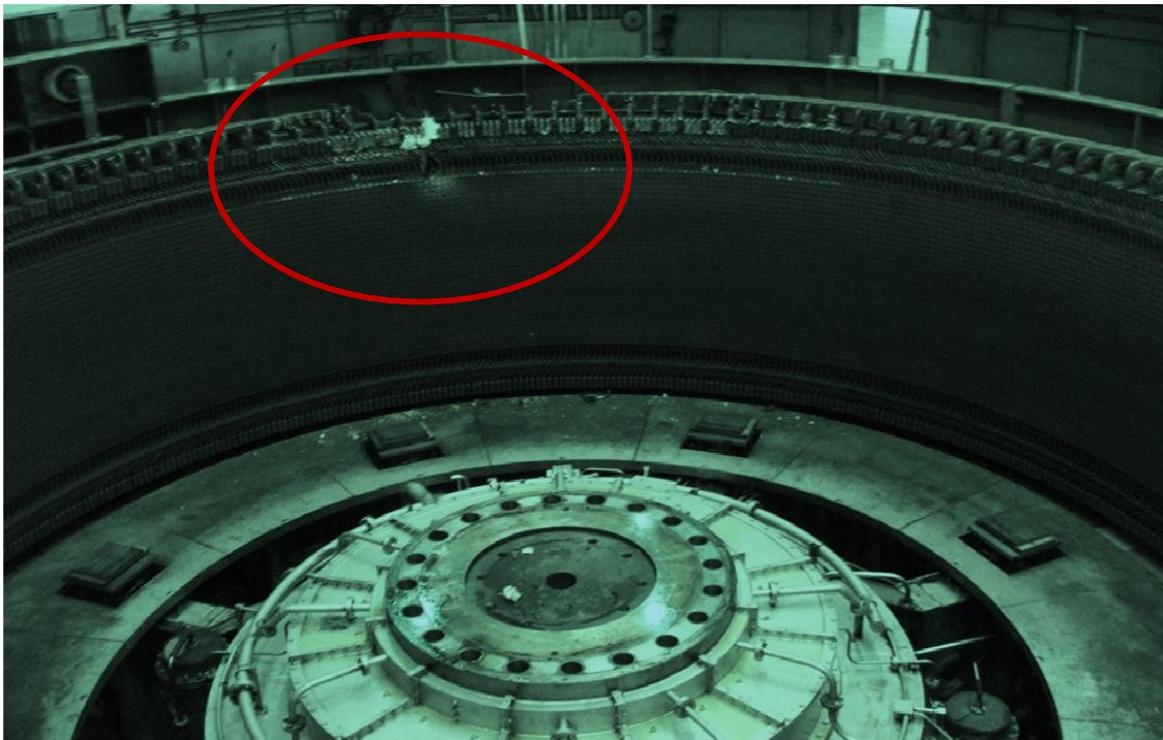
Unit-4: Generation Reduced to 80MW out of Total Installed Capacity of 175MW



Unit-4: A View of Damaged Stator Winding



Unit-4: Rotor Lifting for Repair of Damaged Stator Winding



Unit-4: A View from Inside Showing Damaged Stator Winding