

**United Nations Development Group Iraq Trust Fund**

**Project #66983: E4-15**

**Date and Quarter Updated: 1 October-31 December 2009 - 4th Quarter 2009**

**Participating UN Organisation: UNDP** **Sector: E-Infrastructure Rehabilitation/ERDSOT**

**Government of Iraq – Responsible Line Ministry: Ministry of Electricity**

<b>Title</b>	Emergency Rehabilitation of Mussayib Power Station- Stage II				
<b>Geo. Location</b>	Karbala Governorate, Mussayib				
<b>Project Cost</b>	US\$ 33,000,000				
<b>Duration</b>	At risk due to lack of co-share funds from GoI during 2009. GoI clarified in 4 <sup>th</sup> Quarter that during financial year 2010 they will allocate funds in line with this project agreement. This project will require in tadem an extension by ITF and funding transferred from the Ministry of Electricity.				
<b>Approval Date</b>	08/06/2005	<b>Starting Date</b>	15/06/2005	<b>Completion Date</b>	15/06/2007 extended to June 2009 & Nov.2010 (revised)
<b>Project Description</b>	<p>The rehabilitation of Unit 1 of Mussayib Thermal Power Station (TPS) is essential for improving electrical power supply to the national grid, particularly in Central Iraq. Under Stage I, previously identified rehabilitation/repairs of Thermal Unit 1 controls and turbine/generator problems were corrected wherever possible. Under Stage II, the technical capabilities of the plant staff will be upgraded to not only operate and maintain the unit once rehabilitated but also to assess the requirements for rehabilitation of other units and to undertake repair and maintenance works with minimum international supervision. Ministry of Electricity capacity for these undertakings will be supported by modern maintenance management software and installation of a mobile video/audio system for plant equipment condition assessment. Note: The scope may change from the rehabilitation of Unit 1 to Unit 4 depending upon the agreement by the donor partner.</p>				

**Development Goal and Immediate Objectives**

1. To respond to the immediate humanitarian needs of war-affected Iraqi people through ensuring reliable and safe electricity supply to all consumer categories, in particular key humanitarian essential services.
2. The generating capacity, reliability, availability, and efficiency of Unit No.1 of Mussayib Thermal Power Station increased.
3. Plant staff able to conduct complete maintenance and full repairs of thermal units utilizing latest available technology, modern tools, and state-of-art software for unit maintenance and overhauls.
4. Core team of MoE staff specialized in the overall condition assessment of thermal units trained in the application of state-of-art maintenance management software for monitoring, recording, reporting and planning future maintenance of thermal units in the MoE Fleet.

**Outputs, Key activities and Procurement**

<b>Outputs</b>	<ol style="list-style-type: none"> <li>1.1 Mussayib Thermal Power Station (TPS) Unit 1 rehabilitated and providing 60-80 MW greater capacity, reliability, availability and efficiency by June 2007.</li> <li>2.1 Comprehensive set of selected and essential spare parts supplied to Mussayib TPS, which will be available in stock for emergency repairs and routine maintenance; in order to sustain Unit 1 future generation and reliability.</li> <li>3.1 Thirty-four (34) plant staff trained in Unit 1 rehabilitation skills suited for erection, calibration, testing and commissioning. In addition, a core team of MoE staff proficient in the application of maintenance management software and able to train</li> </ol>
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	other junior technical personnel to enlarge MoE in-house capabilities in maintenance management, planning, monitoring and record keeping.
<b>Activities</b>	1.1.1 Finalization of the list of equipment, parts and relevant components with their detailed technical specifications to be provided based on assessments of the unit. 2.1.1 Unit repair and rehabilitations works conducted by plant staff under contractor guidance. 3.1.1 Implementation of the relevant training overseas for unit rehabilitation works and the training on maintenance management software in Amman, Jordan.
<b>Procurement</b>	Delivery of 135 tons of equipment for rehabilitation process.

<b>Funds Committed</b>	19,475,777	<b>% of approved</b>	59.02%
<b>Funds Disbursed</b>	19,458,049	<b>% of approved</b>	58.96%
<b>Forecast final date</b>	Anticipated November 2011 if co-share funding by GoI received	<b>Delay (months)</b>	53 months

<b>Direct Beneficiaries</b>	<b>Number of Beneficiaries</b>	<b>% of planned (current status)</b>
Men	Population as a whole	
Women	Population as a whole	
Children	Population as a whole	
IDPs	Population as a whole	
Others	Population as a whole	
Indirect beneficiaries	34 staff trained	
Employment generation (men/women)		

<b>Quantitative achievements against objectives and results</b>		<b>% of planned</b>
Completion of activity 1 that involved assessment of need for rehabilitation and initiation of procurement	Determining scope of rehabilitation needed, included full negotiation of prices and delivery schedules (Activity 1).	100
Pre-shipment inspection	Coordination and supervision of factory-witness tests in Japan of selected equipment successfully completed during March – April 2006.	100
Spare parts and equipment	135 tons of equipment delivered to site.	100
Training of Trainers	Specifications for training prepared. 10 engineers trained.	25
Installation works	Discussions at present suggest that a different Unit (4) will be rehabilitated which has ceased operation. If agreement is realized then installation will require a shift back to the beginning steps of this task. This change of scope rests on the realization of the funding from MoE and the agreement by the donor partner who is actively engaged in discussions. Additional spare parts may be required.	0

<b>Qualitative achievements against objectives and results</b>
<ul style="list-style-type: none"> <li>Unit 1 at Mussayib Power Station received an overall cold assessment with information reviewed by MoE, Hitachi/Hyundai in Amman on 25-29 September 2005;</li> <li>Shipment of Container 2 arrived on 4 August 2008;</li> <li>Shipment of Container 3 arrived on 10 October 2008 resulting in 135 tons of equipment total delivered to site;</li> <li>Five Mussayib engineers trained on Auxiliary Equipment at Hitachi;</li> <li>Five trainees participated in training on instrumentation and control for the implementation of installation and commissioning of equipment 15 September to 7 October 2008;</li> </ul>

- Correcting the problems in Unit 1 could increase power generation to Iraqi grid and improve the over all reliability of the power system therefore, the GoI has agreed to cover the difference in rehabilitation up to a ceiling of US\$ 20 Million.
- The Government of Iraq agreed in 4<sup>th</sup> Quarter 2008 to cover the difference in the rehabilitation up to a ceiling of US \$20 Million.
- Shipment of manufacturing parts completed by Hitachi in Japan and Philippines. All the goods under shipment were delivered successfully to Mussayib Thermal Power Station in May 2009 (2<sup>nd</sup> Quarter).
- Short-listing of potential construction companies for undertaking boiler installation was completed and 3 companies have been shortlisted.
- Procurement process for the selection of consultant for managing/monitoring of the installation contract has reached its final stage.
- A letter has been sent to MoE on the progress of the project and requesting confirmation on the availability of MoE funds agreed by HE MoE to bridge the budget gap (USD 20.0 million) for boiler implementation work.
- During 2<sup>nd</sup> Quarter 2009, a meeting was held between the UNDP Deputy Country Director and H.E. the Minister of Electricity at the International Zone in Baghdad. The Minister explained that due to the decline of oil prices, the budget of the Ministry has been reduced; therefore, the Ministry of Electricity would not be in a position to bridge the funding gap for the implementation of the boiler works as agreed at the Dead Sea Meeting on 30<sup>th</sup> November 2008.
- During 3<sup>rd</sup> Quarter the project remained in a state of limbo regarding the co-share .Remaining funds are not adequate to carry out the scope of the planned rehabilitation works.
- The ITF donor partner the Government of Japan was consulted and identified three possible ways forward during 3<sup>rd</sup> Quarter 2009.
- Consultation was made with UNAMI and intervention sought by the SRS in the 4<sup>th</sup> Quarter to resolve this impasse. A one day meeting was held with MoE in the presence of GoJ to discuss the options and reach a solution to complete the project scope. Due a defect in Unit 4, MoE has requested using the parts supplied for Unit 1 in Unit 4.
- GoI clarified in 4<sup>th</sup> Quarter that during financial year 2010 they will allocate funds in line with this project agreement. Presently, in parallel, the project will require extension by ITF and funding transferred from the Ministry of Electricity with an agreement forthcoming from the GoJ to shift from Unit 1 to Unit 4.

### **Main implementation constrains & challenges**

UNDP, based on the initial estimated cost received from Hitachi in 2004-2005, reserved US\$ 13 Million aside for rehabilitation of Unit 1. This reserve was based on the assumption that the implementation work was to be carried out by a MoE appointed contractor. The MoE requested that Hitachi directly hire a contractor to undertake the implementation. With this new arrangement UNDP received a new price quotation of US\$38 million in July 2008. After careful study of the quotations, available funds and identification of several implementation modalities, options for implementation were presented to the Minister of Electricity. It was agreed among the parties present that UNDP would initiate an international tendering process and the MoE and Government of Iraq would cost share covering the difference in cost up to a ceiling of US\$20 Million. Based upon the recommendation by the the Minister, UNDP commenced negotiation with the Government of Japan to initiate the implementation work by an international contractor.

Agreement to change the scope of work has to be made as the MoE has requested that focus be on the rehabilitation of Unit Four (4) rather than Unit One (1). Consultation is ongoing with the Donor Partner the Government of Japan.

Agreement has been made by the MoE that funds will be made available within the 2010 budget. This project cannot proceed until this co-funding is received.

The pre-qualification process for short-listing of contractors for Unit 1 was conducted in early 2009 resulting in a poor response from world class contractors. It is anticipated that this will be a similar pattern in the new process that would initiate on Unit 4 if agreement is reached with the GoJ and funding by MoE made available. Therefore, a longer timeline should be given allocating time for re-bidding.