

United Nations Development Group Iraq Trust Fund

Project #66983: E4-15

Date and Quarter Updated: 1 October-31 December 2010 / 4th Quarter 2010

Participating UN Organisation: UNDP **Sector: E-Infrastructure Rehabilitation/ERDSOT**
Government of Iraq – Responsible Line Ministry: Ministry of Electricity

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| Title | Emergency Rehabilitation of Mussayib Power Station- Stage II | | | | |
| Geo. Location | Karbala Governorate, Mussayib | | | | |
| Project Cost | US\$ 33,000,000 | | | | |
| Duration | This project has shifted to a National Execution Modality in 3 rd Quarter 2010. Earlier discussions were towards this modality. Therefore, the present discussion is on the cost sharing mechanism with the Government for approximately USD \$8 Million with a change of scope from rehabilitation of Unit 1 to Unit 4. The extension of project duration till 15 May 2011 and change of scope were approved by ITF on 17 June 2010. | | | | |
| Approval Date | 08.06.2005 | Starting Date | 15.06.2005 | Completion Date | 15 May 2007, extended to 15.05.2011 |
| Project Description | <p>The rehabilitation of Unit 1 (now Unit 4) 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. The 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.</p> <p>Note: An official request has been approved by ITF to change the Scope of Work from the rehabilitation of Unit 1 to Unit 4 and the modality has changed to national execution by the Ministry of Electricity.</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 (now Unit No. 4) of Mussayib Thermal Power Station increased. (Unit 1 changed to Unit 4 as of Q2 2010.)
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

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| Outputs | <ol style="list-style-type: none"> 1.1 Mussayib Thermal Power Station (TPS) Unit 1 rehabilitated and providing 60-80 MW greater capacity, reliability, availability and efficiency by June 2007. 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. 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 |
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| | maintenance management software and able to train other junior technical personnel to enlarge MoE in-house capabilities in maintenance management, planning, monitoring and record keeping. |
| Activities | 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. |
| Procurement | Delivery of 135 tons of equipment for rehabilitation completed 2 nd Quarter 2009. |

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| Funds Committed | USD 19,829,727 | % of approved | 59.95% |
| Funds Disbursed | USD 19,786,611 | % of approved | 60.09% |
| Forecast final date | 15 May 2011 with ITF, but the MOE timeline with co-share funding by GoI suggests end of 2 nd Quarter 2011. | Delay (months) | 72 months |

| Direct Beneficiaries | Number of Beneficiaries | % of planned (current status) |
|-----------------------------------|--------------------------------|--------------------------------------|
| 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 MoE staff trained | |
| Employment generation (men/women) | | |

| Quantitative Achievements against Objectives and Results | | % of planned |
|--|---|---|
| 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% This component is no longer applicable to this project as it is in NIM |
| Installation works | The change of scope was approved by ITF and UNDP and MoE are currently discussing the payment modality. The bidding documents are developed and bids closed for the boiler of Unit 4 during 4 th Quarter. Companies were shortlisted.. Additional spare parts may be required. | 7% |

| Qualitative Achievements against Objectives and Results |
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| <ul style="list-style-type: none"> 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; Shipment of Container 2 arrived on 4 August 2008; Shipment of Container 3 arrived on 10 October 2008, resulting in a total of 135 tons of equipment total delivered to site; Five Mussayib engineers trained on Auxiliary Equipment at Hitachi; Five trainees participated in training on instrumentation and control for the implementation of installation and commissioning of equipment from 15 September to 7 October 2008; |

- 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 4th 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 (2nd Quarter 2009).
- 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, 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 2nd 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 30th November 2008.
- During 3rd 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 3rd Quarter 2009.
- Consultation was made with UNAMI and intervention sought by the SRSG in the 4th Quarter 2009 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 to a defect in Unit 4, MoE has requested using the parts supplied for Unit 1 in Unit 4.
- GoI clarified in 4th 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, as well as an agreement forthcoming from the GoJ to shift from Unit 1 to Unit 4.
- In 1st Q 2010 the Ministry of Electricity officially requested a change of scope of the project from Unit 1 to Unit 4.
- In 1st Q 2010 the Embassy of Japan received a request for the Ministry of Electricity to change the scope of the project from Unit 1 to identical Unit 4, which collapsed.
- After analysis in 1stQ 2010 UNDP has given a no objection for change of scope pending ITF approval.
- During 1st Q 2010 The Ministry of Foreign Affairs, Japan, has stated no objection to change the scope with written approval pending.
- The Ministry of Electricity re-confirmed its commitments to bridge the fund gap of USD 8 million on 13 May 2010.
- On 17 June 2010, the Ministry of Electricity and UNDP concluded the Letter of Agreement, which stipulates that MoE will be responsible for all activities with UNDP's technical assistance and that UNDP will release USD10 million for the installation works. The detailed financial arrangement is now under discussion. This project will move to National Execution.
- On 17 June 2010, the requests for extension of project duration, change of scope and budget revision were approved by ITF.
- On 21 July 2010 UNDP and the Ministry of Electricity (MoE) staff from the Generation Group conducted a meeting in Baghdad to discuss the details of the LoA between UNDP and MoE and the conditions of the project extension approval of ITF and tentatively agreed on the basic Work-Plan and the time schedule for the completion of the project.
- A workshop was held 14-17 August 2010 in Istanbul, Turkey, between UNDP and Ministry of Electricity staff to discuss in detail the project implementation schedule, milestones, payment modalities, short-listing of potential bidders and engagement of construction supervision consultants.
- Detailed discussion on the Commercial Part of the bid document continued and the Ministry of Electricity submitted comments during 3rd Quarter 2010.
- Detailed discussions on the Technical Part of the bid document, including Technical Specifications resulted in

the Ministry of Electricity preparing the technical component of the bidding document which was submitted to UNDP and reviewed and submitted to MOE as agreed in the Workshop in August 2010 before the end of 3rd Quarter

- Completed the first draft of the bid document with input from both parties during 3rd Quarter 2010.
- Workshop II was held on 29 September-1 October 2010 in Erbil. At this workshop UNDP and the Ministry of Electricity discussed in detail the draft bidding document and prepared the final draft including revisions to the Technical and Commercial Sections.
- Recruitment initiated for a National Engineer in Baghdad to assist the project coordination between UNDP and Ministry of Electricity during 3rd Quarter 2010.
- A revised Project Implementation Schedule was prepared considering the delays during 3rd Quarter 2010.
- A review was conducted on the short-listing process and short-listed bidders during 3rd Quarter 2010.
- Bid document in engaging a contractor was finalised and issued to the 5 short-listed companies with the bid closing date of 3rd December during the 4th Quarter 2010.
- Only 2 short-listed companies procured the bid document.
- Bid clarifications were received from several companies including requests for extension of bid closing date.
- Responses on various clarifications were sent to the bidders and the bid closing date was extended till 2nd January 2011.
- UNDP issued a letter to all 5 companies requesting them to actively participate in the bidding process.
- Four out of 5 short-listed companies apologized to participate in the bidding process providing different reasons. However, one out of four indicated willingness to submit and offer, if bid closing date be extended till 1st March 2011.
- Arrangements were made for evaluation of offers by a team of experts from UNDP and MoE in Erbil after the opening of offers on 2nd January 2011.
- Terms of Reference were prepared for engaging Owner's Engineer to assist MoE in managing the project.
- A consultancy company, established under MoE, expressed willingness to take on the role of Owner's Engineer and a meeting was arranged with this company for further discussions/negotiations in Erbil.
- A National Boiler Engineer was recruited to support the project, including frequent visits to Mussayib Thermal Power Station.

Main Implementation Constrains & Challenges

UNDP, based on the initial estimated cost received from Hitachi in 2004-2005, reserved US\$ 13 Million 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 in covering the difference in cost up to a ceiling of US\$20 Million. Based upon the recommendation by the Minister, UNDP commenced negotiation with the Government of Japan to initiate the implementation work by an international contractor.

Agreement has been made by the MoE that funds will be made available within the 2010-2011 budgets. The MoE and UNDP have entered into a Letter of Agreement where the MoE will be responsible for all activities with UNDP's technical support. Therefore, the implementation modality has changed to national execution. The MoE will prepare the bidding documents and finalize the bidding process and UNDP will provide the technical assistance on the entire process from the bidding to the completion of installation works. UNDP has to find the most suitable payment modality for the installation works. Also, considering the project duration until 15 May, 2011, timing will be a critical issue with the MoE forecasting completion later than the ITF agreed date.

The political fragility of the latest Iraqi elections and the delay in the formation of a new Government has affected this project as there is no longer a Minister of Electricity. Some commitments could be affected in this delay.