



**ANNUAL PROGRAMME NARRATIVE PROGRESS REPORT
REPORTING PERIOD: 1 JANUARY – 31 DECEMBER 2010**

Programme Title & Number
<ul style="list-style-type: none"> • Programme Title: Emergency Rehabilitation of Mussayib Power Station Stage II • Programme Number E4-15 • MDTF Office Atlas Number 6983

Country, Locality(s), Thematic Area(s)
<p><i>Karbala Governorate, Mussayib</i> <i>This work is nation-wide as feeds into the national electricity grid.</i> <i>Basic Services</i></p>

Participating Organization(s)
<i>UNDP</i>

Implementing Partners
<ul style="list-style-type: none"> • National counterparts • Ministry of Electricity

Programme/Project Cost (US\$)	
MDTF Fund Contribution:	\$33,000,000
Agency Contribution	
Government Contribution	\$ 8,000,000
Other Contribution (donor)	
TOTAL:	\$41,000,000

Programme Duration (months)	
Overall Duration	72 months *
Start Date	15 June 2005
Original End Date	15 June 2007
Revised End Date	15 May 2011
Operational Closure Date	2012
Expected Financial Closure Date	2013

Programme Assessments/Mid-Term Evaluation
Assessment Completed - if applicable <i>please attach</i> <input type="checkbox"/> Yes <input type="checkbox"/> No Date: anticipated Mid-Evaluation Report – <i>if applicable please attach</i> <input type="checkbox"/> Yes <input type="checkbox"/> No Date: _____

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* This project has shifted to national execution modality in 3rd quarter 2010 with a signed letter of agreement. This may affect the duration of this project.

I. Purpose

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.

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.

Development Goal and Immediate Objectives	
<ol style="list-style-type: none"> 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. 	

To support the four goals of this project the following outputs and activities have been identified.

Outputs, Key Activities and Procurement	
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 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	<ol style="list-style-type: none"> 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.

UN Assistance Strategy for Iraq

UN Cluster 4 Infrastructure and Results Matrix Housing

There is an articulated for efficient operation, management and maintenance of an electric network with increased availability to the population through rehabilitation of the grid and overall electric generation capacity. This sector further elaborates that the Ministry of Electricity has the capacity to increase capacity, repair and maintain power generation.

The relevant excerpt from the 2006-2007 UN Assistance strategy for Iraq is as follows:

UNCT Goal 2: Assist in the provision of basic services and promotion of community development and participation:

Cluster Outcome 2.6: Rehabilitation and governance of infrastructure at local level.

E3: Increased availability of electricity, particularly to rural and low income areas.

Programme outputs:

- Generation capacity enhanced;
- Technical and management capacity enhanced;
- Power plant equipped with sufficient spare parts for operation and maintenance;
- Maintenance Manuals and drawings for ready reference in efficient operation and maintenance.

UN Millennium Development Goals (MDG)

MDG 7 Target 11 states that significant improvements of people living in slums are not or partially connected to services like water, sanitation and electricity.

Iraq National Development Strategy

The Rehabilitation at Mussayib is based on Pillar 2 10 that prioritizes increasing electricity generation and distribution to meet current and projected needs. Within the document it is acknowledged that there is a shortage caused by numerous problems such as sabotage, looting, lack of security for workers, lack of training and obsolete technologies. It is also acknowledged that Baghdad accounts for over 40% of the Iraqi power load. One of the planned goals on page 38 refers to two actions specific to this project, which are: 1) Reconstruct power network, increase power generation and guarantee a continuous supply, and 2) Update power distribution.

The International Compact with Iraq (ICI)

The rehabilitation of Units to generate electricity at Mussayib Thermal Power Plant links into several components of the ICI. Section 4 Realising the Vision-the Socio-Economic Context in point 2; Revitalize the private sector, particularly through the creation of an enabling environment, and point 3; Improve the quality of life starting with the provision of basic services. This is further elaborated in the section 4.5 Energy (Oil, Gas and Electricity) on page 20-21.

4.5 Energy Goal is: “The Government will develop an energy sector that meets Iraq’s needs and maximizes the benefits of hydrocarbons for all Iraqis and reinforces national unity and institutions.” The goal is further discussed with the Government of Iraq to develop an Energy Master Plan on the basis of an Energy Balance...for the electricity sector, the Government will formulate a plan for least cost development of the power system.... The Mussayib Thermal Power Plant links directly into these actions, which are activities within the larger UNDP infrastructure projects.

During 2010 the UN Country Team made a transition in the documents in which it used. Three key new documents were developed which have a direct affect on this project and UNDP-Iraq. These documents are described below.

DEVELOPMENT ASSISTANCE FRAMEWORK FOR IRAQ 2011-2014 (UNDAF)

The United Nations Development Assistance Framework (UNDAF) was prepared by the United Nations Country Team in Iraq in consultation with the Government of Iraq and other partners, with the aim of improving the lives of the people of Iraq, and particularly the most vulnerable, in alignment with the national priorities and Millennium Development Goals. The United Nations Development Assistance Framework (UNDAF) 2011-2014 is the first for Iraq, marking a significant milestone in the nation's recovery and transition towards longer term development. Based upon and prepared in parallel with the Iraq Five Year National Development Plan (NDP) 2010-2014, the UNDAF provides a coherent and coordinated strategy for the delivery of UN assistance that embodies the Paris Principles, and supports the newly elected Iraqi administration in meeting its various obligations. The focus of the UNDAF implementation is to foster national capacity and leadership of the development process, within governmental, non-governmental and social institutions, in order to transition the country from the impact of violence and repression characterizing recent decades. Five UNDAF priorities have been identified, providing the scope and strategic direction of the UN system's support to Iraq in the next four years, namely:

1. Improved governance, including the protection of human rights.
2. Inclusive, more equitable and sustainable economic growth.
3. Environmental management and compliance with ratified international environmental treaties and obligations.
4. Increased access to quality essential services.
5. Investment in human capital and empowerment of women, youth and children.

Country Programme Document (CPD)

The first Country Programme was endorsed by GoI and approved by the Executive Board of UNDP on 3 September 2010. The Country Programme is aligned with the National Development Plan and is nested within the UNDAF. UNDP has identified four priority areas of synergy with National Development Plan and UNDAF, namely: a) fostering inclusive participation, b) strengthening accountable and responsive governing institutions; c) promoting inclusive growth, gender equality, climate change mitigation and adaptation and MDG achievement; and d) restoring the foundations for development. The Country Programme takes into account that UNDP operates under the overall mandate of the United Nations Assistance Mission in Iraq (UNAMI) focussing on the role of supporting the Government of Iraq (GoI) in the transition towards national reconciliation, peace and stability through work on governance, poverty alleviation, economic recovery and environment guided by conflict prevention and recovery approaches identified in five outcomes and respective outputs. Five Country Programme priorities have been identified, providing the scope and strategic direction of UNDP to Iraq in the next four years, namely:

- 1) GoI and civil society have strengthened participatory mechanisms in place for electoral processes, national dialogue and reconciliation
- 2) Enhanced rule of law, protection and respect for human rights in line with international standards

- 3) Strengthened regulatory frameworks, institutions and processes in place for accountable, transparent and participatory governance at national and local levels
- 4) GoI has the institutional framework to develop and implement MDG-based pro-poor, equitable and inclusive socio-economic and environmental policies and strategies
- 5) Enabling policy and frameworks for rapid economic recovery, inclusive and diversified growth and private sector development

Country Programme Action Plan (CPAP)

The CPAP was signed on 14 March 2011. The CPAP is a signed legal agreement between the Government and UNDP based upon the Country Programme Document. The 2011-2014 CPAP is a four-year living document defining the mutual cooperation and programme of work shared between the Government and UNDP. It is a response to the specific challenges identified in the UN Common Country Assessment 2009 and the UN response as outlined in the UN Development Assistance Framework 2011-2014. These, in turn, take account of the Millennium Development Goals, the Iraq National Development Plan as well as the lessons learned from past UNDP programming in Iraq. The CPAP, has been prepared in close consultation with key stakeholders, defines the goals, and broad outline of strategies and activities that the Government and UNDP jointly subscribe to, with agreed financial parameters. The CPAP further elaborates the five CPD outcomes and respective outputs of UNDP which has incorporated this ITF project.

II. Resources

Financial Resources:

- other funding resources available to the project

The Government of Iraq agreed to co-share up to a ceiling of US \$20 million in 4th Quarter 2008. However, due to the international financial crisis and the resultant fall in oil prices, the Ministry of Electricity could not realize this commitment. The Government clarified in 4th Quarter 2009 that during financial year 2010 that they will allocate funds in line with this project agreement. UNDP and MoE signed a letter of agreement in June 2010 to cost share the costs of rehabilitating Unit 4 under national execution modality (NIM). UNDP agreed to provide to 10 million USD and the gap to be covered by the MoE.

- budget revisions approved by SCSP.
 - Three budget revisions have been submitted and agreed:
 - 11 June 2007, 12 February 2008 and 17 June 2010.
- Good practices and constraints in the mechanics of the financial process, times to get transfers, identification of potential bottlenecks, need for better coordination, etc.

The original site work implementation was to initiate implementation works during 3rd Quarter 2009 after all parts, equipment and goods needed for rehabilitation were delivered to the site. During 2nd Quarter 2009 all parts, equipment and goods were delivered to the site. Inspectors checked at factories and during shipping with a final quality control check by the MoE upon arrival at the Mussayib Power Plant site.

The MoE requested a change in the original contracting modality, which presently is affecting works but is progressive in modality making this project one of the first relative NIM projects..

When implementation works initiate they will be monitored on a regular basis. A web camera system of fixed and mobile cameras have been installed both in the UNDP-Iraq Office in Amman and on the site of work. This link has been used successfully used in other electricity projects and facilitates day to day discussions and also the web camera is taken to the precise point of work for close monitoring. The system is on throughout the working time and ensures that the sub-contractors for rehabilitation works complied with instructions and acceptable procedures of works.

- This is co-share project with the Government of Iraq and is one of the first relative NIM projects.
- Bottlenecks

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 MoE appointed contractors. The MoE requested that Hitachi directly hire a contractor to undertake the implementation, with 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. An agreement to co-share with the Ministry of Electricity was made with a cap of US\$20 million, which is anticipated to be available during financial year 2010.

There was a delay in the formation of the new Government after the March 2010 elections. This affected the project as the old Minister left mid-year and the new Minister named in early 2011.

Human Resources

- National Staff:
Two Project Engineers one in Amman and one in Baghdad.
- International Staff:
One Project Manager
A TOR developed and recruitment underway for a mechanical engineer/boiler engineer
Support functions co-shared on pro-rated basis.

III. Implementation and Monitoring Arrangements

- Implementation mechanisms primarily utilized

This project is led by the Ministry of Electricity. Capacity has been further developed for national implementation.

When implementation works initiate, it will be monitored on a regular basis. A web camera system of fixed and mobile cameras have been installed both in the UNDP-Iraq Office in Amman and on the site of work. This link has been used successfully used in other electricity projects and facilitates day to day discussions and also the web camera is taken to the precise point of work for close monitoring. The system is on throughout the working time and ensures that the sub-contractors for rehabilitation works complied with instructions and acceptable procedures of works.

Additionally an engineer position has been developed which will provide the technical assistance with recruitment anticipated in early 2011.

- Procurement procedures utilized.

UNDP Iraq follows the Financial Regulation and Rules (FRR) and the Procurement Manual posted under the Programme and Operations Policies and Procedures (POPP) which provides the framework to carry out procurement processes. The following bullets serve as guiding principles within the procurement process at UNDP Iraq. These principles are:

- Best Value for Money
- Fairness, Integrity, Transparency
- Effective International Competition

UNDP defines procurement as the overall process of acquiring goods, civil works and services which includes all functions from the identification of needs, selection and solicitation of sources, preparation and award of contract, and all phases of contract administration through the end of a services' contract or the useful life of an asset. UNDP has two primary documents, the Financial Regulations and Rules and Procurement Manual, which specify solicitation procedures for supply of goods, services, or works, including appropriate methods for evaluating and selecting awardees and possible contracts. The Regulations and Rules and Procurement Manual also indicate which conditions justify waiving the competitive tendering process in favor of direct contracting.

Further, in order to ensure compliance with UNDP regulations, rules, policies and procedures, all procurement activities at UNDP-Iraq are subject to a review and approval process prior to an award of a procurement contract.

In summary UNDP-Iraq Procurement Unit follows the rules, regulation and there is no variance in standard procedures.

- The monitoring system.

The implementation modality significantly shifted in 2008 with the decision by the Ministry of Electricity to change the operating context. The original design was to do a direct hire but the MoE requested Hitachi to become the contractor, which made the costs three times higher. This caused a shortfall of funding in which the MoE agreed to co-share as long as an international company was used. Discussions initiated during 2009 for cost sharing and significantly shifting this direct execution project toward national implementation. During 2010 a Letter of Agreement was signed between the Ministry of Electricity and UNDP to cost share and move this project further toward national implementation.

- Assessments, evaluations or studies undertaken.

Unit 1 at the Mussayib Power Station has received an overall cold assessment with information reviewed by MoE, Hitachi/Hyundai in Amman on 25-29 September 2005. The comprehensive technical data gathered at the Mussayib Power Station plus equipment pictures obtained during the cold assessment are with UNDP and have been reviewed by Hitachi/Hyundai, MoE and UNDP specialists. A Final Assessment Report was generated on this basis, which included recommendations for the rehabilitation of Unit 1.

An *Outcome Evaluation of UNDP Governance, Crisis Prevention and Recovery and Poverty Reduction Initiatives in Iraq* in June 2009 was conducted. One of the outcomes addressed was electricity. Within Recovery and Crisis Prevention twenty-seven projects were assessed, with thirteen of the projects within the electricity sector. It was noted that an output regarding the severity of infrastructure damage in 2003 was that the power plants could generate only a fraction of the power supplied previous to this time. It was noted that electricity production was higher in the second half of 2008 than two years earlier, but the gap between demand and production may have significantly increased. The Evaluation stated that “it appears there may have been some habituation...it would appear that availability of service increased, particularly in Baghdad”. Building capacity and national ownership was an area elaborated in the Evaluation, noting that in the ministries when training of technical skills and capacity was developed that persons departed the position going to other international agencies or shifted to other positions. This fluidity of brain drain impacted several of the RCP projects but most notably the electricity projects.

At the end of rehabilitation additional assessments will be conducted.

Electricity is a priority for families in Iraq as identified in the *Results of Field Survey for Needs and Opinions of the Poor in Iraq* by Khalid Hantoush Sachet (Sept 2008). This survey identified that the need for electricity was the most requested need with 22.3% out of 11,198 families represented in ten (10) Governorates.

IV. Results

- Programme progress in relation to planned outcomes and outputs.

Qualitative Achievements against Objectives and Results
<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 overall 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 Letter of Agreement 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.

- The key outputs achieved in the reporting period including # and nature of the activities (inputs), % of completion and beneficiaries.

Quantitative Achievements against Objectives and Results		%
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 (This component is no longer applicable to this project as it is in NIM)	Specifications for training prepared. 10 engineers trained.	25%
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%

Direct Beneficiaries	Number of Beneficiaries	% of planned (current status)
Men	Population as a whole who have access to the national electric grid	N/A
Women	Population as a whole who have access to the national electric grid	N/A
Children	Population as a whole who have access to the national electric grid	N/A
IDPs	Population as a whole who have access to the national electric grid	N/A
Others	Population as a whole	
Indirect beneficiaries	34 MoE staff trained	100%
Employment generation (men/women)	N/A	N/A

- Delays in programme implementation, the nature of the constraints, actions taken to mitigate future delays and lessons learned in the process.

The Government of Iraq agreed to co-share approximately US \$8 million in 4th Quarter 2008. The Government clarified in 4th Quarter 2009 that during financial year 2010 that they will allocate funds in line with this project agreement. UNDP and MoE signed a Letter of Agreement in June 2010 to cost share the costs of rehabilitating Unit 4 under national execution modality. UNDP agreed to provide 10 million USD and the gap to be covered by the MoE. This migration from direct execution has delayed this project but is a positive way forward for this project.

- The key partnerships and collaborations

This project is led by the Ministry of Electricity. This shift is one of the first and is the future direction of UNDP especially with the approval of the Country Programme Document and the Country Programme Action Plan which was signed with the Government of Iraq in March 2011.

- Other highlights and cross-cutting issues pertinent to the results being reported on.

Capacity development has been essential in this project working at an increase level of partnership for national execution.

V. Future Work Plan

- The projected activities and expenditures for the following reporting period (1 January-31 December 2011), using the lessons learned during the previous reporting period.
 - Boiler engineer technical assistance project to the MoE and dedicated to the project.
 - Bidding, evaluation and contracting for the implementation work completed by MoE with TA from UNDP.
 - Implementation work anticipated to commence 3rd Quarter.
 - Supervisory engineer entity to monitor implementation work in place 3rd Quarter.
 - UNDP consultants monitor and provide technical assistance to the MoE.
 - Submit no cost extension of project to meet the timeline of the MoE as NIM.
- Indicate any major adjustments in strategies, targets or key outcomes and outputs planned. The major adjustment in the project is that it has shifted from DIM to NIM.

VI. Performance Indicators¹

Annual Performance Indicators Assessment for the Year 2010.

	Performance Indicators	Indicator Baselines	Planned Indicator Targets	Achieved Indicator Targets	Means of Verification	Comments (if any)
1. IP Outcome: The generating capacity, reliability, availability and efficiency of Unit No. 1 of Mussayib thermal Power Station increased.						
IP Output 1.1 Mussayib Thermal Power Station (TPS) Unit 4 rehabilitated and providing 60-80 MW greater capacity, reliability, availability and efficiency.	Indicator 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.	During the 1 st Gulf War Mussayib TPS was subjected to heavy missile attacks and aerial bombardment, which inflicted severe damage to the plant with Units 1 and 2 main control room and Unit 1 main transformer completely destroyed. The change of scope shifted in 2010 for rehabilitation of Unit 4 which collapsed during 2009.	To obtain greater power output from Unit 4 and to eliminate or minimize problems caused by unreliable operation. Produce 60 or more MW of electricity from Unit 4. Arrest deterioration and bring about extension of Remaining Useful Life	Project moved into NIM operation, MoE agreed to bridge the gap of funding for the rehabilitation work; Bid documents completed for international bidding, one offer received	Inspection visits and verifications made by UNDP engineers and consultants in close co-operation with Mussayib TPS engineering staff. Regular contacts are being maintained by telephone and e-mail to confirm the latest status of the procurement process of the contractor and the Owner's Engineer synchronization test; Load operation test; Reliability test; Certificate of Final Completion.	Estimated costs for original contractor was earmarked, but operating context structure changed, costing significantly more. Scope was approved and changed from Unit 1 to Unit 4. Letter of Agreement was signed between UNDP and MoE on NIM modality. UNDP agreed to provide US\$ 10.0 million and MoE agreed to bridge the gap if necessary for international contracting.

¹ E.g. for the UNDG Iraq Trust Fund and the MDG-F.

2. IP Outcome: 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.						
IP Output 2.1 Comprehensive set of selected and essential spare parts supplied to Mussaib TPS, which will be available in stock for emergency repairs and routine maintenance; in order to sustain Unit 1 future generation and reliability.	Indicator 2.1.1 Unit repair and rehabilitations works conducted by plant staff under contractor guidance.	Lack of spare parts and severely damaged plant.	Parts, materials and components for use in future for maintenance and repair in store.	Delivery of 135 tons of spare parts and equipment. Shipment 2 and 3 arrived 3 rd and 4 th Q 2008. Arrangement of waiver of custom letters and monitoring of security ignored while the cargo was in transit achieved, requiring constant liaison and monitoring. Final shipment of parts and equipment arrived in 2 nd Q 2009.	Photos and documents to items received. Factory test reports and Cargo inspectors' reports. Monitor of store and use of spare parts.	All spare parts supplied. This component has been absorbed into the Ministry of Electricity in 2010 through the negotiations and respective letter of agreement.

3. IP Outcome 3 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.						
<p>IP Output 3.1 Thirty four (34) plant staff trained in Unit 1 rehabilitation skills suited for erection, calibration, testing and commissioning. In addition, the Core Team of MoE staff proficient in the application of 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.</p>	<p>Indicator 3.1.1 Implementation of the relevant training overseas for unit rehabilitation works and the training on maintenance management software in Amman Jordan.</p>	<p>Limited capacity of MoE staff to conduct repair and maintenance.</p>	<p>Iraqi engineers better able to operate and maintain Unit 1 (now 4) to its best capabilities and standards.</p>	<p>Five (5) Mussayib engineers trained on Auxiliary Equipment in Japan.</p> <p>Five (5) trainees participated in training on instrumentation and control for the implementation of installation and commissioning of equipment in Japan during reporting period.</p>	<p>Monitoring skills through tele-Conferencing.</p> <p>Evaluation/ assessment reports by the trainers.</p> <p>Monitoring attendance and skills gained and use at the power plant in the future.</p>	<p>This component has been absorbed into the Ministry of Electricity in 2010 through the negotiations and respective letter of agreement.</p> <p>Upon completion there will be external comprehensive monitoring and quality controls.</p> <p>Two national engineers are dedicated to this project including a boiler engineer</p>

VII. Abbreviations and Acronyms

- List the main abbreviations and acronyms that are used in the report.

AVT: Audio-Video Teleconferencing System

EoJ: Embassy of Japan

GDEP: General Directorate, Euphrates

HE MoE: His Excellency the Minister of Electricity

MoE: Ministry of Electricity

HTC: Hitachi Co. Ltd.

MDGs: Millennium Development Goals

MoE: Ministry of Electricity

MW: Megawatt

TPS: Thermal Power Station