

**PROJECT DOCUMENT II:**

**PROJECT OF HUMANITARIAN ASSISTANCE FOR THE  
REHABILITATION OF THE ELECTRIC POWER SECTOR IN NORTHERN IRAQ**

**IMPLEMENTATION OF UNITED NATIONS SECURITY COUNCIL RESOLUTION 986**

**UNITED NATIONS CONSOLIDATED INTERAGENCY HUMANITARIAN PROGRAMME  
IN IRAQ (IRQ-96-1/N36)  
REHABILITATION OF THE ELECTRIC POWER SECTOR IN NORTHERN IRAQ**

**UNDP Project Number and Title:**

IRQ/97/003 (100 % cost-sharing): Rehabilitation of the Electric Power Sector in Northern Iraq: Implementation

IRQ/97/004 (100 % cost-sharing): Rehabilitation of the Electric Power Sector in Northern Iraq: Observation

**Duration:** 6 months

**Project Sites:** Dohuk, Erbil and Suleimaniya

**ACC/UNDP Sector & Subsector:** Energy (0350)  
Institutional Support, Power Generation & Transmission

**Government Sector & Subsector:** Electric Power, Power Production, Rehabilitation

**Government Counterpart, Agency:** Local Electricity Authorities

**Executing Agency:** United Nations Department for Development Support and Management Services

**Starting Date:** 10 December 1996

UNDP and Cost-sharing Financing and AOS Cost

Inputs:

UNDP (cost sharing inclusive of UNDDSMS/UNDP support costs)

IRQ/97/003: \$13,170,000<sup>(1)</sup>

IRQ/97/004: \$267,233<sup>(2)</sup>

TRAC Nil

Support Costs:

UNDDSMS 4.9 % (Please refer to comments on the budgets)

- (1) Project IRQ/97/003 is funded from the "Iraq Account" established pursuant to SCR 986 (1995).
- (2) Project IRQ/97/004 is financed from the % of the total funds in the "Iraq Account" established pursuant to SCR 986 that has been allocated for administrative activities.

**Brief description:** The goal of this project is to implement under Security Council Resolution (SCR) 986 a project for humanitarian assistance relating to the electric power sector in the three Governorates that constitute the northern region of Iraq in order to meet, in an equitable manner, the immediate and pressing electricity service needs of the population at large, and particularly of the most vulnerable groups on an emergency basis. Priority will be accorded to verifying the restored provision of electricity for medical facilities, water supply systems and other public institutions.

On behalf of:	Signature:	Date:	Name/Title
Executing Agency:	.....	.....	.....
UNDP:	.....	.....	.....

## PROJECT DOCUMENT II:

### PROJECT OF HUMANITARIAN ASSISTANCE FOR THE REHABILITATION OF THE ELECTRIC POWER SECTOR IN NORTHERN IRAQ

#### 1. Background

In order to implement the provisions of UN Security Council Resolution (SCR) 986 and in accordance with the Memorandum of Understanding (MOU) of 20 May 1996 between the Government of Iraq (GOI) and the United Nations, a Distribution Plan was prepared by the GOI to facilitate, among other things, the rehabilitation of the electric power generation plants, and transmission and distribution substations. Such facilities were severely damaged during the Gulf War and its aftermath, and could only be partially restored, using the spare parts available in the country. As a result, many facilities are either failing or being shut down. The fragile electricity system is constantly being interrupted at the supply and consumer ends, and the frequency of power failure and black-outs in urban areas and villages is rapidly on the rise. In some urban areas and most villages, electricity supply is not more than a few hours per day.

The shortage of electricity has been especially evident in the autonomous region in the North which comprises the three Governorates of Dohuk, Erbil and Suleimaniya. This is largely due to damage sustained in the aftermath of the Gulf War, to the non-availability of power supplied from the national grids (Erbil and Suleimaniya) from September 1992, and to the inability to make full use of such supplies (Dohuk) due to deficiencies in the distribution system. Other important reasons have been the rapid depletion of conductors, transformers, circuit breakers and spare parts at substations, and the low water levels in dams at the two hydroelectric power stations in Suleimaniya, which provide that Governorate and the Governorate of Erbil with electricity. This lack of sufficient electricity supply has adversely affected the water supply, health services and the provision of other humanitarian assistance. It is believed that the outbreak of cholera in Suleimaniya in 1995 was partly due to the shortage of electricity.

While the full rehabilitation of the electric generation, transmission and distribution networks is far beyond the scope of the resources allocated in the Distribution Plan, for humanitarian purposes an amount of US\$ 49.17 million was budgeted to repair and maintain major power stations, substations and transmission lines for all regions of Iraq. US\$ 13.17 million of this is specifically allocated for the three northern Governorates. This is less than 10 per cent of the essential needs as expressed in the GOI lists of equipment and material required (for the complete set of lists, see Annex 7).

The lack of heating and cooking fuel at affordable prices aggravates the situation, especially during the winter months. Due to the dearth of both electricity and heating fuel, much of the population resorts to cutting down trees for heating and cooking purposes, thereby causing further environmental damage to the already heavily deforested region.

Technical Profiles, concerning the electric systems in each of the three Governorates, is given in Annex 1.

## **Earlier Relief Efforts**

There has not been any direct relief activity in the area concerning the electric power sector over the years, by the United Nations or any other organization or nation. The British NGO, "Save the Children", however, made an attempt to assess the situation in 1993. Their report reached the same conclusions as does the report of the UNDDSMS mission, namely that the decay is considerable and the need for humanitarian relief is immense. With three additional years of decay, the situation is obviously a lot worse than it was in 1993.

## **2. Humanitarian Objective**

The purpose of humanitarian assistance to Iraq, as specified in SCR 986, is to provide relief to the population that has been subjected to an embargo from 1990 following the Gulf War, particularly to the most vulnerable groups. This Project constitutes the first of what could be a series of relief efforts to provide essential and emergency needs with regard to the electric power sector.

## **3. Project Objectives**

### **3.1 Short-term Objectives**

The goal of the Project is to implement SCR 986 in the three Governorates of the northern region in order to meet, in an equitable manner, the immediate and pressing electricity service needs of the population at large, and particularly of the most vulnerable groups on an emergency basis. Priority will be accorded to verifying the restored provision of electricity for medical facilities, water supply systems and other public institutions for which baseline data will be developed.

Rehabilitation will concentrate on the following specific geographical and technical areas:

- (1) power generation is to be improved by raising the capacity of the Dokan Hydroelectric Power Station (HPS) to its rating of 400 MW from the present capacity of 240 MW and by activating one of the three 83-MW turbines at the Derbandikhan HPS. Both stations are located in the Suleimaniya Governorate;
- (2) rehabilitation of the electricity distribution system and transmission lines serving Suleimaniya City and surrounding towns in the Suleimaniya Governorate;
- (3) rehabilitation of the electricity distribution system within a number of urban centres in the Derbandikhan region in the Suleimaniya Governorate;
- (4) rehabilitation of substations, transformers and transmission lines in the Erbil Governorate; and
- (5) rehabilitation of the distribution network in the Dohuk Governorate, which is presently linked to the network of central/southern Iraq, so that the Dohuk Governorate can make better use of that linkage.

Specific objectives to meet these overall goals are to:

- (1) study and assess the needs for equipment, spare parts, materials and services in the three northern Governorates of Iraq with a view to determining the most essential needs within the financial allocations for energy (including fuel), as stipulated by the MOU;
- (2) procure the commodities from approved lists;
- (3) ensure the installation of delivered equipment at the intended sites and with equitable distribution of the electricity resulting from the rehabilitation efforts among the population in the three northern Governorates; and
- (4) evaluate the impact of Project implementation.

The beneficiaries will generally be those who have the least access to electricity today. Present, measured energy consumption and duration of access are indicators that will guide the assessment. However, top priority is always to be given to public institutions, such as hospitals, water supply plants and schools, for which dedicated supply must be assured at specified times. In this connection, consideration will also have to be given to how regular households can actually benefit equitably from somehow being connected to dedicated circuits (but on the same distribution branch).

Benefits from the intended measures will be felt immediately as faulty parts are replaced and missing ones are added to the network. Depending on the nature of the parts, the lead time, from the moment of contracting to launching the service, may vary from a few weeks (for items stocked by the supplier) to several months (for non-stocked, special parts). The actual assortment of equipment and materials for northern Iraq suggests, however, that the bulk of supply (e.g. small distribution transformers, lightning arresters and cables) will be available quickly since they are of a standard nature.

An analysis is presently being carried out for the purpose of mapping out the various consumer sectors, such as public institutions, industries, commercial enterprises and households. Such an analysis will be very helpful when assessing needs and priorities for equitable distribution of the benefits of the measures taken.

### **3.2 Long-term Objectives**

It is envisaged that the present five-month Project will be followed by a chain of similar humanitarian efforts, whereby the impact of such efforts will be more substantially felt. Thus, the present Project can act as a catalyst towards the long-term objective of normalizing conditions of the electricity network and thereby the living conditions of the population of northern Iraq on the basis of equitable distribution in a more long-range perspective.

That goal brings with it environmental benefits as well, since with better access to electricity the population will increasingly turn away from burning wood. In the long run, this will reshape much of the landscape from the present deforested situation back to environmental normalization.

Target groups can be identified through several criteria and indicators (see below). The present supply records will provide a guide and improvements will be obvious from future supply records.

#### **4. Strategy**

Implementation of the Project will follow a strategy that includes the following components:

- (1) study and assessment of the needs for equipment, spare parts and materials in the three northern Governorates with a view of determining the most essential ones within the financial allocation for energy (including fuel), as stipulated in the MOU (this will result in the establishment of final lists of required equipment, spare parts and material according to assigned priorities and fuel needs, and submission of these supply lists for clearance by the Sanctions Committee in New York);
- (2) procurement of the cleared commodities by UNDDSMS, which includes the signing of contracts with suppliers, delivery of equipment in the northern Governorates of Iraq, and installation on site (e.g. power plants and substations) or storage in warehouses with proper recording; and
- (3) ensuring installation of delivered equipment at intended sites and times, and the equitable distribution of the electricity resulting from the rehabilitation efforts among the population in the northern Governorates of Iraq.

This will be made possible through the establishment of a set of observation criteria/indicators, monitoring and dissemination of periodic reports, and subsequent evaluation of Project implementation.

A comprehensive Project Implementation Manual, covering all major elements in the implementation of the Project and that for the central/southern regions, such as budgets, personnel, training, supply records, logistics, office routines and observation, will be established together with an efficient follow-up and reporting system for the monitoring of progress throughout the period of Project implementation.

#### **5. Service Delivery: Supplies and Logistics**

UNDDSMS will provide the full range of activities normally referred to as supplies and logistics, namely: (1) procurement; (2) shipping; (3) warehousing; (4) secondary transporting; and (5) physical delivery to the project sites. However, tasks (3)-(5) will be carried out in coordination and cooperation with local authorities. The actual installation at the sites is to be carried out by local authorities, who obviously are not in the employ of UNDDSMS, but who will work under the supervision of that UN Department.

The procurement process is as follows:

- (1) UNDDSMS will issue requests for proposals/bids from international suppliers;
- (2) UNDDSMS will receive bids from such suppliers, evaluate the bids and select successful suppliers in accordance with the United Nations Financial Regulations and Rules, consulting with

- local authorities in the region if and when needed;
- (3) before signature, contracts will be submitted to the Sanctions Committee for approval;
  - (4) before signature, contracts will be submitted to the Committee on Contracts at UN Headquarters in New York for approval; and
  - (5) approved contracts will be signed between UNDDSMS and successful suppliers, and UN authorities in Iraq will be advised accordingly.

The delivery process, ex. suppliers' works and all through to each of the three warehouses in the cities of Erbil, Dohuk and Suleimaniya follows the procedures described below:

- (1) UNDDSMS together with suppliers and the suppliers' shipping agents will determine the most favourable shipping route from supplier to destination in northern Iraq and instruct the suppliers accordingly;
- (2) shipment of equipment to the point of entry takes place with all necessary shipping documents; and
- (3) the equipment will be transported from the point of entry to the three individual warehouses in the cities of Erbil, Dohuk and Suleimaniya, whence distribution immediately takes place directly to users (for replacement parts) or parts are kept in store for future emergency needs (for spares).

It is envisaged that contracts with suppliers will be for CIF point of entry plus transportation from that point all the way to the individual warehouses, i.e. the suppliers' undertaking is free the three warehouses in northern Iraq. The route of choice for shipping goods from abroad to northern Iraq is by sea or land transportation to the Turkish port of Mersin, a very commonly used entry point for goods destined for northern Iraq, then after reloading on trucks, overland through Turkey, into Iraq at the Silopi-Habour point of entry in the Dohuk Governorate, to the individual warehouses.

UNDDSMS will contract local transport companies for the transfer of goods to from the three warehouses to the individual installation sites. The same steps will be undertaken for the immediate transfer of spare parts from the warehouses when urgent needs do occur.

Adequate telecommunication linkages are an essential component for supplies and logistics tasks, as well for observation activities. The following basic arrangements are foreseen for the efficient and reliable communication for routing supplies, assuming that sea transportation will be the chosen mode to the port of Mersin.

The main Project office in Erbil and the UNDP office in Baghdad both will be supplied with Satcom-M facilities and they are budgeted for separately under the observation and administrative non-staff budget and are therefore not part of the budget for implementation of this Project.

VHF handsets and mobile stations are determined on the basis of the number of staff and vehicles involved in the implementation activities and the costs for these are included in the budget for implementation for this Project.

## **6. Implementation Activities, Mechanisms and Responsibilities**

UNDDSMS will be responsible for all activities relating to the assessment and provision of equipment, spare parts and materials for all three Governorates based on a determination of the most essential needs that can be met within the financial allocation, as stipulated by the MOU. This includes the establishment of updated equipment lists, complete with cost estimates and priorities, and subsequently their presentation to the Sanctions Committee for clearance. UNDDSMS will also be responsible for all matters relating to procurement and delivery to warehouses and sites, and supervision of installation.

Finally, UNDDSMS will be responsible for observation at the various observation points, i.e. at the three warehouses and at the sites of installation, as well as for the ultimate evaluation of the impact of Project implementation.

The implementation group will consist of a number of professionals, including electrical engineers, observers with an electrical background (international as well as national) and office personnel, all reporting to the International Programme Coordinator. This International Programme Coordinator, who will be stationed in Baghdad, will also oversee the work of the implementation group for central/southern Iraq. Technical back-stopping will be provided by UNDDSMS in New York. It is also foreseen that procurement personnel in New York will assist in setting up efficient procurement routines. Other details of the implementation group for northern Iraq can be found in section 9 below.

Routine procedures for the practical arrangements and responsibilities of distribution, accounting and supervision will be defined in detailed work descriptions at a later time, when the actual circumstances in the field are better known. Such working procedures will also encompass the coordination and advisory roles of UNDDSMS in New York.

## **7. Phasing of Activities**

This Project can best be carried out in a phased approach. The principal phases are as follows.

- (1) The study phase in which all aspects of the Project, including the technical, financial, logistical and managerial aspects, will be examined and a workplan for the individual components will be drawn up. The first mission by UNDDSMS in October/November 1996 launched the study phase.
- (2) The procurement phase follows the study phase closely after formal implementation of SCR 986 comes into effect. Most of the work of this phase concerning the northern Governorates will be carried out by UNDDSMS in New York, but with due consultations with staff in the field.
- (3) The implementation phase begins with the shipment of commodities and covers subsequent activities, such as the distribution of equipment, installation and testing under UNDDSMS supervision, and commissioning.



The observation process will take place in parallel with the implementation phase.

A tentative work schedule, given on the next page, outlines all the main activities of the Project and assigns the various milestone dates and responsibilities.

The work schedule shows that UNDDSMS implementation activities will start as soon as financial authorization has been given by the Controller and DHA in mid March 1997. It also assumes that equipment procured by UNDDSMS will follow a continuous delivery path up to mid May 1997. Such a completion date may not hold true for all items to be supplied since some of them may need longer lead times. This calls for a continuous updating of the entire work schedule, starting from the time that actual bids start coming in and the overall delivery situation becomes more clear.

**Work Schedule for Northern Iraq**

T A S K S	Responsibility	M O N T H S (97)						
		February 0.5 1	March 1.5 2	April 2.5 3	May 3.5 4	June 4.5 5	July 5.5 6	August 6.5 7
DDSMS to receive financial authorization Review equipment lists provided by authorities Clearing of equipment in Sanctions Committee Procurement of equipment and materials Establishment of necessary logistics Mobilization of international implementation/ observation/administration team Mobilization of national implementation/ observation/administration team Recruited staff dispatched in the field Implementation, observation and periodic reporting Evaluation and situation analysis Project terminal report Administrative/financial activities	Controller/DHA DDSMS DDSMS DDSMS DDSMS/UNDP DDSMS UNDP DDSMS/UNDP DDSMS/UNDP DDSMS/UNDP DDSMS DDSMS/UNDP							

## **8. Observation, Reporting and Assessment**

### **8.1 Background**

Observation forms the primary element of the implementation of the Project of Humanitarian Assistance for the Rehabilitation of the Electric Power Sector in Northern Iraq, and it will be carried out independently of the procurement implementation element by UNDP/UNDDSMS, in close liaison with relevant authorities.

### **8.2 The Observation Process**

#### **8.2.1 Observation focus**

The following areas of electric power generation, transmission and distribution will be the focus of observation:

- power plants, generation capacity and availability;
- the operational state of the transmission lines and substations;
- the performance and continuity of supply of the distribution network;
- delivery, distribution and installation of equipment and spare parts; and
- equitable distribution of electricity with high reliability and quality.

#### **8.2.2 What to observe**

The following items, activities and conditions have been identified for observation:

- delivery of spares and equipment at the main warehouses (see Annex 2 for warehouse locations);
- actual installation of the supplies against supplies received;
- rehabilitation and repair of the power generating stations, sub-stations, transmission and distribution network and equipment (see Annex 3 for stations to be rehabilitated);
- overload conditions and percentage of restored power for generators, transmission lines and transformers before and after installation of the spares and equipment;
- state of the distribution network before and after installation of the spares and equipment, in terms of operation and continuity of load capacities;
- availability of electrical power supply in service institutions, such as hospitals, water supply facilities, sanitation treatment plants, schools and other public institutions, and selected households in all Governorates before and after installation of the spares and equipment;
- equitable distribution of electricity (a) among all 3 Governorates of northern Iraq, (b) within each district and (c) at the level of individual households; and
- observation of the electric load statistics at the electricity departments.

### 8.2.3 Where to observe

Observation will be implemented at the:

- the central electricity warehouses located in the cities of Erbil, Dohuk and Suleimaniya;
- two warehouses located inside the Derbandikhan and Dokan power stations;
- electrical substations of Salah Al-din, Azadi, Ifraz, Ein Kawa, North Erbil and South Erbil located in the Erbil Governorate;
- electrical substations in Zakho, New Dohuk, Old Dohuk, Akra, Fisch Khabour, Kalifan, Barazan, Batoofa, Serseng, and Amadiya in the Dohuk Governorate;
- electrical substations in Suleimaniya City, Azadi, Taslooja, Kalar, Azmeer, Razkari, and Haji Awa in the Suleimaniya Governorate
- the power stations of Derbandikhan and Dokan; and
- public institutions (hospitals, water pumping stations, sewage plants and schools) within the three Governorates.

### 8.2.4 Who shall observe what

One unit will be established in Erbil to observe the locations indicated above. The observation group will consist of one International Observer and three National Assistant Observers, one for each Governorate. The International Observer will be stationed in Erbil, but his/her time will be shared over the region.

### 8.2.5 How to observe

In order to carry out the observation process, a set of observation criteria and indicators have been prepared (see section 8.3 below). The criteria and indicators are intended to ensure that the equipment and spares are installed at the intended sites on an equitable basis. The Terms of Reference of the Observation Process, which will be refined at a later stage, will include but not be limited to the examination of the spares and equipment lists, observation of delivery, distribution, installation and usage, supervision of operations, impact of the implemented activities, and the outcome of the generating capacity of the electrical network.

## **8.3 Observation Criteria and Indicators for Northern Iraq**

All the observation procedures described below for the electric power sector will be carried out independently by UNDP/UNDDSMS (under the overall authority of the DHA in New York and UNOHCI in Baghdad) and in liaison and coordination with relevant GOI and local authorities.

### 8.3.1 Success criteria

The following criteria will be used to assess the success of the Project:

- availability of uninterrupted electricity supply to key public institutions, including water supply facilities and hospitals (the numbers and nature of these institutions, as well as their consumption patterns are now being investigated for use as baseline data for assessing the impact of the Project);
- access by urban households to services on an equitable basis (in hours of supply and in consumed power) of electricity and its tariff, especially with regard to the disparity of income/capita in the various cities/towns (present consumption patterns are now under investigation for use as baseline data in assessing the impact of the Project); and
- availability of a reasonable stock of spare equipment/parts in the warehouse to cover breakdown situations.

### 8.3.2 Key technical indicators

The following are the key technical indicators that have been identified:

- rehabilitation of in-service power generation in MW;
- rehabilitation of in-service transformer-station capacity in MVA;
- rehabilitation of in-service 132-kV, 33-kV lines and 11-kV feeders in km;
- rehabilitation of in-service 400-V cables in km;
- the percentage of pumping stations and water treatment plants with uninterrupted supply of electricity;
- the percentage of hospitals, schools and other public facilities with continuous access to electricity; and
- the water level available for hydropower generation behind the dams.

### 8.3.3 Additional indicators

The following are social and economic indicators that can be used to supplement the technical indicators:

- the percentage of urban households with access to adequate electricity supply;
- the restoration of electricity supply/demand (baseline to be determined);
- the impact of kerosene supply; and
- the stock level of essential parts and materials in warehouses.

#### 8.3.4 Sources

The following sources will provide data on these indicators:

- the Department of Electrical Energy of the Ministry of Industry and Minerals in the three northern Governorates;
- hydroelectric power plants;
- transmission and distribution substations;
- NGOs and international organizations with offices and/or activities in urban centres and towns;
- UNDDSMS technical advisors and consultants (progress/evaluation reports);
- UN offices (including the UNDP office in Baghdad) and sub-offices in northern Iraq; and
- interviews and random checks with urban dwellers.

#### 8.3.5 Remarks

While priority will be given to public facilities, it is paramount that equitable distribution be extended to as many families as possible, keeping in mind that all urban families cannot be directly assisted with the limited resources available, and that increasing access of the rural population to electricity, as through grid extension, apart from where already available, should not be considered at this stage.

#### **8.4 Reporting on Observation**

The observation team will produce periodic reports (once every two weeks) related to its assigned tasks in order to ensure that the process of implementation of SCR 986 in the electricity sector is achieving the expected results through the collection and processing of all the necessary information at various levels of delivery, distribution and installation of the supplied equipment. If a situation of serious implication arises, the Observers will report it immediately without waiting until the next normal reporting period. Specific formats will be designed for both periodic and event-triggered reports to facilitate aggregation and consolidation at the Governorate and regional levels.

The report system basically depends on two levels of information collection.

- (a) Production, transmission and distribution level (technical level). This level, which will be handled by the observation teams will entail the completion of the technical data formats which will be prepared by UNDDSMS for observation reporting and assessment purposes through regular site visits to the stations, substations and distribution networks.
- (b) Consumption and end-user level. To gather information on the status of electrical power supply at the level of households and of public institutions (such as hospitals, schools), the assistance of UN agencies, such as WFP, WHO and UNICEF, will be sought during regular surveys to be conducted during the Project.

It is the responsibility of the International Programme Coordinator in Baghdad to receive the observation reports from the observation group in northern Iraq and ensure their accuracy, completeness and timeliness. He/she will coordinate the reporting with UNDP/UNDDSMS in New York and UNOHCI at the country level. An overall monthly report will be submitted by UNDP/UNDDSMS to the DHA in New York on electricity sector observation. The reports will be used to impose corrective measures when and where needed.

### **8.5 Assessment**

UNDP/UNDDSMS will undertake an assessment during and after the equipment delivery and installation stage and in parallel with the observation process, with the objective of confirming the equitable distribution of electricity services in the country, and determining the adequacy of the services provided to cover the needs of the target population. The assessment will be based on comparing the situations before and after the Project over this six-month period. UNDP/UNDDSMS recommends that the electricity sector be included in the UNICEF/GOI implemented Multiple Indicator Cluster Survey (MICS) in its next edition in 1997, whereby information and statistics about the level of electricity consumption by various strata of the population throughout the country would be gathered and compiled.

In order to evaluate the impact of the implementation of the Project, the following activities will be carried out:

- the observation teams will conduct a technical assessment of the adequacy and results of Project implementation;
- recommendations will be made by the technical team in coordination with the relevant departments as to how to improve the implementation process and the need for further humanitarian assistance; and
- the overall impact assessment will be included in the form of a terminal report which will be distributed to all parties concerned.

Specifically, the results of the assessment should be disseminated to the electric departments and the UN agencies and departments working in Iraq for action on recommendations to strengthen (or rectify) the course of SCR 986 implementation.

### **9. Personnel Requirements**

There will be one main Project office in the region, located in Erbil City, and that office will have mobile teams to service the other two Governorates. Erbil City is geographically best suited in terms of the distances to be covered by the mobile teams for the provision of services.

The mobile teams are to consult and share work and responsibilities for the three Governorates, under the overall supervision and leadership of an International Observer and an International Electrical

Engineer.

The mobile teams are expected, when needed, to be available at work sites and not at offices. However, if their need extends for more than one day, lodging will be available at both Suleimaniya and Dohuk. Once their task is completed, direct reporting to the International Observer at the Erbil office will be made upon their return. Local electrical departments are expected to make available warehouses in their respective Governorates.

Based on this, and keeping in mind that the budget for observation are not part of the budget for implementation, the following personnel requirements for implementation are expected for posting at the main Project office in Erbil:

- one (1) International Electrical Engineer, who will also serve as Assistant Programme Coordinator, to be primarily responsible for providing consultancy services, coordination of the movements of the mobile teams and follow-up on the delivery and installation of the equipment;
- three (3) National Electrical Engineers knowledgeable about the existing electrical supply system who will be backstopped by the International Electrical Engineer;
- three (3) National Electrical Technicians;
- three (3) Drivers;
- three (3) Warehouse Staff;
- one (1) National Computer Engineer;
- six (6) Guards; and
- casual labourers, as required.

## **10. Budgets**

A summary of all relevant budget items for the implementation part of the Project is given below, followed by the same for the observation part of the Project. It is noted that the International Observer, three (3) National Assistant Observers, one (1) Secretary and two (2) Drivers, in addition to the International Programme Coordinator and office support/administrative staff are budgeted for under the Observation/Administrative Budget and that they, therefore, are not covered by the budget for implementation. The terms of reference for the International Programme Coordinator, an International Observer and the International Electrical Engineer/Assistant Programme Coordinator are provided in Annexes 4-6, respectively.

## **11. Schedule of Payments**

The schedule of payments can be set only when the priorities for procurement are known. For this reason, a mission is planned to establish these priorities, define procurement packages and set the budgets for each package for processing. Then, the schedule of payment will be established.



Country : IRAQ  
 Project No : IRO/97/003/A/01/01  
 Title : ELECTRICITY SECTOR UNDER SCR 986 NORTHERN REGION (IMPLEMENTATION)

Funding : CS  
 DISMS/ENERGY

Line	Description	1997		1998		1999		2000		2001		2002	
		WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget
<b>10. PERSONNEL</b>													
<b>11. EXPERTS/CONSULTANTS</b>													
<b>11. CONSULTANTS</b>													
1151	ELECTRICAL ENG./ASSIST. COORDINATOR	5.0	71000	5.0	71000	0	0	0	0	0	0	0	0
1199	SUBTOTAL	5.0	71000	5.0	71000	0	0	0	0	0	0	0	0
<b>13. ADMIN SUPPORT</b>													
1301	DRIVER (DOHUK)	5.0	2000	5.0	2000	0	0	0	0	0	0	0	0
1302	DRIVER (ERBIL)	5.0	2000	5.0	2000	0	0	0	0	0	0	0	0
1303	DRIVER (SULEIMANIYA)	5.0	2000	5.0	2000	0	0	0	0	0	0	0	0
1304	WAREHOUSE KEEPER (ERBIL)	5.0	3000	5.0	3000	0	0	0	0	0	0	0	0
1305	WAREHOUSE KEEPER (DOHUK)	5.0	3000	5.0	3000	0	0	0	0	0	0	0	0
1306	WAREHOUSE KEEPER(SULEIMANIYA)	5.0	3000	5.0	3000	0	0	0	0	0	0	0	0
1307	GUARD (ERBIL)	5.0	1500	5.0	1500	0	0	0	0	0	0	0	0
1308	GUARD (ERBIL)	5.0	1500	5.0	1500	0	0	0	0	0	0	0	0
1309	GUARD (DOHUK)	5.0	1500	5.0	1500	0	0	0	0	0	0	0	0
1310	GUARD (DOHUK)	5.0	1500	5.0	1500	0	0	0	0	0	0	0	0
1311	GUARD (SULEIMANIYA)	5.0	1500	5.0	1500	0	0	0	0	0	0	0	0
1312	GUARD (SULEIMANIYA)	5.0	1500	5.0	1500	0	0	0	0	0	0	0	0
1351	CASUAL LABOURER (FOR 3 GOVERNORATE	5.0	4500	5.0	4500	0	0	0	0	0	0	0	0
1399	SUBTOTAL	65.0	28500	65.0	28500	0	0	0	0	0	0	0	0
<b>15. OFFICIAL TRAVEL</b>													
1501	DOMESTIC OFFICIAL TRAVEL	5.0	6000	5.0	6000	0	0	0	0	0	0	0	0
1599	SUBTOTAL	5.0	6000	5.0	6000	0	0	0	0	0	0	0	0

Country : IRAQ  
 Project No : IRQ/97/003/A/01/01  
 Title : ELECTRICITY SECTOR UNDER SCR 986 NORTHERN REGION (IMPLEMENTATION)

Funding : CS  
 DSDMS/ENERGY

Line	Description	T O T A L		1997		1998		1999		2000		2001		2002	
		WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget
16.	MISSION COSTS		26000		26000		0		0		0		0		0
1612	MISSION COSTS		26000		26000		0		0		0		0		0
1699	SUBTOTAL		26000		26000		0		0		0		0		0
17.	NATIONALS														
17.	NAT'L CONSULTANTS														
1751	ELECTRICAL ENGINEER (ERBIT)	5.0	5000	5.0	5000	0	0	0	0	0	0	0	0	0	0
1752	ELECTRICAL ENGINEER (DOHUK)	5.0	5000	5.0	5000	0	0	0	0	0	0	0	0	0	0
1753	ELECTRICAL ENGINEER (SULEIMANIYA)	5.0	5000	5.0	5000	0	0	0	0	0	0	0	0	0	0
1754	ELECTRICAL TECHNICIAN (ERBIT)	5.0	2500	5.0	2500	0	0	0	0	0	0	0	0	0	0
1755	ELECTRICAL TECHNICIAN (DOHUK)	5.0	2500	5.0	2500	0	0	0	0	0	0	0	0	0	0
1756	ELECTRICAL TECHNICIAN (SULEIMANIYA)	5.0	2500	5.0	2500	0	0	0	0	0	0	0	0	0	0
1757	COMPUTER ENGINEER (FOR 3 GOVERNORA)	5.0	5000	5.0	5000	0	0	0	0	0	0	0	0	0	0
1798	SUBTOTAL. NAT'L CONSULTANTS	35.0	27500	35.0	27500	0	0	0	0	0	0	0	0	0	0
1799	SUBTOTAL	35.0	27500	35.0	27500										
1999	COMPONENT TOTAL	110.0	159000	110.0	159000										
40.	EQUIPMENT														
43.	PREMISES														
4331	RENTAL OF PREMISES		8000		8000	0	0	0	0	0	0	0	0	0	0
4399	SUBTOTAL		8000		8000	0	0	0	0	0	0	0	0	0	0

7 March 1997

BUDGET DOCUMENT : UNITED NATIONS DEVELOPMENT PROGRAMME

Country : IRAQ  
 Project No : IRO/97/003/A/01/01  
 Title : ELECTRICITY SECTOR UNDER SCR 986 NORTHERN REGION (IMPLEMENTATION)

Funding : CS  
 DDSMS\ENERGY

Line	Description	T O T A L											
		WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget		
<b>45. LOCAL PROCUREMENT</b>													
4501	SECONDARY TRANSPORT, WAREHOUSE		127500		127500		0		0		0		0
4502	COMMUNICATION CHARGES		5000		5000		0		0		0		0
4503	COMMUNICATION EQUIPMENT		12250		12250		0		0		0		0
4599	SUBTOTAL		144750		144750		0		0		0		0
<b>47. INT'L PROCUREMENT</b>													
4701	ELECTRICAL EQUIPMENT		12104964		12104964		0		0		0		0
4702	VEHICLES (3) AND SPARES		81000		81000		0		0		0		0
4703	COMMUNICATION EQUIPMENT		3100		3100		0		0		0		0
4704	OFFICE AUTOMATION EQUIPMENT		22000		22000		0		0		0		0
4705	OFFICE EQUIPMENT AND FURNITURE		12000		12000		0		0		0		0
4799	SUBTOTAL		12223064		12223064		0		0		0		0
4999 COMPONENT TOTAL			12375814		12375814		0		0		0		0
<b>50. MISCELLANEOUS</b>													
<b>53. SUNDRY</b>													
5301	MISCELLANEOUS		20000		20000		0		0		0		0
5399	SUBTOTAL		20000		20000		0		0		0		0
5999 COMPONENT TOTAL			20000		20000		0		0		0		0
999 PROJECT TOTAL			110.0 12554814		110.0 12554814		0		0		0		0
GRAND TOTAL			110.0 12554814		110.0 12554814		0		0		0		0
Supports Costs (4.9%)			615,186		615,186		0		0		0		0
GRAND TOTAL			13,170,000		13,170,000		0		0		0		0
COST SHARING			-13,170,000		-13,170,000		0		0		0		0
NET UNDP INPUT			-0-		-0-		0		0		0		0

**BUDGET COVERING COST-SHARING  
CONTRIBUTION  
(For Internal UNDP Use Only)**

Project Number:           IRQ/97/003  
 Project Title:            Electricity Sector Under SCR 986 Northern  
                               Region (Implementation)  
 Version:                    Approved

Component	Budget Line	Description	Donor	Total \$	Year 1997
100		<b>COST SHARING*</b>			
	101-01	Main budget	DHA*	12,554,814	12,554,814
	101-03	Support Services (DDSMS/UNDP)	DHA*	615,186	615,186
	199	<b>Total Cost-Sharing</b>		<b>13,170,000</b>	<b>13,170,000</b>

<u>Payment Schedule</u>	<u>Date</u>	<u>Amount</u>	<u>Contributor*</u>
1. To be paid	March 1997	\$7,000,000	DHA*
2. To be paid	May/June 1997	\$6,170,000	DHA*

Cost-sharing is payable in US dollars, to be deposited into the "UNDP Contribution Account" No. 015-002284 with Chemical Bank, U.N. Plaza, New York

\* Cost-sharing contribution will be transferred by DHA to UNDP from the "Iraq Account" established pursuant to SCR 986.

7 March 1997

BUDGET DOCUMENT : UNITED NATIONS DEVELOPMENT PROGRAMME

Country : IRAQ  
 Project No : IRQ/97/004/A/01/01  
 Title : ELECTRICITY SECTOR UNDER SCR 986 NORTHERN REGION (OBSERVATION)

Funding : CS  
 DDSMS\ENERGY

Line	Description	TOTAL		1997		1998		1999		2000		2001		2002	
		WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget
<b>10. PERSONNEL</b>															
<b>11. EXPERTS/CONSULTANTS</b>															
<b>11. CONSULTANTS</b>															
1151	COORDINATOR (PROG./COORDINATOR)	2.5	35500	2.5	35500	0	0	0	0	0	0	0	0	0	0
1152	OBSERVER (FOR 3 GOVERNORATES)	5.0	68000	5.0	68000	0	0	0	0	0	0	0	0	0	0
1153	CONSULTANTS (PROG./COORD.)	1.0	12500	1.0	12500	0	0	0	0	0	0	0	0	0	0
1198	SUBTOTAL. CONSULTANTS	8.5	116000	8.5	116000										
1199	SUBTOTAL	8.5	116000	8.5	116000										
<b>13. ADMIN SUPPORT</b>															
1301	SECRETARY (FOR 3 GOVERNORATES)	5.0	2500	5.0	2500	0	0	0	0	0	0	0	0	0	0
1302	DRIVER (ERBIL)	5.0	2000	5.0	2000	0	0	0	0	0	0	0	0	0	0
1303	DRIVER (ERBIL)	5.0	2000	5.0	2000	0	0	0	0	0	0	0	0	0	0
1399	SUBTOTAL	15.0	6500	15.0	6500										
<b>15. OFFICIAL TRAVEL</b>															
1501	DOMESTIC OFFICIAL TRAVEL	5.0	5000	5.0	5000	0	0	0	0	0	0	0	0	0	0
1599	SUBTOTAL	5.0	5000	5.0	5000										
<b>17. NATIONALS</b>															
<b>17. NAT'L CONSULTANTS</b>															
1751	ASSISTANT OBSERVER (ERBIL)	5.0	5000	5.0	5000	0	0	0	0	0	0	0	0	0	0
1752	ASSISTANT OBSERVER (DOHRUK)	5.0	5000	5.0	5000	0	0	0	0	0	0	0	0	0	0
1753	ASSISTANT OBSERVER (SULEIMANIYA)	5.0	5000	5.0	5000	0	0	0	0	0	0	0	0	0	0
1798	SUBTOTAL. NAT'L CONSULTANTS	15.0	15000	15.0	15000										
1799	SUBTOTAL	15.0	15000	15.0	15000										

Country : IRMO  
 Project No : TRC/97/004/A/01/01  
 Title : ELECTRICITY SECTOR UNDER SCR 986 NORTHERN REGION (OBSERVATION)

Funding : CS  
 DDSMS\ENERGY

Line	Description	1997		1998		1999		2000		2001		2002	
		WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget	WM	Budget
1999	COMPONENT TOTAL	43.5	142500	43.5	142500								
-----													
40.	EQUIPMENT												
43.	PREMISES												
4301	RENTAL OF PREMISES		8000		8000		0		0		0		0
4399	SUBTOTAL		8000		8000		0		0		0		0
-----													
45.	LOCAL PROCUREMENT												
4501	COMMUNICATIONS CHARGES		10000		10000		0		0		0		0
4502	OPERATIONS AND MAINTENANCE		3750		3750		0		0		0		0
4599	SUBTOTAL		13750		13750		0		0		0		0
-----													
47.	INT'L PROCUREMENT												
4701	VEHICLES (2) AND SPARES		52000		52000		0		0		0		0
4702	COMMUNICATION EQUIPMENT		12000		12000		0		0		0		0
4703	OFFICE AUTOMATION EQUIPMENT		9500		9500		0		0		0		0
4704	OFFICE EQUIPMENT AND FURNITURE		12000		12000		0		0		0		0
4799	SUBTOTAL		85500		85500		0		0		0		0
-----													
4999	COMPONENT TOTAL		107250		107250								
-----													
50.	MISCELLANEOUS												
53.	SUNDRY		5000		5000		0		0		0		0
5301	MISCELLANEOUS		5000		5000		0		0		0		0
5399	SUBTOTAL		5000		5000		0		0		0		0
-----													
5999	COMPONENT TOTAL		5000		5000								
-----													
999	PROJECT TOTAL	43.5	254750	43.5	254750								
-----													
	SUPPORT COSTS (4.9%)		12,483		12,483								
	GRAND TOTAL		267,233		267,233								
-----													
	COST SHARING		-267,233		-267,233								
	NET UNDP INPUT		-0-		-0-								
-----													

**BUDGET COVERING COST-SHARING  
CONTRIBUTION**  
(For Internal UNDP Use Only)

Project Number:           IRQ/97/004  
 Project Title:            Electricity Sector Under SCR 986 Northern Region  
                               (Observation)  
 Version:                  Approved







Component	Budget Line	Description	Donor	Total \$	Year 1997
100		<b>COST SHARING*</b>			
	101-01	Main budget	DHA*	254,750	254,750
	101-03	Support Services (DDSMS/UNDP)	DHA*	12,483	12,483
	199	Total Cost-Sharing		267,233	267,233

<u>Payment Schedule</u>	<u>Date</u>	<u>Amount</u>	<u>Contributor</u>
1. Paid	01/20/97	\$ 31,133	DHA*
2. To be paid	March 1997	\$ 80,000	DHA*
3. To be paid	May/June 1997	\$156,100	DHA*

Cost-sharing is payable in US dollars, to be deposited into the "UNDP Contribution Account" No. 015-002284 with Chemical Bank, U.N. Plaza, New York

\* Cost-sharing contribution will be transferred by DHA to UNDP from the 2.2% of the total funds in the "Iraq Account" established pursuant to SCR 986 that has been allocated for administrative activities.

### Work Schedule for Northern Iraq

T A S K S	Responsibility	MONTHS (97)					
		December (96) 0.5 1	January 0.5 1	February 1.5 2	March 2.5 3	Apr'1 3.5 4	May 4.5 5
DDSMS to receive financial authorization Review equipment lists provided by authorities Clearing of equipment in Sanctions Committee Procurement of equipment and materials Establishment of necessary logistics Mobilization of international implementation/ observation/administration team Mobilization of national implementation/ observation/administration team Recruited staff dispatched in the field Implementation, observation and periodic reporting Evaluation and situation analysis Project terminal report Administrative/financial activities	Controller/DHA DDSMS DDSMS DDSMS DDSMS/UNDP DDSMS UNDP DDSMS/UNDP DDSMS/UNDP DDSMS/UNDP DDSMS DDSMS/UNDP						



## ANNEX 1

### TECHNICAL PROFILES OF THE NORTHERN GOVERNORATES OF IRAQ

#### 1. Dohuk Governorate:

**Major cities:** Dohuk (capital city, 215,00 inhabitants), Zakho (border city near Turkey, 126,000 inhabitants) and Summail (71,000 inhabitants).

**Available power:** Presently 85 MW, all coming from Mosul City in central Iraq through two 132-kV and three 33-kV lines. Summer demand is 85 M and winter demand is 140 MW. Supply from central Iraq is presently satisfactory but the inadequate distribution network of Dohuk cannot make use of supply being provided. It is estimated that 20 per cent of all supply goes to public institutions, such as schools, hospitals and water supply stations. All power is distributed to cities and towns using 11-kV lines with transformation to 400 V by 250 kVA overhead-mounted distribution transformers.

**Maintenance:** The Dohuk Governorate maintains a well-trained crew of engineers and other technical personnel, numbering more than 250 people, to look after lines, transformers and substations. A comprehensive maintenance project is carried out yearly, before the winter season begins.

**Outages:** The Dohuk Governorate does not maintain statistics on power outages but reports that generally "many outages" of 30-minute duration or more are experienced. The main causes cited are overload conditions and the unavailability of spare parts mainly for protection.

**Warehouses:** Dohuk has ample facilities for warehousing electrical equipment: 50,000 m<sup>2</sup> of open yard and 3 regular closed warehouses of 1,440 m<sup>2</sup> each.

**Major suppliers of electrical equipment:** The main suppliers over the years have been companies in Japan, the Republic of Korea, Yugoslavia, Sweden, France and Hungary.

#### 2. Erbil Governorate:

**Major cities:** Erbil (capital city, 520,000 inhabitants), Koysanjaq (36,000 inhabitants) and Ein Kawa (18,000 inhabitants).

**Available power:** 210 MW delivered from two hydroelectric power plants in the Suleimaniya Governorate: Dokan (5 times 80-MW installed capacity) and Derbandikhan (2 times 83 MW). Demand peaks at 360 MW in winter and 190 MW in summer. 30 per cent of the supply goes to public institutions, such as schools, hospitals and water supply stations. Transmission from Suleimaniya is handled by two 132-kV overhead lines of 100-MW and 130-MW capacities, respectively. Three substations transform this power into 33 kV and 11 kV and further into 400 V by overhead-mounted distribution transformers for final supply to consumers.

ANNEX 2  
ELECTRICAL WAREHOUSE INFORMATION IN IRAQ

Warehouse and Location	Owned by	Capacity		Facilities
		Inside warehouse	Outyard	
Erbil City	Electrical Dept. at Erbil	4 x 1440 m <sup>2</sup>	50,000 m <sup>2</sup>	shelves, cranes
Dohuk City	Electrical Dept. at Dohuk	3 x 1440 m <sup>2</sup>	50,000 m <sup>2</sup>	shelves, cranes
Derbandikhan Hydro-power Station	Electr. Dept. of Suleimaniya	40 m x 15 m x 10 m		shelves, 10-tonne bridge crane
Dokan Hydropower Station	Electr. Dept. of Suleimaniya	40 m X 15 m X 10 m		shelves, 5-tonne bridge crane
Suleimaniya City	Electr. Dept. of Suleimaniya	60 m X 20 m X 15 m		

In addition to these warehouses, there are stores at each of the 132-kV and 400-kV stations within the region.

**ANNEX 3**  
**Power Stations and Substations in the Northern Governorates**  
**(Spares and Rehabilitation Needs)**

Governorate	Station	Type of station
<b>Dohuk</b> <b>(total of 316 spare items needed)</b>	<b>Dohuk</b>	
	<b>Feshkabour</b>	<b>33/11-kV substation</b>
	<b>Amadiya</b>	<b>33/11-kV substation</b>
	<b>Sarsink</b>	<b>33/11-kV substation</b>
	<b>Khelifan</b>	<b>132-kV substation</b>
	<b>Batufa</b>	<b>33/11-kV substation</b>
	<b>Lomanu</b>	<b>33/11-kV substation</b>
	<b>Summail</b>	<b>33/11-kV substation</b>
	<b>Agra</b>	<b>33/11-kV substation</b>
<b>Erbil</b> <b>(total of 147 spare items needed)</b>	<b>New Dohuk</b>	<b>132-kV substation</b>
	<b>Ifraz water project</b>	<b>33/11-kV substation</b>
	<b>Koysanjaq Nasij</b>	<b>33/11 kV</b>
	<b>Girdachal</b>	<b>33/11 kV</b>
	<b>Soran</b>	<b>33/11 kV</b>
	<b>Ein Kawa</b>	<b>33/11 kV</b>
	<b>Badawa</b>	<b>33/11 kV</b>
	<b>Qushtapa</b>	<b>11 kV</b>
	<b>North Erbil</b>	<b>132-kV substation</b>
<b>Salah Al-din</b>	<b>132 kV</b>	

<b>Suleimaniya</b> <b>(total of 446 spare</b> <b>items needed)</b>	<b>Derbandikhan</b> <b>Dokan</b> <b>Suleimaniya</b> <b>Azadi</b> <b>Tasliya</b> <b>Kalar</b> <b>Azmeer</b> <b>Azgary</b> <b>Haje-Awa</b> <b>Koya</b> <b>Malkandy</b> <b>Bazyan</b> <b>Halabja</b> <b>Baradak</b> <b>Said Sadiq</b> <b>Majeed Bag</b> <b>Raniya</b> <b>Chamchamal</b> <b>Maida</b> <b>Shaid</b>	<b>hydropower station</b> <b>hydropower station</b> <b>132-kV substation</b> <b>132-kV substation</b> <b>132-kV substation</b> <b>132-kV substation</b> <b>132-kV substation</b> <b>132-kV substation</b> <b>Mobile substation</b> <b>Mobile substation</b> <b>132-kV substation</b> <b>33/11-kV substation</b> <b>33/11-kV substation</b> <b>33/11-kV substation</b>  <b>33/11-kV substation</b>  <b>33/11 kV</b> <b>11 kV</b>
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ANNEX 4

**Terms of Reference of International Programme Coordinator (IPC)**

**Post Title:** International Programme Coordinator (IPC) for the Implementation of SCR 986: Electricity Sector in Iraq.

**Duration:** Two months from 15 February 1997.

**Duty Station:** Baghdad, Iraq.

**Duties:** In collaboration with the UNDP office in Baghdad and UNDDSMS in New York, the IPC will undertake the coordination of all activities for the Projects for (1) the Rehabilitation of the Electric Power Sector in Northern Iraq: Implementation IRQ/97/ , and Observation and Administrative Activities IRQ/97/ , and (2) Observation of Rehabilitation of the Electric Power Sector in Central and Southern Iraq IRQ/97/ under the United Nations Consolidated Inter-Agency Humanitarian Programme in Iraq for the implementation of UN Security Resolution (SCR) 986 and be responsible for the smooth and speedy implementation in achieving the objectives of these projects.

Under the supervision of the UNDP Resident Coordinator, such coordination work will include:

- (1) Preparation of a Work Plan;
- (2) Participation in the selection of equipment and material for the three Governorates of northern Iraq and assistance in the procurement process;
- (3) Overseeing observation activities in northern, central and southern Iraq, including adapting the general guide-lines for observation to the specific requirements and conditions of the Electric Power Sector in Iraq.
- (4) Liaison with the IMOU observer(s) for the Electric Power Sector, as required for overseeing and supervising observation activities;
- (5) Supervision of logistics concerning the importation and storage of equipment and material for the three northern Governorates;
- (6) Liaison with all locally represented UN agencies and Iraqi authorities;
- (7) Assistance in the selection of national candidates for all relevant posts under the Projects;
- (8) Liaison with visiting International Consultants and support of their

activities;

(9) Liaison with UNDDSMS and UNDP and submission to them of progress reports twice a month;

(10) Such other information gathering and reporting tasks relevant to the subject of the projects as shall be requested by UNDDSMS;

(11) Submission to UNDDSMS and UNDP of a final mission report in six (6) copies; and

(12) Other tasks as deemed necessary by UNDDSMS or UNDP within the exigencies of this assignment.

**Education and Experience:**

The International Programme Coordinator shall be a University Graduate in Electrical Engineering with at least 15 years of experience with electrical power network facilities, particularly in project management, installation and maintenance.

**Languages:** The International Programme Coordinator shall be fluent in the English language. Proficiency in the Arabic language would be an asset, as would a knowledge of Kurdish.

**Previous UN Experience:**

Experience from previous UN assignments and missions would be an asset.

**Confirmation of Date of Start of Assignment:**

The International Programme Coordinator shall await confirmation from UNDDSMS that the assignment can start before embarking on the trip to Iraq via Amman, Jordan.

ANNEX 5

**Terms of Reference of International Observer**

**Post Title:** International Observer for the Implementation of SCR 986:  
Electricity Sector in the Three Governorates in Northern Iraq.

**Duration:** Two months from 28 February 1997.

**Duty Station:** Erbil City, Governorate of Erbil, Republic of Iraq.

**Duties:** To be responsible to the International Programme Coordinator for leading a group of three National Observers and three National Warehouse Keepers, who are to be stationed in each of the three Governorates in northern Iraq, to undertake Observation Activities for Project IRQ/97/ under the United Nations Consolidated Inter-Agency Humanitarian Programme in Iraq for the implementation of UN Security Council Resolution (SCR) 986 in that region of the Republic.

Observation points will include power generation plants (for capacity and availability), transmission lines and substations (for operational state), distribution networks (for performance and continuity of supply) and warehousing, delivery, distribution and installation of replacement equipment, spare parts and materials, all aiming at equitably distributing electricity with a high degree of reliability and quality.

The specific duties of the International Observer will be to:

- (1) Observe the unloading and division of goods at the warehouses in the cities of Erbil, Dohuk and Suleimaniya, where the goods will be either sent to the required sites for installation or maintained in stock for future needs;
- (2) Observe the physical appearance of parts and materials at actual sites, and witness their installation and subsequent commissioning to ensure intended use and performance;
- (3) Maintain strict and detailed records of delivery, installation and stock, and follow regular reporting routines to the International Programme Coordinator and other parties concerned;
- (4) Assess the impact of measures taken, based on relevant UN criteria and indicators, and submit to the International Programme Coordinator a final assessment report at the end of the Observation period; and

(5) Other tasks as deemed necessary by UNDDSMS, UNDP and the International Programme Coordinator within the exigencies of this assignment.

**Education and Experience:**

The International Observer shall be a University Graduate in Electrical Engineering with at least 15 years of experience with electrical power network facilities, particularly in installation and maintenance.

**Languages:** The International Observer shall be fluent in the English language. Proficiency in the Arabic language would be an asset, as would a knowledge of Kurdish.

**Previous UN Experience:**

Experience from previous UN assignments and missions would be an asset.

**Confirmation of Date of Start of Assignment:**

The International Observer shall await confirmation from UNDDSMS that the assignment can start before embarking on the trip to Iraq via Amman, Jordan.



ANNEX 6

**TERMS OF REFERENCE OF  
INTERNATIONAL ELECTRICAL ENGINEER/  
ASSISTANT PROGRAMME COORDINATOR**

**Post Title:** International Electrical Engineer/Assistant Programme Coordinator for the Implementation of SCR986: Electricity Sector in the Three Governorates in Northern Iraq.

**Duration:** (to be decided).

**Duty Station:** Erbil City, Governorate of Erbil, Republic of Iraq.

**Duties:** To be responsible to the International Programme Coordinator for leading a group of three National Electrical Engineers and three National Technicians, who are to be stationed in each of the three Governorates in northern Iraq, to undertake technical backstopping activities for Project IRQ/97/ under the United Nations Consolidated Inter-Agency Humanitarian Programme in Iraq for the implementation of UN Security Council Resolution (SCR) 986 in that region of the Republic.

Such backstopping will include technical support for power generation plants, transmission lines, substations and distribution networks, i.e. all areas of rehabilitation in connection with the installation and commissioning of replacement equipment and spare parts.

The assignment also includes assistance to the International Programme Coordinator on all other matters relating to the particular duties in northern Iraq of that person.

Specific duties of the International Electrical Engineer/Assistant Programme Coordinator will be to:

- (1) Provide consultancy services and training to all three Governorates in northern Iraq in connection with the receipt of equipment and material, installation, commissioning and usage;
- (2) Assistance in the selection of candidates for the posts of National Electrical Engineers and Technicians;
- (3) Participation in the selection of equipment and material for the three Governorates of northern Iraq and assistance in the procurement process;

- (4) Supervision of installation and commissioning activities concerning the equipment and material supplied;
- (5) Coordination of movements of mobile teams in connection with technical backstopping and observation activities;
- (6) Follow-up on the delivery and installation of equipment and material;
- (7) Maintenance of strict and detailed records of all activities performed, with regular reports submitted to beneficiaries of such activities, the International Programme Coordinator and the International Observer;
- (8) Assessment of the impact of activities undertaken and submission to the International Programme Coordinator of a final assessment report about the activities performed, state of the electrical power system and level of knowledge of trained personnel, including recommendations concerning future actions to be undertaken both with regard to the acquisition of equipment and material, and the training of personnel; and
- (9) Other tasks as deemed necessary by UNDDSMS, UNDP and the International Programme Coordinator within the exigencies of this assignment.

**Education and Experience:**

The International Electrical Engineer Assistant/Programme Coordinator shall be a University Graduate in Electrical Engineering with at least 15 years of experience with electrical power network facilities, particularly in installation and maintenance.

**Languages:** The International Electrical Engineer/Assistant Programme Coordinator shall be fluent in the English language. Proficiency in the Arabic language would be an asset, as would a knowledge of Kurdish.

**Previous UN Experience:**

Experience from previous UN assignments and missions would be an asset.

**Confirmation of Date of Start of Assignment:**

The International Electrical Engineer/Assistant Programme Coordinator shall await confirmation from UNDDSMS that the assignment can start before embarking on the trip to Iraq via Amman, Jordan.

**ANNEX 7**

**SETS OF LISTS OF EQUIPMENT AND SPARE PARTS TO BE PROCURED  
FOR THE THREE GOVERNORATES OF NORTHERN IRAQ**