

MSC-IPP Energy
DGIB/LBN/B7-4100/96/111



الجمهورية اللبنانية
مكتب وزير الدولة لشؤون التنمية الإدارية
مركز مشاريع ودراسات القطاع العام

Inception Report

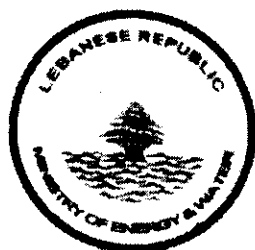
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Republic of Lebanon
Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
(C.P.S.S.)

Submitted by the Consortium formed by

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Project Synopsis

Project Title	:	Investment Planning Programme – IPP – MSC – Energy
Project Number	:	Energy DG I B/LBN/B7-4100/96/111
Country	:	Lebanon

Objective:

The main objective of this project is to assist the government of Lebanon in the restructuring and development of the Energy Sector toward a competitive environment. This assistance will facilitate the introduction of competition and market economy to the Energy Sector, leading to better efficiency in the Energy Sector, cost and price reductions for all consumer groups and the lowering of energy import dependency.

Goals:

The main goals of the project are to provide assistance for the following activities:

- Survey and analysis of the current situation in the Lebanese Energy Sector. Suggestions to prepare the Ministry for its new role in a competitive Energy Sector environment.
- Suggest measures to prepare the Ministry for Energy and Water for the restructuring of its internal organisation to cope with new responsibilities and mandate.
- Assist the Ministry in matters of energy policy and strategy formulation in the Energy Sector.
- Suggest ways and means to organise a Donor Co-ordination Department inside the Ministry to ensure efficiency and maximum benefits from the donors' contributions.
- Provide advice to support the privatisation process in the electricity sub-sector by supplying information on the regulatory function.
- Assist the Ministry in organising an efficient system of gathering data and information necessary to establish an Energy Sector database in cooperation with the Regulatory Authority.
- Suggest measures to increase the energy efficiency in all sub-sectors. Assist the Ministry with regard to renewable energies and environmental aspects in the Energy Sector in the context of economic efficiency.
- Assist the Ministry in setting up an Independent Regulatory Authority to ensure competition in the Energy Sector wherever possible and regulation of the natural monopolies.
- Suggest and assist the Ministry in preparing the legal documents necessary to obtain a coherent legal framework for a competitive Energy Sector and for the Regulatory aspects.
- Assist in the identification, selection and training of staff required for the Regulatory Authority.
- Advise and support the Regulator during the first year of operation (second year of project) and maintain a supportive role during the project's third year.

Outputs:

The Project will assist the Ministry in delivering the following results for the development of the Energy Sector in Lebanon:

- Assist in improving the policy and strategy formulation capability for the Energy Sector.
- Help in the creation of an energy database for the Energy Sector in cooperation with the Regulatory Authority.
- Provide suggestions and assist in the setting up of a website, homepage, library and relevant publications inside the MEW.
- Assist the Ministry as a policy and strategy maker to review its organisational structure in order to adapt it to its new mandate for a competitive and open market environment.

- Suggest a training programme to take into account the new mandate of the Ministry, propose seminars, workshops and round table discussions on energy topics (15), study tours (3) and scholarships (3).
- Assist the Ministry in preparing draft legal documents (laws, decrees, bylaws) to obtain a clear and coherent set of laws creating a solid legal framework for an open and competitive Energy Sector.
- Assist in the organisation of an independent Regulatory Authority for the Energy Sector.

A team of Lebanese and European experts will provide the input to the project. This will comprise approximately 300 man-months over a period of three years.

Target group[s]:

The main recipients of the project are; the Ministry of Energy and Water, the future Regulatory Authority, the Higher Council for Privatisation as well as potential investors, and users and operators in the Energy Sector.

Project start off date: 25.10.2002

Project duration: 36 months

Article	Title	Description
1.1	Report on the inception phase of the Project	Produce an Inception report to update the nature and scope of work of the project.
1.2	Review of the legal framework	A law on the organisation of the power sub-sector exist. It need to be reviewed due to contradictions and confusing articles.
1.3	Ministry's administrative structure review	On a priority basis the Minister asked for an urgent Activity to review the current structure of the Ministry and suggest a new organisation chart taking into account the new functions of the Ministry.
1.4	Energy sector Law	No legal framework does exist currently for the energy sector. The first step is to have a clear policy and strategy for the sector.
1.5	The Electricity Act	This Act is the law for the electricity sector and it establishes the structure of the sub-sector and the Regulatory Authority.
1.6	The Gas Act	The gas Act establishes the role duties of all the operators in the subsector and establishes the structure.
1.7	The Oil Act	Idem to the above Act.
1.8	The Law for the restructuring of MEW	On a priority basis the Minister asked for an urgent Activity to review the current personnel situation and the current structure of the ministry and have suggestions to adapt the ministry to its new functions.
1.9	The Regulatory Authority By-Law	Currently a vague mention and an even vaguer mandate for the Regulatory exist in a temporary Law (on the organisation of the sub-sector). The Regulator needs a clear and coherent legal status. It is the purpose of this Bylaw.
1.10	Preparation of Lebanon's Energy Balance	The balance is a fundamental tool for the elaboration of a sector policy and the formulation of a well-focused strategy.
1.11	Preparation of Lebanon's Energy Inventory	The purpose of the inventory is to know what national energy resources exist and are probable. Alternatively what resources are available for importation?
1.12	Support MEW for sector policy and strategy formulation	When the balance and the inventory exist then the next step id to how analyse the information to prepare the elaboration of a policy and strategy.
1.13	Tools for implementation of the energy policy and strategy by MEW	To arrive at the optimal Strategy simulations and modelling are the tool utilised to arrive at the best alternatives.
1.14	Capacity building and institutional strengthening of the MEW	Through on hand on work with the visiting experts and seminars and workshops knowledge can be transferred to the Ministry staff. .
1.15	Assist the MEW to incorporate	The Ministry of Environment will produce norms

	environmental guidelines in the policy and strategy formulation of the Energy Sector	and standards for the protection of the environment. The project will assess the impact of these norms on the policy and the strategy and verify the economic impact of these norms and advise the Ministry on the optimal solution.
1.16	Assist the MEW in the preparation of incentive programmes to support the objective and the goals of the energy policy	In a competitive and open market the Ministry has only a few options to give incentives without distorting the market. However, the project will advise the minister on the options available.
2.1	Seminar on the experience in restructuring a sector before privatisation	Lessons learned are available in Europe with restructuring a power sub-sector before privatisation and introducing competition. These lessons will be instructive for the Lebanese authorities.
2.2	Seminar on the dissemination of regulatory experience	Each country in Europe has his specific regulatory system. From the European experience lessons could be learned. Some countries in the Middle east have as well interesting experience.
2.3	The First Study Tour	The first study tour will permit to the decision makers in the Lebanese power sub-sector to learn from the Europeans Regulators their problems and the solutions.
2.4	Preparation of Guidelines on the regulation of the natural monopolies and modalities in setting up an open and competitive power market	Every Regulator needs to develop and publish normative rules for the tariff setting of the natural monopolies. The rules for the operating of the IMO, ISO have to be lay out carefully and in details. The same apply to the generators and the distributors.
2.5	Organisation of an Office of Public Relations inside the Regulatory Authority	The communications with the public at large and the consumers are critical for the image of a Regulator. A Regulator must have the consumers on its side. Transparency and superb communications are an absolute priority for the Regulator.
2.6	Seminar to train the Regulator staff	As soon as the core of the staff of the Regulator have been selected, a seminar from operatives in Europeans Regulators will explain the main functions, tools used and ways and means to improve the level of competition.
2.7	Seminar for training the MEW and Regulator staff on the privatisation process and requirements	This activity is a priority since privatisation is the government priority. This important part of establishing a competitive market should be done in cooperation with the Regulator.
2.8	Seminar on the regulation of an open and competitive power market	This seminar will explain the difference between the natural monopolies which must be regulated and how to promote competition
2.9	Seminar on the gas market restructuring	The gas sub-sector shares a lot of similarities with the power sub-sector. However, the differences are important and need to be explained in details especially for the natural monopoly.

2.10	Second Study Tour: How the regulator work	This study tour will concentrate on the managerial and administrative aspects of the Regulation including the public relations and the organisation of the public hearings.
2.11	Scholarship in Europe: Focus Statistic gathering and treatment	One staff member of the Regulator will be trained on how to gather statistics from the energy sector and how the compile and threat them.
2.12	Scholarship in Europe: Setting up an energy sector database	One staff member of the Regulator will be trained in Europe on managing a data base for the energy sector
2.13	Scholarship in Europe: Training the provisional Regulator on the management of a regulatory system	The provisional Regulator will be trained inside a selected European Regulator to gain experience on how to manage a regulatory organisation at the CEO level
2.14	Scholarship in Europe to obtain a comprehensive knowledge of how to organise the internal functioning of a regulatory system	At the administrative level a staff of the regulator will be train on the aspect of internal administration of the Regulatory Authority.
2.15	The Energy sector Database	A Regulator to regulate needs a lot of accurate information and operational data. A data base is he tool the regulator use to gather, treat, compile and retrieve the data it need to form an opinion on the conduct of the operators.
2.16	Setting up the DG of legal Affairs	A senior expert will assist the DG of the Authority responsible for the legal affairs to set up its department and make it operational.
2.17	Setting up the DG of Safety & Engineering Department	A senior expert will assist the DG of the Authority responsible for the Safety & Engineering Department to set up its department and make it operational
2.18	Setting up the DG of Economic & Financial Affairs	A senior expert will assist the DG of the Authority responsible for the Economic and Financial affairs to set up its department and make it operational.
2.19	Setting up the DG of administrative Affairs	A senior expert will assist the DG of the Authority responsible for the administrative affairs to set up its department and make it operational.
2.20	Initial support to the operations of the Regulator	Experts will come on demand to assist then Authority during its first year of operation
2.21	Legal assistance to the Authority	The regulator will need some legal assistance when asked to give a legal opinion on some aspects of the conduct of the operators or assisting in preparing the licences.

Activity	Title	ILTE	ISTE	Total IE m/m	LLTE	LSTE	Total LE m/m
1.1	Report on the inception phase of the Project	2.5	0	2.5	5	5	10
1.2	Review of the legal framework	2	1	3	3	0	3
1.3	Ministry's administrative structure review	2	3.5	5.5	2	2	4
1.4	Energy sector Law	2	1.5	3.5	2	5	7
1.5	The Electricity Act	2	1.5	3.5	2	3.5	5.5
1.6	The Gas Act	2	1.5	3.5	1	4	5
1.7	The Oil Act	1.5	2	3.5	1	4	5
1.8	The Law for the restructuring of MEW	1.5	1.5	3	2	3.5	5.5
1.9	The Regulatory Authority By-Law	1.5	2	3.5	1	4.5	5.5
1.10	Preparation of Lebanon's Energy Balance	2	4	6	1	2	3
1.11	Preparation of Lebanon's Energy Inventory	2.5	2	4.5	1	0	1
1.12	Support MEW for sector policy and strategy formulation	4.5	3	7.5	2.5	0	2.5
1.13	Tools for implementation of the energy policy and strategy by MEW	3	3	6	2.5	2	4.5
1.14	Capacity building and institutional strengthening of the MEW	3	3	6	2.5	2	4.5
1.15	Assist the MEW to incorporate environmental guidelines in the policy and strategy formulation of the Energy Sector	2	3	5	2	1.5	3.5
1.16	Assist the MEW in the preparation of incentive programmes to support the objective and the goals of the energy policy	2	2	4	2	0	2
Sub-total		36	34.5	70.5	32.5	39	71.5
				0			0
2.1	Seminar on the experience in restructuring a sector before privatisation	0.5	1.5	2	1	1	2
2.2	Seminar on the dissemination of regulatory experience	0.5	1.5	2	0.5	1	1.5
2.3	The First Study Tour	1.5	0	1.5	1	0	1

3. Additional Loss Value is part of Support of the MEW Support
 100% of the total amount spent by the MEW

2.4	Preparation of Guidelines on the regulation of the natural monopolies and modalities in setting up an open and competitive power market	1.5	5	6.5	1	0	1
2.5	Organisation of an Office of Public Relations inside the Regulatory Authority	0.5	2	2.5	25	0	25
2.6	Seminar to train the Regulator staff	1	1	2	1	0	1
2.7	Seminar for training the MEW and Regulator staff on the privatisation process and requirements	1	2	3	2	0	2
2.8	Seminar on the regulation of an open and competitive power market	1	1	2	2	0	2
2.9	Seminar on the gas market restructuring	0.5	1.5	2	2	0	2
2.10	Second Study Tour: How the regulator work	1	1	2	1	0	1
2.11	Scholarship in Europe: Focus Statistic gathering and treatment	1	0	1	0	4	4
2.12	Scholarship in Europe: Setting up an energy sector database	0.5	0	0.5	0	4	4
2.13	Scholarship in Europe: Training the provisional Regulator on the management of a regulatory system	0.5	0	0.5	2	0	2
2.14	Scholarship in Europe to obtain a comprehensive knowledge of how to organise the internal functioning of a regulatory system	0.5	0	0.5	0	2	2
2.15	The Energy sector Database Phase I	1	1.5	2.5	3	3	6
2.15	The Energy sector Database Phase II	2	5.5	7.5	2	4	6
2.16	Setting up the DG of legal Affairs	1	2.5	3.5	1.5	1	2.5
2.17	Setting up the DG of Safety & Engineering Department	1	2.5	3.5	1.5	1	2.5
2.18	Setting up the DG of Economic & Financial Affairs	1	2.5	3.5	1	1	2
2.19	Setting up the DG of administrative Affairs	1	2.5	3.5	1	1	2
2.20	Initial support to the operations of the Regulator	3.5	14	17.5	2	8.5	10.5
2.21	Legal assistance to the Authority	0	0	0	2	4.5	6.5
Sub-total		22	47.5	69.5	52.5	36	88.5
TOTAL		58	82	140	85	75	160

Evolution of the situation in the Energy Sector since April 2001

The Terms of Reference (ToR) for the IPP MSC-Energy project were completed on 7th March, 2000 and the corresponding call for proposals was made on 28th April, 2001. The contract was signed on 15th October, 2002.

Since then, there have been some major changes in the Lebanese energy sector, which have had some influence on the current situation. The main changes are as follows:

- The association agreement between the European Commission and Lebanon was agreed upon in Brussels on 10th January, 2002 and signed in Luxemburg on 17th June, 2002. This agreement has a significant impact on the project with regard to the assistance to the Ministry of Energy and Water (MEW), especially to the formulation of the Energy Policy and Strategy and the setting up of a Regulatory Authority that will introduce competition in the energy sector.

Whereas the main articles stipulated by the Barcelona Declaration and related Euro-Mediterranean partnership meetings concerning energy matters apply internationally, such as:

- Security of supply
- Competitiveness of the energy industry
- Environmental protection
- Establishment of Euro-Mediterranean Free-Trade by the year 2010
- Promote the development of interconnected networks for electricity, gas and oil in the Mediterranean area

other articles intend to implement a number of measures at national level and include activities for the energy sector which have an impact on the Regulatory function:

- Establishment of independent regulatory authorities
 - Unbundling of the sector
 - Progressive introduction of competition in the production and supply functions
 - Elimination of subsidies and tariff reforms in order to bring prices into line with costs
 - Promotion of private participation notably by licensing Independent Power Producers (IPPs) to operate in the generation sector
- Law No. 247 for the dissolving and merging of some ministries was published in the Official Gazette on 14th August, 2000. This law specifies the dissolution of the Ministry of Hydraulic and Electric Resources (MHER) and the Ministry of Petroleum (MOP) and the creation of a new Ministry; the Ministry of Energy and Water (MEW) whose tasks include most of those which were the responsibility of the dissolved Ministries. This responsibility does not allow the Ministry to adapt to its new tasks which are specified in the law. A committee was appointed by the Minister of Administrative Reform in order to propose a draft law for the restructuring of the MEW. This committee has finished its work and will submit the draft law to the MEW soon.
 - The general privatisation law No. 228 was published in the Official Gazette on June 2nd 2000 for the organisation of privatisation procedures.
 - The Higher Council for Privatisation (HCP) was formed and its Secretary General appointed in June 2001. The Consultant will have to coordinate closely with HCP in order to insure that MEW sets up the Regulatory Authority with a view to support the restructuring and privatisation process of the electricity sub-sector.
 - The law No. 462 was published in the Official Gazette on 5th September, 2002. It is known in the English translation as the “Electricity Law” but in the Arabic original as “The law for the organisation of the

electricity sub-sector” The main purpose of this law is the corporatisation and commercialisation of the generation and distribution of functions of the Electricité du Liban (EDL) grid. This law creates a basis for electricity sub-sector restructuring and for facilitating the privatisation of EDL’s power plants and grid. It also mentions the future existence of a Regulatory Authority and supplies some indications for a draft mandate. This law allows for the selection of existing employees from the MEW or from EDL and their transfer to the future Regulatory Authority, MEW, the Privatised Company or to the Transmission Company and will allow the filling up of some of the posts proposed in the Inception Report. The Consultant found a series of contradictions and ambiguities in the law N° 462. One of the first activities for the Consultant will be to assist the Ministry in proposing the necessary amendments and try to implement the activities indicated in the law. However, it is evident that a more comprehensive legal framework will be needed for the Regulatory Authority.

- The responsibility for the privatisation of EDL was given to BNP-Paribas on April 2002. This investment bank is currently working with some partners such as Devey Ballantine, ELC-Electro Consultants, and the National Economic Research Association (NERA). Devey Ballantine completed the legal due diligence for EDL at the end of September 2002. Along with a local consultant, Rafic El-Khoury and Partners, NERA has submitted some alternatives for the restructuring of the power sub-sector and some advice on tariff setting (Regulatory Authority, Tariffs, Regulation and Market Structure). This report was submitted in October 2002. Upon request from MEW, the Consultant reviewed the report and submitted comments and suggestions to the Ministries.
- On 19th September, 2002 The Council of Ministers approved in principle the creation of two Power Utilities; (i) one Generation and Distribution Utility to be privatised up to 40% and (ii) one Transmission Utility that shall remain fully state-owned with a private management contract. This decision will have an impact on the nature and scope of the assistance provided by the Consultant to MEW, not only regarding the future strategy of the power sub-sector but for the regulation as well.
- The Government of Lebanon (GOL) decided to proceed with the privatisation and approved the request for expression of interest, which was published on 17th October, 2002. The deadline for submitting the expression of interest was 22nd October, 2002. The HCP received 19 expressions of interest and the analysis of these expressions of interest is still in progress.
- The ToRs for the calls for tenders to sell up to 40% of the Generation and Distribution Company as well as the Management Contract for the Grid are also in progress.
- On 12th July, 2001, the GOL signed the UNDP/GEF project “Cross Sectorial Energy Efficiency and Removal of Barriers to ESCO Operation”. The Consultant will coordinate with the implicated authorities for the implementation of this project.
- The following items regarding the gas and oil sub-sectors will have an impact on setting up the future strategies of these two sub-sectors:
 - In 2001 the UNDP/Ministry of Environment “SPASI” Project issued the National Standards on Environmental Quality, which were developed for all the sectors of the industry, including the part of the energy sector regarding emissions.
 - A feasibility study for the supply of Natural Gas (NG) and Liquid Natural Gas (LNG) **was completed** by Kellog Brown & Root under a USTDA grant (United States Trade and Development Agency) and was submitted to EDL in February 2001.
 - A gas supply contract was signed with the Syrian Petroleum Company to supply the Combined Cycle Power Plant in Deir Ammar - north of Lebanon - with 1.5 millions m³/day of gas. The call for tenders for the construction of the coastal gas pipeline from the Syrian border to Deir Ammar Power Plant is underway. This will add to the responsibilities of the Regulatory Authority.
 - A draft agreement was signed in 2002 by Egypt, Jordan, Syria and Lebanon to build a regional pipeline in order to obtain a supply of natural gas from Egypt.

- A rehabilitation project of the two refineries of Zahrani – south of Lebanon - and Beddawi – north of Lebanon is being considered and a Build, Organise, Operate and Transfer (BOOT) law was approved by the Council of Ministers and is currently being debated in the Lebanese Parliament.
- A BOOT law for LNG terminal, re-gasification facility was approved by the Council of Ministers and is currently being debated in the Lebanese Parliament.
- The consultant Dewy Ballantine signed a contract in 2002 for conducting a legal due diligence for the gas current infrastructure.
- A contract with the consultant “Spectrum” was approved by the Council of Ministers in order to carry out a hydrocarbon seismic exploration survey. This survey was completed and the results submitted to the Minister of Energy and Water in December 2002. The results need to be assessed by a specialised firm.

Impact of the recent evolution in the energy sector on the project’s scope of work

On the legal side:

A law on the restructuring/organisation of the Energy Sector is by nature temporary. When the restructuring is completed, the Energy Sector will need an Energy Law and a set of sub-sector Acts and By-Laws to establish a coherent legal framework for the sector.

In chronological order, MEW will have to proceed with the drafting of an Energy Law clearly setting the policy and strategy for the sector. The Electricity Act, the Oil & Gas Act and the Regulatory Authority By-Law will then follow. **It is important to stress that the chronological order should be followed as stated previously.** Without a strong legal basis, the authority of the Regulatory Authority could be challenged by the operators in the sector which could lead to an overlapping of the respective roles of the government and the Authority.

On the public relations side:

The Regulatory Authority will have to deal with a significant number of actors in the sector in a completely new set-up. The public/consumers know little of the impact on the services they receive and a considerable amount of public awareness and sensitisation will have to be made. The Regulatory Authority’s main goal is to protect the consumers against abuse from monopolistic power and market dominance. The public must understand the role and duties of the Regulatory Authority as well as their rights and duties. In order to do so a Public Relations office needs to be created within the Regulatory Authority.

On the information gathering side:

The significant increase in the number of operators in the sector (with an upward trend as the sector will soon be fully open and competitive), necessitates the Regulatory Authority to gather a huge amount of information/data on line and in real time without which the Regulatory Authority can not regulate efficiently. Not only the Regulatory Authority, but also MEW require information regarding policy and strategy formulation. A Database will be required to cope with the new situation.

Executive Summary

Following meetings and discussions with the local authorities and other actors in the sector as well as selected stakeholders, the Consortium compared the original ToR written two years ago and the proposal of services with the current situation. The purpose of this exercise was to take into consideration the evolution of the situation in the Energy Sector in Lebanon during the last two years, update our knowledge on the needs for assistance, as expressed by the Ministry of Energy and Water (MEW), review the priorities and identify those activities, which are now a priority, taking into account the evolution of the situation.

The original objective and goals of the project as expressed in the original ToR (1998) have been reviewed with our counterparts and they are still valid.

Objective:

- i) Rehabilitation and modernisation of selected infrastructure sectors, which traditionally have been the responsibilities of the public sector.

Goals:

- i) Provision of an efficient and reliable supply of electricity at the least cost.
- ii) Attraction of foreign and local capital and broadening of local ownership in a transparent and competitive fashion
- iii) Protection of consumer interests and minimisation of possible negative effects of restructuring on the most vulnerable part of the society
- iv) Creation of a state of the art local institution capacity and human capital in the sector.

We believe from our discussions with our counterparts that the above Objective and Goals are still valid and to a large extent are accepted by the Lebanese authorities. However to attain the first goal i.e.; the efficient supply of electricity at the least cost this will depend on the extent of the restructuring of the sub-sector to achieve full competition at the generation level.

The Inception Report is the result of the comprehensive exercise mentioned above. Quite a few things were unknown to us at the time the proposal was prepared. For instance the more detailed timetable intended by the Lebanese government for the privatisation of EDL. The acceleration of the privatisation process leading to the review of the project's priorities will result in a significant increase in the legal work to be urgently completed to avoid the Regulator working in a legal vacuum for the regulation task. However, before developing a detailed regulatory structure, a general energy policy review is needed. An energy strategy for Lebanon covering the next 20 years will then be developed. This will set the framework in which the Regulator would operate. The Ministry of Energy and Water is responsible for two sectors, namely energy and water; and three energy sub-sectors: power, oil and gas..

This Inception Report presents the activities to be implemented to satisfy the government priorities in their logical and chronological order for implementation. However, it is difficult to foresee what the real priorities will be in two years time from now. Therefore, the current defined activities will be reviewed on a regular basis along with each progress report, since with a projected life span of three years, it is quite conceivable that the priorities will have to be revised. It is evident that this project will require some flexibility to adapt to new priorities. The present list of activities is supportive of an accelerated programme of privatisation in a legal framework yet to be completed. Our approach for the implementation of the project is based on our current understanding of the situation in the Energy Sector and of current governmental priorities. Partial

privatisation of the power sub-sector infrastructures and full privatisation of operations is the present policy and strategy of the Lebanese government in close cooperation between the MEW and the Higher Council for Privatisation (HCP).

We have reviewed the new laws recently published concerning the organisation /restructuring of the power sub-sector N° 462 from 2002 and the law for privatisation N°228 from 2000. These two laws will have a significant impact on the nature and the scope of the activities, which were suggested almost 2 years ago. Furthermore, it is currently not possible to foresee how the power sub-sector will evolve, since it is the investors from the private sector, through consultation and ultimately through the licensing conditions decided by the Regulatory Authority, which will influence how the functions sub-sectors will be divided and operated in the long-term.

The changes in the nature and scope of work of the activities to be implemented will have an impact on the organisation of the project and on the composition of our team of experts. The aim of the Consortium is to ensure that, in the new context of privatisation and competition, the project will build a solid capacity of regulation for the Energy Sector (power, oil and gas). To do so we will concentrate on the following activities:

- (1) Assist in the establishment of an Energy Policy and Planning Unit inside the MEW as well as the establishment of a Donor Co-ordination Department, which will be able to define the long-term energy strategy and contribute to the achievement of the project's objectives after the departure of the EU experts.
- (2) Assist in setting up an Independent Regulatory System for the Energy Sector over a period of two years able to establish an open and competitive environment in each sub-sector and regulate the natural monopolies effectively and fairly.
- (3) Assist in the development of the professional resources within the MEW by means of seminars and the organisation of training sessions in Lebanon and the EU. Selected organisations will be used to enhance the analytical capability of the Ministry's staff and those from the Regulatory Authorities, i.e. the Regulator.
- (4) Assist the MEW in selecting a database system design well suited to the tasks of a Regulator. Installing and developing a database system inside both the Ministry and the Regulator able to gather on-line all the necessary data to allow the Regulator to monitor the operations of the power market and for the Ministry to retrieve the data needed to formulate policies and strategies for each sub-sector.
- (5) Suggest the selection and installation of the necessary tools/methods for the analysis of statistical data and modelling of options to facilitate the decision process inside the Ministry. Select and adapt the suitable software and hardware as well as the modelling programs /tools to enable both the Regulator and the Ministry to make detailed analyses and produce a simulation model to appraise all alternatives and select the most pertinent for the development of the sector.
- (6) Assist the Government to restructure/organise the Energy Sector to insure an optimal level of competition, taking into account the small size of the Lebanese economy. Help the Government, and in particular the Higher Council for Privatisation, to inform potential private investors in the Energy Sector about the regulatory aspects (fairness, consistency and transparency of the system of regulation) to achieve an optimal balance between supply and demand, protect consumers and ensure the financial viability of the operators. There is no other way to achieve the objective of economic efficiency other than to gradually introduce competition into the Energy Sector through effective regulation within a supportive legal system interpreting clearly the objective of the Government that is to have an efficient competitive structure and an independent Regulatory Authority. The first step consists of separating the main functions of each sub-sector to establish transparency, setting up an optimal competitive

environment, promoting competition wherever possible and regulating the natural monopolies, i.e. where competition is not feasible due to economic or technical factors.

- (7) Assist in setting up a Donor Co-ordination Department (DCD) inside the MEW. It will support the MEW in raising funds for energy sector projects and in identifying potential private investors for the Lebanese Energy Sector possibly with the support of Financial Institutions through the means of co-financing. The DCD will also have the capacity to develop projects and to prepare project proposals according to the standards and formats used by international donor organisations, such as IBRD, EIB, IFC, KFW, GEF, GTZ, etc. The DCD will co-ordinate the various activities of the international organisations for the Lebanese Energy Sector and will inform investors about the opportunities to invest in the Energy Sector of Lebanon and supply them with all the relevant information they need to appraise a project. This DCD will develop an approach well suited to each investor or International Financial Institution (IFIs) in order to facilitate and assist them with local governmental procedures. During the preparation of requests, as per the IFI's and Investment Bank's criteria, the DCD will remain in contact with all IFIs and investment banks wishing to participate in a future IPP project.
- (8) Lebanon is a country with high energy prices and only a few national energy resources. Under these circumstances the efficient use of energy has to play an important role in the energy strategy of the country. The Project will therefore suggest several energy conservation activities for different consumer groups to make use of this significant yet so far unused potential for energy saving. Furthermore, the potential and the cost-benefit for the wider use of renewable energy resources such as hydropower, solar thermal power, wind energy, biomass, etc. will be investigated and if needed, some decrees for the use of renewable energy will be suggested. The Project envisages close co-operation with the UNDP/GEF project on energy conservation currently under implementation at MEW.
- (9) The Consultant will assist the MEW in preparing a catalogue of NGO currently active to implement measures and incentives to support the energy saving in the private and public sectors.
- (10) The Consultant will assist the MEW in the preparation of safety norms and standards for the Energy Sector. These norms will be supplied to the Regulatory Authority for inclusion in the Operators' licenses.
- (11) The Consultant will liaise with all donor agencies currently working in the Energy Sector, in particular with energy conservation and renewable energy projects in order to avoid duplications of efforts and mutual support. The Consultant will inform relevant Lebanese authorities and donor agencies about the activities within the Project, in particular the following ongoing projects (i) "IPP MSC-Environment" financed by the European Commission, (ii) "Lebanon Cross Sectorial Energy Efficiency and Removal of Barriers to ESCO Operations" financed by UNDP/GEF and (iii) BNP Paribas' "Consulting Services Contract" financed by the Government of Lebanon.

An important aim of the Project is to support the MEW in capacity building and institutional strengthening to enable the Ministry to handle the demands of the future energy market and to develop a sustainable energy strategy. With a reliable and cost efficient energy supply, this enhanced Energy Sector shall be able to contribute to the prosperous development of the Lebanese economy. We believe that the assembled team of long and short-term experts, with their combined skills, coupled with the backstopping resources of the Consortium, can achieve the success of this Project.

Work Programme

Task 1. Support the MEW in its new responsibilities

Activity 1.1 Report on the Inception Phase of the project

The Inception Phase has been used to review the current situation in the Energy Sector, identify the needs of our counterpart, establish contacts with our main interlocutors and make arrangements for the implementation of the Project.

During the inception phase, the Consultant was able to establish a good relationship with the Beneficiary and other actors in the sector as well as identifying, selecting and hiring local long-term experts and administrative support staff for the project. An office for the Regulatory Task was set up and discussions were held for obtaining an office inside the Ministry. The project office was supplied with a modicum of office equipment and the necessary communication equipment. Once operational, the inception phase has been mostly utilised by the Consultant to:

- Mobilise the project team of Lebanese and European personnel, consisting of the: Team Leader/Senior Policy Advisor, Mr. Alain Gertsen-Briand and Senior Regulatory Advisor, Mr. Gerhard Schroeter, and the LLTEs: Policy Expert, Mr. Joseph Saroufim and Regulatory Expert, Mr. Antoine Rabbath. Mr. Antoine Rabbath has been nominated to replace Mr. B.A Jaber. As Mr. Alain Gertsen-Briand was absent from Beirut from 20th December 2002 until the 5th March 2003, Mr. Gerhard Schroeter was acting TL for the project management.
- Gather information from previous projects and perform preliminary analysis on them. This task has been initiated in close co-operation with MEW and EDL and will be continued during the course of the Project. .
- Prepare the communication and information network comprising a home page <http://www.msc-energy.net>, which will be released upon agreement of the Inception Report.
- Develop an equipment list for furnishing the office, in cooperation with CDR. The project was supplied with initial computer equipment in order to start with the work.
- Develop a training programme in co-operation with MEW, which needs to be detailed and specified with the upcoming progress reports.
- Discuss preliminary findings and proposals to a wide audience of administrators, experts (MEW, CDR, HCP, EDL, international organisations and donors) and other persons involved in energy management, and to obtain their feedback.
- Discuss and agree on the draft version of the Inception Report with all stakeholders.
- Present the first version of the Inception Report to the EC Delegation and receive suggestion for improvements to incorporate in the second version.
- Received from the EC Delegation comments and suggestions on the second version of the Inception Report. These suggestions will be incorporated in the third version of the Inception Report.
- Permission was obtained from the EC Delegation to present an English version of the Inception Report and the same for subsequent reports.
- A project office for Task 2 was provided by CDR in the building of the Conseil Executif des Grands Projets de la Ville de Beyrouth, rue de l'armée, Edifice Kurban Daouk, Kantari. Discussions are still going on for the allocation of an office inside the MEW for Task 1. It is imperative that a quick decision is made to allow the project to have close communication with the project's recipient.

The Consultant has reviewed the original terms of reference written almost 2 years ago and updated the proposal of services. While the two main tasks and objectives of the project remain unchanged, the project needs to include new activities necessary for achieving these tasks and objectives. This will impact significantly on the budget of the project.

Considering the strong interdependency of different parts of the Energy Sector on the supply side multiplied by the fuel/energy substitution at the end-user side, our approach will begin with a comprehensive investigation and analysis of all upstream and downstream problems. It is not possible to define an optimal strategy for the power industry from the outset of the Project without first carrying out an analysis of the primary energy and end-user markets. The same applies for other parts of the Energy Sector. We intend to integrate a yearly updated energy balance model into the practice of the MEW policy making process to allow the simulation of various scenarios of Energy Sector development, starting with primary energy (Oil, Gas, Coal and renewable energy) consumption through a procedure of transformation and ending with end-user energy consumption. By changing any input parameters it is possible to see how this influences all other parameters. One can also find the most environmentally friendly solutions minimising cumulative emissions of gases throughout the whole chain, from primary energy to end-use. The model is based on the EUROSTAT principles and was adopted by many countries all over the world.

The general privatisation law (No. 228 from May 31st 2000) and the Electricity sub-sector organisation/restructuring Law (No. 462 from September 5th 2002) create the basic framework for a new structure of the power sub-sector and begin the privatisation process.

Nonetheless, the Energy Sector needs a coherent legal framework with an Energy Law, an Electricity Act, an Oil Act, a Gas Act, a Law for the Restructuring of the MEW and very important for our project, a Regulatory Authority By-Law. This legal framework will be a new activity to be implemented from the onset of the project.

After careful study of these laws, the Consultant held talks with MEW, HCP and local experts, on the ways in which the project can support the implementation process and help to develop the necessary understanding of privatisation and practical measures to be taken in this respect.

On the basis of the existing legal framework for the privatisation of the Energy Sector in Lebanon and experiences from Western European and Nordic countries, the Consultant developed some elements for a Hypothetical vision of a typical Regulatory Authority organisation chart (Annex 4). This model is only an example and certainly reflects that which the Lebanese authorities will decide upon in a last resort. Many alternatives need to be discussed and developed with all the potential stakeholders during the implementation of task 2.

The Council of Ministers approved the creation of two utility companies for the power sub-sector: one for Distribution and Generation to be privatised up to 40% and one Transmission Company that shall remain fully state-owned for a while operating under a private management contract. This decision underlines the high priority of the support the MEW needs for the creation of the Regulatory Authority.

“The Electricity Organisation Law” provides scope for changes in the personnel structure of EDL and allows for the transfer of personnel from one institution to another. Taking into account the current freeze on hiring new personnel and the high degree of qualification of some EDL staff, this provides the opportunity of selecting employees from EDL and transferring them to the MEW, the Regulatory Authority and to the Privatised Companies. It will also allow for the staffing of the Regulatory Authority.

During the review of the “Electricity Organisation Law”, our local experts found a series of contradictions and ambiguities. Therefore, the Consultant will produce a list of comments and suggestions to improve the clarity of the current Law in order to allow the MEW to prepare and suggest the necessary amendments and bylaws and to assist the MEW in preparing a set of draft Laws and Bylaws to establish a coherent legal framework for the Energy Sector.

The Consultant will apply a pragmatic approach to regulation without any pre-judgements and without haste. Privatisation is sometimes a controversial and somewhat difficult process. With this in mind, one of the goals of the Regulator is to facilitate the process by having a transparent and fair system of regulation. The main goal of the Project is to assist the MEW to adapt to its new mandate as policy and strategy maker in an open and competitive energy environment.

In the context of regulation, the project will assist the MEW in deciding scenarios when the private sector is viable to enter a new type of regulatory system will be put in place. The potential investors interest will depend to some extent on the type of regulation and the role of the Regulatory Authority in the planning on the system to be implemented and what will be possible regarding the creation of a competitive environment.

The Consultant understands social obligations in a broad sense and not only for the protection of socially disadvantaged customers. It should be noted that the purchase of uneconomic inputs could not be sustained in a competitive market unless there is a legitimate political will to comply with strict environmental standards or to reduce import dependency by, e.g. promoting renewable energy sources. If the wholesale generation market becomes competitive, high-cost sources will not have a place in the market. Furthermore, the Regulator has a duty to enforce economic efficiency. Subsidies are, in general, non-economic and send the wrong signal to consumers. For example, in a number of countries with no independent regulator or with weak regulations, some non-economic policies exist, which are in favour of large customers paying rather more than the economic cost arising from mitigating measures, which forbid these large customers to resell their low-cost power. The same is true for “below real cost” sales to poor people. Subsidies require the costs to be borne by someone else. This however breaches one of the goals of the Regulator to have a fair, non-discriminatory system for all consumers.

The Consultant intends to place emphasis on finding ways to harmonise a move towards competitive energy markets without an excuse for non-economic solutions unless the political will is to support (from the budget) or reduce certain energy sources, which are not least-cost solutions. There are a few energy policy-making tools to explore. These include taxation, provided the Regulator believes it is not a discriminatory measure distorting the competitive market.

The success of the Project will depend substantially on the work of the local experts involved. The Consultant considers that the expertise of the professional resources will be the key factor to achieve the objectives of the Project. The Consultant has put together a core team of four long-term experts, each one contributing with his expertise and experience.

Without being exhaustive, the key issues to be addressed by the Project team include:

- i) Institutional capacity building in energy policy development, strategy formulation and investment planning.
- ii) Setting up a Regulatory Authority, which could promote competition to obtain economic efficiency, protect the consumers and promote investments in the sector.
- iii) Substantial improvement of information gathering, stocking and retrieving to support the decision making process.
- iv) Organisation and efficient execution of a successful training programme. The training programme prepared during the inception phase takes into consideration the ongoing privatisation process and the existence of the new laws.

- v) Successful completion of a coherent legal framework without any contradictions or confusing mandates for the main actors in the Energy Sector.

The draft Inception Report has been distributed to the Minister of Energy and Water, the Head of the EC Delegation, the President of CDR, the Secretary General of HCP, the CEO of EDL with a request for comments and suggestions. Most of the comments and suggestions were included in the Inception Report.

On 5th March 2003 the Minister of Energy and Water informed the Consultant that Mr. Georges Kamar was the MEW's Coordinator for the implementation of the project.

Inputs:

- Two long-term local experts 5 man/months
- One long-term local experts 5 man/months
- Long-term international expert 2,5 man/months

Activity 1.2 Review of the legal framework (New activity)

Review of the Law N° 462 (Organisation of the Power sub-sector) and the Law N° 228 (Privatisation) and review the English version.

Work programme:

The law N° 462 has some contradictions and ambiguities, which need to be clarified and amended. The text of the law will be reviewed by the long-term experts and scrutinized by our local legal expert to propose amendments and a corrected English version, in order to produce a draft copy of the Law reflecting the intentions of the Government in relation to the organisation of the electricity sub-sector. The MEW will then be able to suggest amendments to the Law N°462.

Deliverables:

The two laws reviewed and suggestions listed as well as the English version corrected in conformity with the intentions of the Legislator and the Government. This could be used as a reference by all actors/operators involved in the sub-sector.

Inputs:

Two local senior power sub-sector experts fluent in Arabic and English, familiar with the technical jargon of the sub-sector assisted by a local lawyer firm knowledgeable with the local jurisprudence and with experience in drafting laws in Arabic and English. The Team Leader will coordinate the assignment.

- Two local long-term experts 3 man/months
- A international law expert 1.man/month
- Long-term international experts 2 man/months

Activity 1.3 Ministry's administrative structure review (New activity)

Objective:

At the request of the Minister, the current structure of the MEW needs to be reviewed to take into account the result of the current power sub-sector restructuring (Law 462). A law No. 247 for the dissolving and subsequent merging of some Ministries was published in the Official Gazette on August 14th 2000. This law specifies the dissolution of the Ministry of Hydraulic and Electric Resources (MHER) and the Ministry of Petroleum (MOP) and the creation of a new Ministry; the Ministry of Energy and Water (MEW) whose tasks include most of those which were previously the responsibility of the dissolved Ministries. Those responsibilities make the present Ministry's tasks irreconcilable with the new tasks of the Ministry as specified in Law 462 and the Law for the Organisation of the Water Sector. We need to adapt the current structure of the MEW to the new situation.

Work Programme:

A senior specialist in administrative reform with experience in efficient organisational structuring of public service departments and private companies will review the current situation. After analysis of the future structure of the energy and water sectors, the specialist will suggest an efficient organisation chart for the MEW. Furthermore the specialist will assess the qualifications of the current staff and will suggest staffing scenarios for the new organisational chart.

Assistance will be provided to the MEW through a comprehensive analysis of staffing issues with special attention given to the issues of skill base and sector need compliance, costs implicated by possible changes, economic constraints and possible remedies. These activities include:

- Assisting the MEW in reviewing the proposed new structure.
- Supporting the MEW in conducting a survey on staff levels, allocations and job profiles.
- Suggesting and elaborating a strategy for improving the utilisation of the existing work force.
- Assisting in the development of job descriptions for existing staff.
- Suggesting a performance monitoring and evaluation system.
- Identifying gaps based on the newly proposed structure.
- Proposing recommendations for further employment needs and related budget requirements.
- Suggesting means for integrating the DCD and EPSD into the structure of MEW.

Deliverables:

A report on the current staffing qualifications in relation to the present organisation chart. The specialist will review the existing annual performance evaluation of the staff and will submit an overall assessment of staff qualifications for the new sector structure.

Suggestions will be made for the adaptation of a new structure for the future challenges of the Ministry with a profile of the potential candidate for each post.

Following a review by the Ministerial Authority, the various scenarios proposed will be limited to only a few alternatives.

Inputs:

A senior international personnel management expert with experience in designing efficient organisation charts for public sector departments.

- Review of existing staffing 1 man/month
- Review of the current structure 1 man/month
- Design of a new structure 1.5 man/months
- Matching post description with candidate profile 1 man/month
- Suggest alternatives to the Minister 1 man/month
- One long term local expert 2 man/months
- One short-term local expert 2 man/months

The sector legal framework *(Supplementary work to establish a coherent legal framework)*

In the current contract, the Consultant has 12 man/months of local legal advisory manpower and 5½ man/months of foreign legal advisory manpower. These man/months are reserved for the internal legal workload of the Regulator, for preparing decrees, rulings, opinions, licences, etc. To produce a coherent legal framework requires more resources in man/month.

Objective:

Prepare and submit a legal framework to the MEW covering the Energy Sector in a coherent, hierarchical and logical manner. To this effect the project will prepare and submit a set of draft legal documents to the Ministry to be used as reference for all the sub-sectors draft laws and bylaws. In particular, the project will produce an Energy Law, an Electricity Act, an Oil Act, a Gas Act, a Law for the Restructuring of the MEW, a Water Act (if requested by the Ministry), an Energy Saving and Renewable Law (if requested by the Ministry) and finally

the Regulatory Authority By-Law describing clearly the roles, mandates, objectives and goals of all actors, including the role of the Government, the legislative body and the Regulator. All mandates, roles and duties will be specified in a precise and clear legal framework.

The legal framework will include a draft Gas Act and a draft Oil Act with a view to insuring that all the actors involved in these sub-sectors at present or in the future are aware of the legal framework they will be involved in. Furthermore, it will define the role of the Government as policy and strategy maker, the rights and duties of the investors and those of the consumers.

Finally, the Energy Sector Regulatory System will be established in a clear and precise legal framework since a Regulator cannot operate in a legal vacuum. A draft Regulatory Authority By-Law will also be prepared.

Activity 1.4 Energy Sector Law (New Activity)

Objective:

Prepare a draft law for the Energy Sector, which will clearly establish the Policy and the Strategy of the Government. Identify all the sub-sectors and the roles, duties and rights of all the actors in each sub-sector. This law will identify all the other laws and by-laws necessary to establish a coherent and clear Energy Sector legal framework.

Work programme:

Preparation of a draft law for the Energy Sector (power, oil, gas). State clearly the policy, strategy, objective and goals of the Government in relation to the Energy Sector. Identify and determine the role and mandate of all the actors in the sector and define their roles, rights, duties and accountability. Identification of the interrelations between all the sub-sectors and the description and establishment of the legal framework in which they will operate.

Deliverables:

A draft Law, acceptable to the Government and the main partners, active in the sector. Following a review from the Government, this draft Law could be presented to the parliament for discussions. The MEW will take the leadership in the preparation of the law, supported by an international expert.

Inputs:

- Two long-term local experts fluent in Arabic and English familiar with the technical jargon of the sector. 2 man/months
- One senior international lawyer specialising in legal aspects of the Energy Sector. 1.5 man/months
- The assistance of a local lawyer firm, with knowledge of the local jurisprudence and with experience in drafting laws in Arabic and English. 5 man/months
- Long-term international experts 2 man/months
- Printing of the document.

Activity 1.5 The Electricity Act (New Activity)

Work programme:

The policy of the government as well as the strategy to be pursued for the power sub-sector need to be clearly expressed in a legal context. For instance, in the case of an open and competitive market, all the operators must be identified and their respective roles, functions, responsibilities and interrelations described in a legal context. The respective roles, functions, rights and responsibilities of the Government and of the Regulator, as well as their legal status in a competitive environment, must be well defined to insure that investors, operators and the public are well aware of how the sub-sector will operate and develop. The MEW will take the leadership in preparing this law and to introduce it to the parliament

Deliverables:

A draft Law, acceptable to the Government and to the main partners in the sub-sector. This draft law will be sufficiently detailed to be presented to the Parliament for discussions.

Inputs:

- Two local senior long term experts fluent in Arabic and English familiar with the technical jargon of the sector. 2 man/months
- One senior legal international expert with experience in the sub-sector: 1.5 man/months
- Assistance by a local firm of lawyers, with knowledge of the local jurisprudence and with experience in drafting laws in Arabic and English. 3.5 man/months
- Long-term international experts 2 man/months
- Cost of printing and distribution.

Activity 1.6 The Gas Act (New Activity)**Work Programme:**

In a very similar way to the above-mentioned Act, the gas sub-sector must also have a legal framework to establish guidelines on the rights, duties and responsibilities of the investor and potential investors. The mandate and power of the Regulator and of the Government must be clearly stated. The MEW will be the sponsor of this activity.

Deliverables:

A draft Law prepared by the Ministry with the support of experts. A law acceptable to the Government and could be presented to the Parliament for approval.

Inputs:

- One senior local short term expert 1 man/month
- One international expert for the management of gas distribution. 1.5 man/month
- Assistance from a local firm of lawyers, with knowledge of the local jurisprudence and with experience in drafting laws in Arabic and English. 4 man/months
- Long-term international experts 2 man/months
- Costs related to the printing and publishing the Law.

Activity 1.7 The Oil Act (New Activity)**Work programme:**

Whether the oil is extracted locally or imported as crude oil or as petrol products through tankers or pipelines and/or processed in refineries, it has to be stocked, distributed and taxed. A legal framework, needed for establishing the roles, duties and rights of all the operators, upstream to the refineries and downstream to the consumers, must be defined and the mandate and power of the Regulator established in a legal context.

Deliverables:

A draft Law, which is acceptable to the Government and could be presented to the Parliament for approval. The MEW will take the initiative of the preparation of the law supported by experts.

Inputs:

- Two Local senior short-term experts with experience in oil products stocking and distribution. 1 man/month
- Assistance from two international short-term experts, one with experience upstream of the refineries and the other downstream. 1 man/month
- The services of a local firm of lawyers, with knowledge of the local jurisprudence and with experience in drafting laws in Arabic and English. 4 man/months
- One senior legal international expert with experience in the sub-sector. 1 man/month
- Long-term international expert ½ man/month

- Costs related to the printing and publishing the Law.

Activity 1.8 The Law for the Restructuring of MEW (New Activity)

Objective:

With the arrival of the Energy and Water Sector liberalisation and after issuance of the Organisation of the Electricity and Water Sectors Laws, the MEW's functions and roles in both sectors will change. After the Ministry's administrative structure review, a consensus will be developed on the type of structure the MEW needs for the future. This will require the adoption of a new law by the Parliament.

Work programme:

Taking into account the result of the Ministry's structure review, the Consultant will prepare and submit a draft Law to the Minister, which will reflect the changes necessary for the new structure adapted to the changing conditions in the Energy and Water Sectors.

Deliverables:

The drafting of a Law acceptable to the Minister, to be presented to the Parliament

Inputs:

- Two senior long-term experts familiar with all the technical and managerial aspects of the sector. 3.5 man/months
- Assistance from a local firm of lawyers, with knowledge of the local jurisprudence and with experience in drafting laws in Arabic and English. 3.5 man/months
- One senior legal foreign expert with experience in the sector 1 ½ man/months
- Costs related to the printing and publishing the Law.

Activity 1.9 The Regulatory Authority By-law (New Activity)

Work programme:

When the above-mentioned legal frameworks for the sector and the sub-sector have been drafted, the last step is to prepare the Regulator By-Law. The mandate of the Regulator is already mentioned as an actor in all the sector and sub-sector laws. In the By-Law, the focus is on the precise mandates, duties and rights of the Regulator in relation to all the sub-sectors under his authority. The internal organisation of the Regulator will be defined. The process for the approval of the budget of the Regulator and the methods used (fines, license fees and levies) to finance its operations will be described. The transparency and accountability of the Regulator to the elected representatives will be stated. The selection process for the Chairman of the Board and of the Commissioners will be defined and the duration of their respective mandates indicated as well as their remuneration. The MEW will be the sponsor of this activity.

Deliverables:

A draft of the Regulator By-Law prepared by the Ministry and to be presented and approved by the parliament

Inputs:

- Two senior local long-term experts familiar with all the technical and managerial aspects of the sector. 1 man/month
- Assistance from a local firm of lawyers, with knowledge of the local jurisprudence and with experience in drafting laws in Arabic and English. 4.5 man/months
- One senior legal international expert with experience in the sub-sector 2 man/months
- Long-term international expert. 1 ½ man/months
- Costs related to printing and publishing the By-Law.

Activity 1.10 Preparation of Lebanon's Energy Balance (New Activity)

Objective:

One of the fundamental tools necessary for the development of Policies and Strategies for the Energy sector is the national Energy Balance. This tool should be as detailed as possible and give an overall picture of all energy imports, exports and local consumption. The sources of energy are classified as primary and final and the quantities and types of energy consumed, need to be identified and quantified. In general, an energy balance is published each year for the public at large, however the Ministry, by using the database, may wish to have a monthly energy balance to detect the trends and take corrective measures when needed.

Work Programme:

The expert will establish working relationships with the various entities, which collect statistics, namely: the Ministry of Energy and Water, the Ministry of Public Works and Transport, the Ministry of Interior and Municipalities, the Ministry of Industry, various departments of EDL, the Directorate General of Statistics, etc. A seminar will be organised to explain the purpose, rationale for the information, structure of the database and format of the energy balance to the relevant employees in the various institutions.

Produce a datasheet for each source of information. Indicate the data and information needed from each organisation. Prepare and distribute computer programmes for the collection and transmission of data. Enquiries will be made as to the possibilities of obtaining all the data needed on a monthly basis through electronic means.

A format for the annual energy balance will be developed and a computer programme written for the automatic collection, storage and retrieval of the information put in place inside the MEW.

Development and preparation of a **detailed energy balance** for all energy products produced, imported and consumed in the country. This energy balance will be updated continuously using the energy sector database. A yearly report will be published. When the database is functional, a simulation (what/if) for the projection of the energy balance could be made for the coming year. This will allow the formulation of preventive strategies.

Deliverables:

- An annual energy balance format with an electronic updating system.
- A monthly energy balance system for internal usage by the Ministry also available on the web site for the general public.

Inputs:

- A senior international energy economist with experience in preparing national energy balances. 4 man/months
- A senior long term local expert with knowledge of where to find the information. 1 man/month
- A senior short term local expert with knowledge of where to find the information. 2 man/months
- Long-term international experts 2 man/months

Activity 1.11 Preparation of Lebanon's Energy Inventory

Objective:

The objective is to make an inventory of all the existing and potential energy resources available in Lebanon. This inventory will establish quantitatively and qualitatively all resources in oil, gas, wood, coal, hydropower,

wind, biomass and solar energy, etc. The inventory may also include potential energy resources at the regional level (imports).

Work programme:

In cooperation with the MEW, prepare the **inventory** for the national energy resources and assess all possibilities for the diversification of energy supply through importation with a view to identifying a least cost energy supply for Lebanon.

Classify the energy resources in categories, such as existing reserves, guaranty reserves, and probable reserves.

Deliverables:

A register of all the energy resources of Lebanon i.e. guaranty and probable.

A list of suggestions to improve the knowledge of the Lebanese resources.

A register of all foreign energy resources available to Lebanon in a decreasing order of cost and security of supply.

Inputs:

- One international energy economist with experience in energy inventory 2 man/months
- One long-term local expert to assist the Energy economist 1 man/month
- Long-term international expert 2.5 man/months

Activity 1.12 Support MEW for sector policy and strategy formulation

Objective:

The main goal of task 1 is: to define a general energy policy and propose a strategy up to 2020, divided into periods of 5, 10, 15, and 20 years. The current policy needs to be reviewed to take into account the upcoming implementation of an open and competitive Energy Sector. When this is completed a strategy will be developed and subsequently proposed to the Ministry to implement a sector policy. With the introduction of a competitive environment for the Energy Sector, a completely new strategy will need to be elaborated in a coherent manner. This is a vital component since few investors will take the risk of investing in the sector if there is no clear strategy, in the context of a solid legal framework, and above all a regulatory system with established rules, clear principles and transparent methods to set the tariffs. Investors will insist on a stable, consistent and transparent regulatory system, which is part of the overall sector strategy. Therefore, the formulation of the long-term strategy is the main goal of Activity 1.12 and is a pre-requisite for the successful Energy Sector development.

Work Programme:

This activity includes the following tasks:

- **Study the impacts resulting from the introduction of competition into the generation side of the power sub-sector.** Assisting the MEW in studying the effects resulting from the introduction of power interconnections with neighbouring countries and the construction of a gas pipeline making gas available for power generation. There are plans to construct a 400 kV grid linking Lebanon, Syria, Egypt, Jordan, Iraq and Turkey, which will result in potential electricity imports beginning in 2003. Furthermore, a gas pipeline from Syria linking the Deir-Ammar Electrical Combined Cycle Plant is scheduled to be in operation at the end of 2003. Another project in consideration deals with the supply of gas from Egypt to Jordan, Syria and Lebanon in 2004-2006. Should these projects come into being, they will have a significant impact on Lebanon's energy balance. There exists a possibility to build a terminal for the

importation of LNG from Algeria, Qatar and other countries. A law on LNG import and distribution is under preparation for consideration by Parliament. These new energy resource possibilities will provide the electricity sub-sector with additional diversification of primary energy supply and will have an impact on prices and costs and result in an increase in competition.

- * When the above-mentioned activities have been completed, assistance will be provided to the Ministry in cooperation with other consultants involved in the oil & gas subsectors to develop a set of energy policy scenarios, including a macro analysis of the impacts of all the scenarios.
- **Development of options for an Energy Strategy for Lebanon:** Based on the analytical work mentioned above and the Government-agreed policy, the elements of an energy strategy for Lebanon will be developed. The strategy will be elaborated for periods of 5 years up to 2020. This strategy will be developed, taking into account a need for regular up-dating. Many variable inputs will be considered, such as various sources of energy supply (primary energy) and forecast of energy consumption (final energy demand) with respective variable costs and prices for each alternative. The energy strategy will also consider the dependency on energy product imports and how to best use Lebanon's national resources of 263.7 MW of hydropower. An optimal compromise will be achieved with an economic efficient fuel mix for generation, reducing import dependency and limiting emissions by reducing low priced heavy fuel oil in the power sub-sector as much as is economically efficient and considering cost efficient electricity imports. The fuel mix and the departing mitigating techniques to limit emissions will be considered. The independent power generators will be subjected to national environmental and public safety standards as well as international conventions, e.g. the Kyoto-Protocol.
- **Working out and developing incentives and guidelines to support the energy market in accordance with the Energy Strategy:** Based on the results of the economic simulations of the impact of the proposed strategy on the environment and the economy, suggestions will be made to the MEW to propose incentives e.g. import taxes or exemptions based on generation fuel types. This may influence the fuel mix used in generation and will have an impact on the economy. Therefore the MEW will liaise with the Ministries of Finance, Economy and Industry to develop a consensus on the strategy to be adopted.

Deliverables:

Analysis of the effects of the import of new energy resources into the generation side of the power sub-sector and suggestion of an Energy Sector strategy for Lebanon until 2020 divided in periods of 5 years. Suggestions for incentives to support the Government adopted strategy.

Inputs:

- One senior long-term expert familiar with all the technical and managerial aspects of the sector. 2.5 man/months
- One senior international expert with experience in the sub-sector 3 man/months
- Long-term international expert 4.5 man/months

Activity 1.13 Tools for implementation of the Energy Policy and Strategy by MEW

Objective:

Provide the necessary tools to the MEW to assist in the implementation of the energy policy and strategy developed under Activity 1.12 In particular the implementation of an Energy Policy & Strategy formulation

Department (EPSD) will institutionalise inside the MEW the continuous conduction of strategic formulation and energy policy development.

Work Programme:

Assist the MEW in the creation and implementation of the EPSD inside the Ministry as an important partner in the development of the Lebanese Energy Sector in the context of an open and competitive environment. The EPSD will focus on an integrated cross-sectorial energy formulation and on the regular revision of the energy strategy beginning with a detailed energy balance focusing on the end-users. Through training and cooperation with the experts, the Project will enable the EPSD to prepare and regularly update a comprehensive Energy strategy in the context of an open and competitive sector with various private operators and turn itself into a well performing Department, able to continue to supply the Ministry with pertinent and well focused strategic options.

The activities to be implemented under this task comprise in particular:

- **Development of a concept for the establishment of an Energy Policy & Strategy formulation Department (EPSD) within the MEW:** This activity includes the development of a plan for the EPSD comprising:
 - Assist the MEW in determination of the goals to be achieved and the functions of the EPSD, e.g. strategic development of an energy competitive market (thermal power generation, hydropower, gas, oil, renewable energies, non-energy fossil fuel use), identification of investment projects and potential investors, policy co-ordination with other ministries and governmental institutions, preparation of draft legal and regulatory documents forming the legal framework for the evolution of the Energy Sector policy and market development, dissemination of information and public awareness campaigns
 - Assist the MEW in Development of procedures for interactions with other institutions and players in the Energy Sector and within the MEW
 - Assist in the development of the organisational structure of the EPSD (organisation chart, hierarchy, integration within the MEW)
 - Identification of staffing (positions, skills etc.) and equipment needs (office space, furniture, PC technology, networks, software, etc.)
 - Calculation of costs (fixed and variable) connected with the operation of the EPSD
 - Assist the MEW in the preparation of the budget of the EPSD
 - Assist in the elaboration of an action plan for the implementation phase of the EPSD.
- **Assist the MEW in reviewing and restructuring the methodology, quality and quantity of the current Lebanese energy statistics.** Particular emphasis will be given to purpose or target orientated statistics which can serve as a direct tool in decision-making and in interpreting statistical indices. The restructuring process of the Energy Sector will bring about a series of problems and changes for the Lebanese energy statistics which will be tackled by the Project, e.g. organisational changes in the MEW, new user groups, budgeting changes and the need for the comparability of Lebanese standards to the joint EUROSTAT / IEA standards.

The improvement concept will be implemented in two steps in close co-operation with the Lebanese Directorate General for Statistics:

For the short term

- Assist in the verification of the reliability of the current data to guarantee good quality as a basis for decision making

- Assist in the revision of statistical data and identification of the needs of the decision makers, investors and industries to the statistical data. Development of a matrix of conversion factors allowing the transformation of Lebanese statistics into a compatible EUROSTAT / IEA energy balance.
- Assist in the implementation of software, including the EFLOW software used by EUROSTAT for the production of energy flow diagrams. A comprehensive training programme accompanies this activity.
- Assist in reviewing the current legislation on statistical surveys, data protection and flow of information (within and outside the ministry) and develop a draft decree to change the survey system to suit the newly chosen statistics system
- Suggest a report format for the government with interpretation and data analysis.
- Propose the report content, format, circulation (annual/quarterly/monthly) and publication to media (e.g. bulletin or Internet).

For the Medium term

- Propose a revision of the procedures and the organisations involved in data collection and data processing as well as matching procedures with the EUROSTAT systems. This means among other things: monthly and quarterly questionnaires in addition to the yearly questionnaires, adding consumption data, adjusting Lebanese statistical data system, improving the collection system by sector on 2-digit level, etc.
- Assist in strengthening the institutional capacity for energy policy and strategy formulation inside MEW. Essential documents will be collected and stored in an **electronic library**. Access will be free to selected sector operators and the staff of the MEW incl. the EPSD, DCD and the Regulatory Authority.
- Assist in the setting up of a systemised information classification.
- Propose a broader dissemination of project results using tools, such as the Internet. The **project home page** will contain a section, which is restricted to the partners for exchanging all project documents (minutes, reports etc.) and for providing access to the project library catalogue, which allows for the dissemination of information to all parties concerned on the existence of studies in the respective fields. Secondly, the Internet web site will contain a public section informing all interested parties about the project.
- Suggest a format for a regularly published **newsletter** to ensure the systematic dissemination of project results, know-how, and international best practices to key sector staff in MEW, EDL and other concerned institutions.
- Assist the MEW in developing an overall **dissemination strategy** to provide maximum information to interest parties.
- Assist in the development of a standard format for a **Biannual Report** on the Energy Sector.

Deliverables:

Assist the MEW to develop an action plan for the EPSD, including activities for the start-up phase (18 months); Review of current energy statistics; Development of gap analysis; Short-term improved compatibility of present and statistical data system; Medium-term solution: Full compatibility of data collection procedures. Implementation of statistical software; Energy balance; Training; Electronic library; Periodical research on new and upcoming publications; Electronic library catalogue; Training seminar on the continuation of the library after the end of the project; Meta-information database on information systems and energy databases in Lebanon; Project home page; Newsletters; Overall Dissemination Strategy for MEW; Elaboration of standard format for biannual reports; Support to the elaboration of biannual reports; Establishment of a post for biannual reporting, including a detailed job description and on-the-job training.

Inputs:

- One senior long- term expert familiar with all the technical and managerial aspects of the sector. 2.5 man/months
- One senior short-term expert familiar with all technical and managerial aspects of the sector. 2 man/months
- One senior international expert with experience in the sub-sector 3 man/months
- Long-term international expert 3 man/months

Activity 1.14 Capacity Building and Institutional Strengthening of the MEW

Objective:

Identify and attract the best qualified personnel available to insure the efficient performance of the Regulatory Authority and the MEW. The Consultant will identify the qualified staff inside EDL and submit suggestions to attract the available and qualified staff to work inside the Regulatory Authority and with the MEW in accordance with article 45 of the new Lebanese Law for Electricity organisation.

Work Programme:

Support the EPSD in the identification of staffing needs, the calculation of budgetary implications and assistance in the recruitment of new personnel. Assist in the identification of training needs for increasing the capacities of MEW and partner institution staff and establish a sustainable partnership between Lebanese and European organisations in the Energy Sector. Provide suggestions and assist in the implementation of training sessions and workshops.

This above programme of task will comprise:

- **Assist the MEW in a comprehensive analysis of staffing issues** with special attention to the issues of skill base and sector need compliance, costs implicated by possible changes, economic constraints and possible remedies. These activities include:
 - Assisting the MEW in reviewing the proposed new structure.
 - Supporting the MEW in conducting a survey on staff levels, allocations and job profiles.
 - Suggesting and elaborating a strategy for improving the utilisation of the existing work force
 - Assisting in the development of job descriptions for existing staff
 - Suggesting a performance monitoring and evaluation system
 - Identifying gaps based on the new proposed structure
 - Proposing recommendations for further employment needs and related budget requirements
 - Suggesting means of integrating the DCD and EPSD into the structure of MEW.
- Support the MEW in the **implementation of the EPSD**, through on-the-job-training, which includes:
 - A review of the current institutional structure of the energy market
 - Recommendations on restructuring the Energy Sector to establish a competitive market, identification of future operators to insure a dynamic and competitive market.
- **Suggest a training programme for the personnel of the MEW and other organisations to meet the needs of the new energy market:** Based on the work carried out under the other subtasks, a series of training sessions, workshops and seminars have already been identified. (During the course of the project, further training needs will be identified and conducted according to the requirements at the time.) The project will prepare the necessary logistics for the training activities and will ensure proper participation and information transfer. The consultants charged with training will be asked to provide written material to allow their input to be used for further reference (sustainability) including:
 - Literature review of the topic
 - Actual training material
 - Relevant bibliography

The List of topics includes:

 - Training for MEW personnel on setting energy policy and strategy
 - Seminar on energy conservation in co-operation with the UNDP/GEF funded Energy Conservation project.
 - Seminar on environmental norms and standards for the power sector

- Training on project identification, selection, project appraisal and project management, monitoring, post-evaluation, lessons learned
 - Training on procedures to obtain funding from International Financial Institutions for energy projects
 - Seminar on “The Ministry and Public Relations”
 - Seminar on the principles of EUROSTAT Statistics
- **Suggest a training programme with some European organisations:** Further to the above, the consultant will assist the MEW in organising study tours to European institutions to exchange experience in specific disciplines to be identified with the MEW staff, to suit the emerging needs. Concrete plans for study tours and scholarships are:
 - Study tour: Visit and discussions with European Ministries and institutions responsible for the energy policy implementation for the Energy Sector in Germany and France
 - Study tour: Visit to Germany and Denmark to study private sector initiatives in the field of renewable energies, including concrete examples, as well as relevant governmental organisations

Deliverables:

Suggestion for an organisation chart for the DCD and EPSD. Presentation of a strategy for improving the utilisation of the existing staff. On-the-job-training. Presentation of ad hoc studies. Preparation and implementation of well focused training sessions and workshops. Training activities. Establishing partnerships with some European institutions.

Inputs:

- One senior local long-term expert familiar with all the technical and managerial aspects of the sector. 2.5 man/months
- One senior local short-term expert familiar with all the technical and managerial aspects of the sector. 2 man/months
- One senior international expert with experience in the sub-sector 3 man/months
- Long-term international expert 3 man/months

Activity 1.15 Assist the MEW to incorporate environmental guidelines in the policy and strategy formulation of the Energy Sector

Objective:

Assist the MEW in implementing the environmental norms and standards developed by the Ministry of Environment for the protection of the environment. These norms developed by the Ministry of Environment will have an impact on the policy and strategy formulation and will provide potential investors in the Lebanese Energy Sector with information on environmental requirements. These norms will assist potential operators/investors with facts on the investments needed to achieve environmental compliance. It is important here to emphasise the fact that numerous donors are attracted by environmental considerations, and therefore this element should be linked with the mandate of the Regulatory Authority.

Work Programme:

According to Article 6 of the Law 462 “Organisation of the Electricity sub-sector” the MEW “*propose the public safety and environmental guidelines and technical specifications required in electrical facilities and installations [..]*”. Furthermore, there is a need for a co-operation with the Ministry of Environment (MoE) in the implementation of the “National Standards for Environmental Quality for the Republic of Lebanon”, published in 30.01.2001, as well as integrating the environmental requirements in the power sector under the umbrella of the new “Environmental Framework Law”. The standard document for this task will be the report

entitled “Lebanon Electricity Sector Privatisation - Environmental Audit”, prepared by BNP Paribas, Electroconsult and Rafik El Khoury & Partners Consulting Engineers for the MEW in July 2002. Taking into account the above, the following work programme is proposed:

- **Support to the co-operation between the MoE and the MEW** e.g. on achieving a deadline for sector compliance to the National Standards for Environmental Quality. This will include power generators < 10 MW.
- Development of a **draft regulation for “Large Combustion Plants”** for oil and gas fired power and thermal plants with thermal performance of more than 50 MW (with gas: 100 MW) and for regulating the emissions of sulphur dioxide (SO₂), nitrogen oxide (NO_x), dust, carbon monoxide (CO), fluorides (F) and chlorides. This regulation should distinguish between new and old plants, plants, which are under construction and those undergoing approval processes.
- Development of an **“Emission Monitoring Programme for Medium and Large Power Plants”**, e.g. > 10 MW. This includes compliance monitoring, in particular, which should be implemented by MoE and should provide the Regulator guidelines for the environmental norms and standards to be included in the operator’s licences.

Deliverables:

Assist the MEW with the interpretation of the MoE environmental requirements to be taken into account in the policies and strategies formulation. Make sure that existing and future operators in the Energy Sector are aware of and will comply with the norms and standards issued by the MoE. Prepare a set of environmental guidelines to be included in the licences to be issued by the Regulator to all operators in the Energy Sector.

Participate in the realisation of an “Environmental Review Study” by the MoE, elaborate an Environmental Action Plan, participate in round table meetings with the MoE, MEW, EDL and the Regulatory Authority and assist in the draft regulations on “Emission Control from Large Combustion Plants” and the “Monitoring Programme” by the MoE.

Inputs:

- One senior local long-term expert familiar with all the technical and managerial aspects of the sector. 2 man/months
 - One senior local short-term expert familiar with all the technical and managerial aspects of the sector. 1.5 man/months
 - One senior international expert with experience in the sub-sector. 3 man/months
- Long-term international experts 2 man/months

Activity 1.16 Assist the MEW in the preparation of incentive programmes to support the objective and the goals of the energy policy

Objective:

Assist the MEW in developing tools, procedures and know-how to implement the objective and goals of the energy policy and strategy developed in Activity 1.12 Support the MEW in establishing a Donor Co-ordination Department (DCD) to create institutional capacity to improve co-ordination and increase donor activities in Lebanon as well as providing assistance to the development of an Energy Conservation Programme promoting efficient and economic renewable energy.

الجمهورية اللبنانية
مكتب وزير الدولة لشؤون التنمية الإدارية
مركز مشاريع ودراسات القطاع العام

Work Programme:

Lebanon currently, has nearly no fossil energy resources of its own, energy conservation and renewable energies may have a role in limiting fossil fuel imports. In addition, well selected investments in energy conservation could have significant economic benefits.

A number of activities have been grouped under this activity to respond to the need to assess the potential benefits of these technologies. This activity includes the following tasks:

- **Assist the MEW to the establishment of a Donor Co-ordination Department (DCD).**
 - Creation of a database containing information on all international and bilateral donors, including programmes, current projects financed in Lebanon and the region, conditions, procedures, contact details, etc.
 - Identification of energy relevant international projects and programmes managed by other ministries
 - Establishment of regular contacts to donors and international financing institutions e.g. World Bank/IBRD, UNDP, EuropeAid, USTDA, USAID, EIB, KfW, GTZ and other Agencies.
 - On the basis of this information, and with reference to the energy strategy, select and approach selected donors and/or seek to implement planned projects of GoL (in co-operation with CDR).
 - Assist the MEW in developing an action plan to integrate the DCD within the structure of the MEW. Propose objectives and goals to be achieved, staffing needs and job descriptions
 - Suggest a training programme, assist in the management of the DCD and provide training in project appraisal, ToR writing and project cycle management
- **Energy conservation programme:** Assist the MEW in the development of an Energy Conservation Strategy based on solid economic principles aimed at reducing the amount of primary fuel imports by improving conservation measures and utilisation of renewable energy, thus indirectly improving the quality of the environment. Achieving social benefits by the creation of significant numbers of jobs in energy-related services and reduction of household energy costs. The Project will suggest economic efficient investments in energy conservation (This part of the Project will co-operate closely with the UNDP/GEF Energy Conservation Project):
 - Suggest a set of Standards for building construction
 - Propose a programme to promote Energy Audits in industries.
 - Support the UNDP/GEF programmes for developing an investment programme to Promote Energy Service Companies (ESCOs) and for Energy Labelling
 - Suggest a programme for the replacement of old boilers by high-efficiency boilers in residential buildings with significant SO_x and NO_x emission reduction
 - Suggest a programme for setting financial incentives to encourage commercial, industrial or household energy conservation and a programme designed for public buildings, (schools in particular would be a good example)
 - Suggest a programme to develop professional qualifications for energy efficiency experts.
 - Suggest a programme to increase awareness of energy saving, by developing means to promote consumer awareness and resource conservation and public information and investment promotion dissemination.
 - In a word, suggest a programme for incentives for any action allowing a reduction of demand, especially at peak times, thus creating “negative watts” (NW).

Deliverables:

Reference tool on donors and procedures, sustained capacity enhancement at MEW (DCD), manuals for project evaluation and project cycle management, integration of the unit within the structure of the MEW, action plan for the DCD, training programmes for personnel, fully developed project proposals (with ToR's where applicable), an Energy Conservation Strategy Paper, identification of sources of funds for investments.

Inputs:

- One senior long-term expert familiar with all the technical and managerial aspects of the sector. 2 man/months
- Two international experts with experience in the sub-sector: 3 man/months
- Long-term international experts 2 man/months

Task 2. Assistance in the setting up of an Energy Sector Independent Regulatory Authority

Foreword:

The need for a Regulatory Authority results from the very fact that the privatisation of infrastructures and the licensing of operations in the power sub-sector are traditionally regarded as part of the government's responsibility since the mid-1940s. State-owned monopolies do not build a reputation for economic efficiency and consequently governments have been inclined to return these commercial operations to the private sector. This policy allows governments to avoid financing or guaranteeing capital-intensive investments, increasingly harder to sustain in face of the increase in demand for social services which governments have to finance. However, it is clear that full privatisation and competition without regulation is not feasible. Competition without a referee will be chaotic and the consumer's rights may be ignored. Regulation by the government is not acceptable by private investors due to the uncertainty and fluctuation of decisions on a political level. Therefore, the creation of an Independent Regulatory Authority is a pre-requisite for an open and competitive energy sector. For the investors to be fully informed on the mandate and the norms and criteria to be used by the Regulators are of the outmost importance. Consequently, the organisation of an Independent Regulatory Authority is a priority for the government to insure the privatisation process of the infrastructures and the operations of the power sub-sector do not suffer any undue delay.

Objectives & Goals for the electricity sub-sector Regulatory Authority:

The Authority carries out its responsibilities under the Energy Law, the Electricity Act and the Regulatory Authority By-Law. In relation to the electricity output, the Authority is guided by and aims at achieving the following objective and goals:

Objectives:

Promote efficiency in the generation, transmission and distribution of electricity and obtain the optimal level of economic efficiency in the sub-sector

Goals:

- Promote competition in the generation and sale of electricity and facilitate a smooth transition to an open, dynamic and competitive environment and regulate fairly the natural monopolies.
- Provide generators, traders, retailers and consumers with non-discriminatory access to transmission and distribution systems in the country.
- Protect the interests of consumers willing and able to pay for the services they obtain, with respect to competitive fair pricing, reliability and quality of the electricity service.
- Protect fairly the investors/operators to insure their financial viability and the preservation of a financially competitive electricity industry.
- Facilitate and promote the use of cleaner, environmentally benign energy sources in a manner consistent with the policies of the Government and the objective of economic efficiency.

Competition or Tariff setting:

Besides promoting competition in generation wherever possible, since no natural monopoly impedes competition, the Regulator is in charge of deciding if the price level in the wholesale market reflects the real cost of generation. Should the price level be excessive, the Regulator has the authority to impose a price cap on generation.

For the natural monopoly elements of the sub-sector (transmission lines and distribution grids) the Regulator has the duty, through detail studies, to decide upon a fair and reasonable tariff structure and level for each component of the natural monopoly. This tariff system needs to be transparent and must correctly reflect the economic costs to the consumers. All rulings from the Regulator are made public and are explained in detail (on the web site) and can be challenged by the operators or the consumers during regular public hearings. After due consideration to all points of view, the Regulator will return a Ruling that will have to be applied in

full and will become a precedent for all future similar cases unless the context and the original premises retained have changed. A ruling by the Regulator cannot be appealed in a court of law. The power of the Regulator is quasi judicial. However, should the Regulator over-step its mandate, as specified in the Regulatory Bylaw, then the Regulator can be sued in a Court of Law.

According to a recent study, the current electricity tariff system of Lebanon¹ needs to be reformed before privatisation to insure that the LRMC tariffs for the generation; transmission and distribution are set at the proper level. This, with the current non-technical losses, will result on average in a hefty increase. According to the report, if this is not done before privatisation, the privatised firms will request it afterwards. This means that the Regulator would have to deal in a short time with a complex tariff problem.

Other important points at the time of privatisation are the tariff system to be used by the Regulator for the natural monopoly aspects and the price control to be implemented by the Regulator for the wholesale market. Evidently, this is the critical point for receiving good proposals at the time of bidding. Clarity and consistency of the tariff system is what the bidders would like to know before committing their resources in the sub-sector. Three methods exist to fix the tariffs, namely:

- i) The accounting /rate of return system. This is what the capital market likes the most. However, on economic ground this is inefficient. Even in the US, the FERC, the originator of the system, prefers to receive tariff increase requests based on the LRMC.
- ii) The LRMC was the tariff system used in Western Europe for many years (after nationalisation) by the State Owned Monopolies. This system of fixing the tariff is academically elegant and on makes sense economically. However, how the Regulator can be sure that the "costs" used in the formula are correct. The State Owned Monopolies and the IPP had/have always more and better information than the Regulator on real costs and often managed/massaged the figures and recycled the economy of scale of the monopoly to their advantage.
- iii) From the beginning of privatisation in England, in the early 90's, it was recognised that an LRMC based tariff system plus incentive with price cap for the natural monopoly components of the sub-sector would be necessary to obtain efficiency in the sub-sector. The story about what eventually did happen is well documented. Lebanon would have the advantage of benefiting from the errors made by the precursors in privatisation. The Lebanese Power sub-sector Regulator would have to have a good set of power expansion programmes and a LRMC tariff studies implemented by independent consultants as references and using this information decide on the amount of incentive to give to utilities through the selected price cap system . What is important for the investors is to know the rules of the game in which they will be major players and who will be the referee. The system of incentive and price cap needs to be fair, consistent and transparent, consultations with the stakeholders could narrow the choices.

Security of supply:

In an open and competitive sector, even if the decision to invest in the power sub-sector is left to the private investors, the Ministry of Energy in consultation with the Regulator must insure at all times that the power supply will match the demand. To do so a long-term expansion programme needs to be carried out and regularly updated. An investor requesting a licence to build a power plant has to demonstrate to the Regulator that the project is not only technically feasible and able to compete in the wholesale market but also its in-service date fits well in the power expansion programme produced for the Regulator. It is the duty of the Regulator to inform potential investors of the risk resulting from the wrong timing of an investment. Notwithstanding the fact that in an open and competitive market the role of the government is limited to monitoring the evolution of the situation and letting the Regulator create a healthy, competitive market, in some cases the Government might be obliged to intervene. For instance, should the Regulator detect that the Generation companies are limiting their investments and creating entry barriers to the competition to force the

¹ The NERA report

wholesale price up, i.e. corner the market, then the government would have to make the decision to offer incentives to IPP or decide for a direct action by investing in the generation.

The structure of an Open and Competitive power sub-sector:

When implementing a policy of open and competitive market for liberalising the power sub-sector the Ministry and the Regulator must combine their efforts to restructure the sub-sector to make it transparent and insure a healthy competitive level.

The power sub-sector, to achieve a real and efficient level of competition, needs to be broken up in its fundamental functions to achieve clear separation of responsibilities, transparency and accountability. The restructuring of the sub-sector must preferably be achieved prior to privatisation. The lessons learned e.g. UK, indicate that privatisation of a state owned power utility monopoly, without a complete restructuring before privatisation, especially at the generation level, is an impediment to later obtain the right level of competition. Each function of the power sub-sector could be attributed to an operator (private or state-owned). To avoid future collusion, when privatising, the Government must insure that ownership of more than one function/operator should not be given to a single owner.

- **The transmission grid:** It is a quasi-natural monopoly, duplication of transmission lines, in most cases, will be non-economic. The company, which owns the transmission grid, is responsible for the efficient and secure transmission of power at the national or regional level. This company has the duty to transmit power from all the generators to the various distribution companies. The information for future expansion of the transmission grid is provided by the Independent System Operator (ISO). The Regulator determines the tariffs of the grid.
- **The Independent System Operator (ISO):** It is a natural monopoly; no duplication of this function is possible for technical reasons. It operates the grid to insure its security and the efficient transmission of power from the generators to the distributors. The ISO operates the dispatching centre, the SCADA and EMS. The ISO receives its information from the Independent Market Operator (IMO). The ISO balance the demand with the generation taking into account the list of the contracts submitted to him by the IMO. The Regulator decides the tariff for the services of the ISO. In countries with small transmission grids, the function of the grid and the ISO can be combined e.g. Sweden.
- **The generators:** Generating power is not a natural monopoly function. In fact the more Generators we have the better it is to achieve a good competition level. Through the Independent Market Operator (IMO) or directly through traders, the Generators sell their output to the highest bidder. For the security of the grid, the Generators must inform the ISO one day ahead of the availability of their generating plants and the cost of the reserve capacity (primary, secondary and tertiary). In case of emergency the Generators must obey instantly the instruction of the ISO. The commercial matters are solved the day after. The Regulator monitors continuously the situation (database) of the price level at the wholesale level and makes sure that the competition is fair, honest and dynamic.
- **The Independent Market Operator (IMO):** It is a quasi monopoly. It is responsible for the projection of the demand for the short, medium and long term. It takes note of all the contracts and informs the ISO of the projected demand for the day after. It receives from the distributors their estimate for peak capacity and energy and the current status of all contracts. Based on the curve of increasing price for the generation it balances generation with demand and sends the result to the ISO. The IMO is responsible for invoicing the distributor and paying the generator the day after, when all the facts are reconciled. All operators must have a guarantee and be endorsed by a Bank(s). The Regulator fixes the operation costs of the IMO. xxx
- **The distribution networks:** These are natural monopolies. Each region, province, department, county, etc. has a distribution network MV/LV. In general they are interconnected to the HT transmission grid at the low voltage side of the HV/MV transformer station. The power supply is purchased either directly from the Generators or from the IMO. One day before they must send their forecast to the IMO for the demand of the day after. In general, the payments for the delivered power are done within a week through the IMO or directly to the generator for direct long-term bilateral contracts. The costs of the grid (construction operation and maintenance) are fixed by the Regulator, the market fixes the cost of the energy.
- **The Independent Regulator:** The main goals of the Regulator are to protect the consumers against the abuses of monopoly power and the imperfections of the market. The Regulator controls the cost of all the natural monopolies and promotes a healthy competition to insure that the consumers get value for their

money. Furthermore by actively trying to obtain productivity gains by supplying stimulus to all the generators, it insures efficiency. The Regulator aims at keeping the cost as low as possible, yet insuring the financial viability of the operators.

The regulator upon request from a potential operator will review the competence, reputation and the financial soundness of the future operator, the Regulator will issue a licence, which lays down all the conditions, duties and responsibilities the operator has to meet. Licences are renewable each year after review by the Regulator of the performance of the licence holder. At that time amendments could be made. The suspension of a licence is the most drastic measure that a Regulator can exercise; generally fines for breach of the conditions of the licence suffice to correct a situation. The Regulator charges the licence holders a fee for the services of the Regulator in pro rata of the turnover of the companies or combinations of other levies.

Before issuing a licence, the Regulator holds public hearings, where everybody can review the draft licence and comments and suggest amendments. Any consumer can at any time register a complaint with the Regulator if the consumer believes it has suffered a prejudice from an operator. All complaints must receive an answer in writing from the Regulator. Through this office of Public Relations, the Regulator keeps in touch with the population in general and with the consumers in particular. A Regulator who has lost the confidence of the public/consumers becomes irrelevant and ineffective. The legitimacy of a Regulator depends on its credibility with the consumers and the operators; it is why the Public Relations office of the Regulator is of vital importance in establishing communications, information and transparency.

- **The Government:** The Government identifies and names the President of the Regulatory Board, generally for a term of 5 years. The Government is responsible for passing the Electricity Act, which creates and gives a legal status to the Regulator; The Government writes and adopts the Regulatory Authority By-Law, which describes in detail the mandate of the Regulatory Authority, its role, duties and responsibilities. This By-Law will also indicate the number of Commissioners on the Board and their remuneration. The Regulator is accountable to the people, either directly to a parliamentary commission or to the Parliament through the Ministry. The annual reports of the Regulator are made public with the Audit of the books.

The role of the Government in an open and competitive energy market is limited to establishing the policies and strategies for the energy sector and fixing the rules for all actors in the sector by issuing the Energy Law, the Electricity Act and the Regulatory Authority By-Law. The Government's important function is to decide the right taxation system to raise money, and also for giving incentives to implement its policies and strategies for the sector. Close coordination with the Regulator is necessary to insure that the taxation system does defeat the objective of the Regulator viz, the economic efficiency.

The Government has a duty to support the work of the Regulator in as much as this later respects its mandate. The Government and its agents have the duty to show an example to the consumers by being a model and exemplary consumer itself.

- **The consumers:** Any consumer willing to receive electricity and able to pay the cost of its consumption has the right to be connected to the grid and to receive a reliable service of an acceptable quality at the least cost possible. To protect the Rights and the interests of the consumers is the main goal of the Regulator. However, those Rights exist in as much as the consumer promptly pays the electricity bills. A delinquent consumer, which interferes with the security of the grid or does not pay it's the bills has no Rights and cannot expect any assistance from the Regulator.

Financing the operations of the Regulatory Authority:

To be independent from political influence and fully autonomous the Regulator must gain its financial resources from the people it protects, i.e. the consumers. However the Regulator must be accountable to the elected people.

To comply with the above, the Authority will prepare an annual operating budget that will include all of the Authority's expenses, including the salaries and benefits of its members and the employees working for the Authority. The Authority may charge a licence fee to each of the licensees based on a pro rata share of each licensee's financial turnover. Another approach is to levy a charge on each KWh generated with an administrative fee for the licences. The latter has the advantage of being an incentive for energy efficiency

since the levy is up front for generation. If the energy is wasted, the operators cannot recover the levy from the consumers. A few alternatives exist for funding the Regulator's services which vary from country to country. A consensus needs to be developed among the Lebanon's stakeholders on the most efficient way to fund the Regulator. What is important is to make available a level of funding sufficient to cover the budgeted expenses of the Authority for the year to come. The budget of the Authority must be transparent and the method of calculating the licence fees and other levies must be published for public review and scrutiny.

The structure of the Regulatory Authority:

No two regulatory Authorities have the same structure and organisation chart. For instance, in the USA the FERC has complete responsibility for all the sub-sectors of the energy sector. In England the power and gas were merged recently and this merging resulted in significant saving. In Norway (NVE) the power and the water are under one Regulator but not the oil & gas. In Sweden (STEM) the regulator looks after all the sub-sectors of the energy sector. As a result no typical structure can be used in all countries. Nonetheless, three typical structures exist they are namely:

- **The industry model:** Each sub-sector has a DG. Gas, oil, electricity, water.
- **The functional model:** Each function has a DG, i.e. transmission, generation, distribution;
- **The discipline model:** General Counsel, chief engineer, chief accountant, tariff office and Public Relations.

Discussions between the Ministry and the designated Board members will result in a consensus on what is best for the Lebanon. The main point to determine the choice of a structure from another is the availability of the qualified personnel. Some structures require more specialists than others. For instance, an energy financial analyst can cover three different sub-sectors, whereas the industry model requires three specialists.

Professional Capacity Building for the Regulator

Objective:

Assist in setting up an efficient Regulatory Authority, which can regulate an open and competitive energy market.

Goals:

- From the European Governmental Agencies/departments and the respective National Regulators, obtain the experience accumulated during the restructuring of the energy sector prior to privatisation, collect the lessons learned from European Governments and analyse their experiences. Prior to the implementation of their programmes of privatisation, advice will be given on restructuring their respective energy sectors and more specifically the power sub-sector. Obtain information on the constraints involved in installing an open and competitive market.
- Assist in organising the internal department of a Regulatory Authority well adapted to the Lebanese needs. European experts with hand on experience in managing regulatory authority will assist their Lebanese colleagues in setting up the Lebanese regulator.

Deliverables:

- A functioning Regulatory Authority with trained staff able to regulate efficiently an open and competitive energy sector.
- Study tours to inform the Lebanese delegation of the problems and the work to be done to achieve the reform of the energy sector; Document on the method of promoting competition in the energy sector; Guidelines on how to regulate the natural monopolies. ii) A second study tour resulting in a clear understanding of how the European Regulators are organised, the methods utilised to regulate and the tools required to accomplish their mandates;
- Seminars resulting in an increase in the knowledge of the Authority's staff in the composition and function of the main operators in an open and competitive power market and in the nature and scope of the regulatory function. ii) Seminar resulting in a better knowledge of all the chronological steps, which must be implemented before the privatisation of a monopoly. iii) Seminar resulting in awareness of experiences

of other countries, which have embarked on a liberalisation process of their energy sector, the focus will be on the lessons learned. iv) Seminar resulting in a comprehensive knowledge of all aspects of a competitive market for the gas sub-sector. Scholarships resulting in knowledge and capacity to take the lead in installing a functioning statistical department within the Regulator with online communication with the Ministry. v) Seminar on operational database for the energy sector in Lebanon with home page access for the public and online communication between the Ministry and the Regulator. vi) Resulting in an Interim Regulator obtaining a comprehensive knowledge on how to manage a regulatory system. vii) On obtaining an excellent knowledge of how to ensure the internal functioning of a regulatory system.

Activity 2.1 Seminar on the experience in restructuring a sector before privatisation.

Objectives:

Prior to privatisation of a state-owned vertically integrated power utility a restructuring of the sub-sector is needed to clearly separate the main functions and establish transparency. This first step will allow the private sector to see what is the real value of each function like the generators, the transmission and the distribution grids. Then a new structure is established to obtain a competitive sector. The new actors are the Regulator, the ISO the IMO. Once all these actors are operating adequately, privatisation may proceed since the bidders will know exactly what they are buying.

Work programme:

Identify the experts in the UK, Germany, Sweden etc., who have the most experience with all the operations necessary to restructure the power sub-sector and brief them on the need of Lebanon to be aware of the lessons learned elsewhere.

The seminar will be based on a thematic approach i.e. the necessary legal framework, the logical steps when proceeding in the restructuring of the sub-sector. Setting up the regulator, creating an IMO and an ISO, what were the problems and the solutions? What are the steps when privatising the main operators? Problems and solutions.

Deliverables:

One-day seminar with experts with experience in the problems related to the privatisation of the power sub-sector in selected European countries. Identification of the problems and their solutions.

Inputs:

- 1 long-term local expert. 1 man/month
- 4 short term international experts 1.5 man/months
- 1 long term international expert 0.5 man/months
- Local expert (lawyer) specialising in energy 1 man/month
- About 10 Lebanese decision makers attending the seminar.

Activity 2.2 Seminar on the dissemination of regulatory experience

Objectives:

Obtain from practitioners currently working for a Regulatory Authority or ex Regulators their advice on how the set up a Regulatory Authority and the most common problems they had to face during their mandate.

Work programme:

- Obtain an overview of experiences with privatisation in Europe and present the results of the same process in countries in the Middle East.
- Presentation of practical experiences in European countries and in the Middle East after privatisation has been implemented. What was the impact on the consumers in relation to price and quality of services? What impacts affected the personnel of the old monopolies?

- Changes in the areas of responsibility, in particular for the Governments after privatisation and introduction of an independent regulator? What will be the new role of the MEW in a competitive energy market? What has been the impact of IPP on the market?
- Results of the existing schemes in countries from the Middle East.
- Lessons learned and identification of barriers to be overcome. (Constraints, regulatory problems and government problems)

Deliverables:

A good appreciation of the problems a Regulator must face in his function.

Inputs:

- Preparation of the seminar by the TL 0.5 man/month
- 3 short term international experts. 1.5 man/months
- 1 long term local expert. 0.5 man/months
- One local short-term expert 1 man/month
- About 10 Lebanese decision makers.

Republic of Lebanon
 Office of the Minister of State for Administrative Reform
 Center for Public Sector Projects and Studies
 (C.P.S.P.S.)

Activity 2.3 The First Study Tour:

Objectives:

Give the opportunity to the Minister of Energy and Water and other leading personnel of the Ministry to study the implementation of the privatisation process in Europe and the work of the Regulatory Authorities in the energy sector.

Work programme:

- Select and contact a representative sample of European Governmental Agencies involved in the restructuring of the energy sector before introducing competition as per the European Energy charter and the EC Directives for the introduction of an open and competitive energy sector.
- Prepare the cursum for the meetings, list the priority subjects to be reviewed and organise the meetings. Prepare the travel timetable; make all the necessary arrangements for the Study Tour.
- Select the Lebanese members of the team to participate to the Study Tour and supply them in advance with the background information on the Agencies/Regulators to be visited and the list of the topic to be covered during the meetings.
- Organise meetings with the Regulatory Authorities or other related institutions in UK and Germany.

Deliverables:

A successful study tour to inform the Lebanese delegation of the problems and the work to be done to achieve the reform of the energy sector.

Inputs:

- The Team Leader will organise the Study Tour programme. 1 ½ man/months
- Local long-term expert 1 man/months
- Cost of air travel for 6 persons
- Cost for lodging and living allowance for 6 persons
- Cost of land transportation and sundries.

Activity 2.4 Preparation of Guidelines on the regulation of the natural monopolies and modalities in setting up an open and competitive power market

Objective:

Transfer to the Authority a set of normative documents to assist in the setting of tariffs for the natural monopolies.

Work programme:

- Prepare guidelines for the Regulatory Authority on how to regulate the natural monopoly in the power, oil and gas sub-sectors. The guidelines will include recommendations on how to promote an open and competitive market.
- Prepare a set of documents and guidelines on how to organise and gradually proceed with a restructuring of the energy sector and how to implement the Government policy of having an efficiently competitive energy sector open to investors. Advise the Ministry and the Authority on the strategy to be adopted to cope with the specific particularities of Lebanon in relation to restructuring the sector and feasibility of privatisation. In relation to the natural monopolies regulation, prepare a set of the most appropriate methods currently used in Western Europe and prepare a set of guidelines.
- Prepare a set of documents explaining the different methods to set the tariffs for the transmission and distribution lines and the services of the IMO and ISO.

Deliverables:

A document on the method of promoting competition in the energy sector. Guidelines on how to regulate the natural monopolies.

Inputs:

A senior international expert will establish the best practice currently used by the European Regulators to:

- 1 long-term local expert: 1 man/month
- Regulate the natural monopolies in the power, oil and gas sub-sectors 3 man/months
- How to promote competition and monitor its level: 2 man/months
- Long-term international expert 1.5 man/months
- Printing the reports/guidelines.

Activity 2.5 Organisation of an Office of Public Relations inside the Regulatory Authority

Objective:

Keep the public informed of the realisations and the mandate, objective and goals of the Regulatory Authority. Inform the public on a continual basis of the work done by the Regulator and on its future activities.

Mandate and work programme:

The Regulator as the protector of the consumers must at all times inform the public/consumers as well as the operators in the sector of the work done by the Regulator to comply with its mandate. The public, directly or through the media, needs to be informed and to be aware of all the efforts of the Regulator to protect the interests of the consumers and treat fairly the operators in the sector. The public relations office will establish regular communications with the media and keep them informed of all-important ad hoc decisions made by the Regulator and explain the rationale for the decisions. The manager of the public relations office will organise and publicise the forthcoming public-hearings and publish their results with all necessary explanations. The public relations department will, on a continual basis, receive and answer all questions the public may have. Furthermore, the Regulator will set up a web site to keep everybody aware of what it is doing in analytical works, the methodology used to regulate the natural monopolies, the dates and venues for the future public hearings, the case submitted for the opinion or rulings/judgment from the Regulator. Access to the web site will be available to the public and will be regularly updated. The manager of the Office of Public Relations is

always available to the press, radio and TV and maintains close contact with the elected representatives to keep them well informed of the work of the Regulator.

Work programme:

- Collecting data and set-up of a consumers' profile database, regularly updated.
- Organizing press conferences, seminars, workshops and events relevant to the Regulator's functions.
- Identifying counterparts and contact the professional organisations, the government administrations, partners and stakeholders in the energy and water sectors. Setting up regular line of contact with concerned public relations counterparts (i.e. MEW, HCP, EDL and Parliamentary Energy Committee).
- Preparing and presenting the information related to the energy sector in user-friendly kits (i.e. consumer rights, laws, rules and regulations, tariffs and costs).
- Creating and encouraging direct and transparent links with all media by facilitating access to information concerning the Regulator work programme and the evolution of the situation in the energy sector (i.e. regular briefings, press releases, access to database).
- Creation of a web site (internet and intranet), regularly updated.
- Setting up a unit in charge of receiving, channelling and following up consumer complaints.
- Setting up an information front desk aiming at providing the consumers with simple and fast access to information related to the energy sector (i.e. rights, tariffs, costs, complaints' formats) in user-friendly toolkits.
- Collecting and analysing local publications for matters related to the energy sector in order to keep the Regulator updated on the state of mind of the population on the performance of the energy sector and the results achieved by the Regulator.
- Assisting the Regulator in defining the annual strategy and setting up a work plan.

Deliverables

- From the central database establish a consumers' profile database per category of consumer.
- Organise press conferences, seminars and workshops as necessary.
- Contact public relations counterparts in each institution, operators and actors in the energy and water sectors.
- Prepare information toolkits to inform the consumers/public of the methodology used by the Regulator.
- Create strong links with the media and the public at large.
- Create a web site (internet and intranet) and update it regularly.
- Consumers' complaints desk to channel consumer complaints and supply an answer within 24 hours.
- Consumer information desk to supply all the information requested by the consumers.
- Review and analysis of the local press and other media to establish the image profile of the Regulator.
- Prepare a yearly annual strategy and work plan to be revised regularly to take into account the changes in the sector.

A well performing Public Relations Office well equipped to accomplish its mandate.

Inputs

- An international short-term expert in public relations. 2 man/months
- A long-term local expert with sufficient expertise in the public relations discipline to have the potential to become the Head of the Office of Public Relations. 25 man/months
- Team Leader 0.5 man/month
- Equipment audio/video, printing capability, multimedia equipment, projectors etc.

Activity 2.6 Seminar to train the Regulator staff

Objectives:

Explain to the staff the rationale for a restructuring of the power sub-sector before starting the privatisation process and an introduction of competition. The role of each actor in a competitive market.

Work programme:

- Set the Objective and goals of the regulator
- Identify the basics prerequisite for successful privatisation; energy law; electricity act; by-law for the Regulator; utility/sector restructuring to favour competition; grid code; etc.
- Specify the nature, scope and hierarchy of draft legal documents to enforce power electricity market principles.
- Establish the structures, roles, rights, duties and responsibilities of the operators involved in the power market; IMO; ISO; Gencos; Disco; Grid and Traders
- Models for different type of markets, structures, contracts, trading arrangements plan for resolving shortcomings in competition.
- Tariff models for the natural monopolies in transmission, distribution and for the ISO; recommendations for the power transit tariff methodology and the nodal system.
- Ways and means of unbundling the main functions of the energy sector

Deliverables:

Increasing the knowledge of staff of the Authority about the composition, function, of the main operators in an open and competitive power market and of the nature and scope of the regulatory function.

Inputs:

- Participation of the Regulatory Authority staff plus invited staff from the MEW and EDL
- Local long term expert: 1 man/month
- One international expert 1 ½ man/months
- Team Leader 1 man/month

Activity 2.7 Seminar for training of the staff of the MEW and Regulator in the privatisation process and requirements

Objectives:

Present an overview of all the tools and methods used in the privatisation process.

Work programme:

- Introduce the staff of the Regulatory Authority to the principles of regulation in the energy sector.
- Explain the privatisation process from a state-owned monopoly to a privately owned company in a competitive environment.
- Necessity of unbundling to achieve transparency (separate bookkeeping, separate management, separate operations) of the vertically integrated and state-owned monopolies on a functional basis for generation, transmission and distribution.
- Creation of a competitive environment in generation by grouping power plants into viable entities.
- The role of investment bankers to facilitate privatisation.
- Preparation of dossiers (financial audit and legal due diligence) for each company to be privatised before their corporatisation.
- Preparation of pro forma balance sheet under various scenarios.
- Preparation of dossiers/prospectuses for investors (International laws on commercial disclosure of information and financial data before issuing shares)
- Forecasting of cash flow, expenditures, operational expenses, projected gross revenues and net revenues before tax and depreciation. Projection of the benefits under the existing or projected regulatory system.
- Company's valuation and expected revenues from their sale of shares. Purpose of the golden share.

Deliverables:

Better knowledge of all the chronological steps which need to be implemented before the privatisation of a monopoly

Inputs:

- Participation of selected staff from the Authority, MEW, EDL, CDR, HCP
- An international Investment banker expert in privatisation ½ man/month
- An international legal expert in due diligence and corporatisation ½ man/month
- An international Regulatory expert who has monitored the unbundling process of an integrated power monopoly (lessons learned) ½ man/month
- An international expert from a State Agency who has managed the full privatisation process of a state-owned monopoly ½ man/month
- Participation of the Team Leader 1 man/month
- Local long-term experts 2 man/months

Activity 2.8 Seminar on the regulation of an open and competitive power market**Objectives:**

Give a comprehensive overview of the different methods to regulate the natural monopolies and how to do it.

Work programme:

- Prepare key personnel involved in the power sub-sector transition from a monopoly to a regulated open and competitive power market.
- Set the Objective and goal of regulations, different models of regulation, suitability of a model for Lebanon. The main responsibilities of the Regulator.
- Prepare the licensing of each operator in the sector. Purpose of the license and its content
- Determine the cost of regulation and ways and means to finance it.
- Establish the transparency of the system and the accountability of the regulator.
- Settle the question of the current concession contracts in Lebanon.
- How introduce and promote competition (IPP etc.)
- How protect the consumers? Function of the Public hearing.
- Regulation of natural monopolies. How to set the tariff for natural monopolies.
- How the Regulator ensures an optimal balance between supply and demand. The California case.
- Clarify the role of the Regulator in the protection of the environment and suppress barriers to entry.

Inputs:

- Personnel of the Regulatory Authority, staff from the MEW, EDL, CDR, HCP
- A foreign expert in the management of a regulatory system 1 man/month
- The project Team Leader 1 man/month
- Two local long-term experts 2 man/months

Activity 2.9 Seminar on gas market restructuring**Objectives:**

Give an overview to the staff of the MEW and of the Regulator of restructuring the gas sub-sector prior to privatisation.

Work programme:

- Explain to the Lebanese authorities the process of setting up a competitive gas sub-sector.
- Explain the process of gas market liberalisation in the EU. The basic element of gas economics.
- Organise different models for different market contracts and trade arrangements, key issues and consequences of the liberalisation of the gas market.
- Review of the legal and institutional framework and evaluation of critical issues especially on the EU directive for single gas markets.
- Identify the requirements for change to legislation and responsibilities of participants, effect of regulatory intervention, privatisation, utility restructuring, and amendments to legal framework.

- Chose a design of tariff models for grid services for T&D natural gas in term of price and environmental effects.
- Overall fuel market and existing legislation on the gas market, pricing and tariffs.
- Develop a price and a tariff system.
- Promote a competitive market for gas distribution.
- Regulate of a natural monopoly.
- Decide on a tariff setting for gas pipelines and distribution of gas.

Deliverables:

A comprehensive knowledge of all aspects of a competitive market for the gas sub-sector.

Inputs:

- The Lebanese Regulatory Authority. Representatives of the MEW, EDL, HCP and companies currently operating in the gas (bottled) distribution sub-sector.
- An international expert with a broad knowledge of the German gas market ½ man/month
- An international expert from Ofgem to explain the regulatory aspects ½ man/month
- An international WE operator in the gas sub-sector to explain the investor point of view. ½ man/month
- The two local long-term experts: 2 man/months
- The Team Leader 0.5 man/month
- Return Air travel for 3 experts from Europe
- Living allowance for 6 days

Activity 2.10 Second Study Tour: How the Regulator works

Objectives:

The first study tour was focused on the restructuring and the privatisation process. The purpose of the second will be to find out how the Regulators work.

Work programme:

After the local staffs of the Authority have understood the liberalisation process and the role of each actor in the process in broad terms, a more narrowly focused approach will be needed to find out how the Regulator proceeds to implement its mandate. Meetings will be organised with the Regulators of selected countries to analyse their ways and means of regulating the energy sector. The important elements are: methodology used, tools utilised, structure of the Regulator and functions attributed to each department. Furthermore, public hearings, financing of the regulation, licence fees, levies, etc. will be examined. The countries to be visited are; England, Norway, Finland and Germany. Organisation of meetings and discussions with the following topics:

- Dispatch control centre/SCADA (ISO England) (IMO England and Norway).
- Power exchange market (Germany, England and Norway).
- The HV Grid regulation and regulation for distribution.
- Monitoring of the traders
- Public hearings.

Deliverables:

A clear understanding of how the European Regulators are organised, the methods utilised to regulate and the tools required to accomplish their mandates.

Inputs:

- Three persons from the Interim Regulatory Authority and two from the Ministry plus project TL (total 6 persons)
- Participation of the International regulators and operators: 1 man/month
- Air travel for 7 persons
- Land travel for 7 persons
- Living allowance for 7 persons

- Team Leader 1 man/month
- Local long-term expert 1 man/month

Activity 2.11 Scholarship in Europe: Focus on statistics gathering and treatment

Objectives:

Provide one staff member of the Regulator with the opportunity to gain experience in the treatment of statistics.

Work Programme:

- Setting up a statistic unit within the Regulator to gather and retrieve data and establish a yearbook on energy sector statistics.
- Study the Eurostat system, the method of collection data and the possible application to the needs of the Ministry and the Regulator
- Procedures of data treatment, storage and retrieval. Protocol for access and security.
- Assess the possibility of using part of or adapting the Eurostat software to the needs of the Ministry and the Regulator (EFLOW system).
- How to establish a yearbook on sectorial statistics.

Deliverables:

A knowledge and capacity to take the leadership in installing a functioning statistical department inside the Regulator with online communication with the Ministry.

Inputs:

- A selected Lebanese professional with a high educational level in mathematics, statistics and mathematical modelling 4 man/months
- Team Leader 1 man/month
- Agreement by Eurostat (Brussels) to accept the Lebanese trainee for a four-month period. Cost?
- Portable computer and software. Costs: € 2500

Activity 2.12 Scholarship in Europe: Setting up an energy sector database

Objectives:

Training of staff of the Regulator in the management of an energy sector database

Work programme:

During 6 months in the head office of the IEA in Paris, the trainee will study:

- IEA method to obtain information, data storage and retrieval. Logic and application in the Lebanese system.
- Procedures for data collection.
- Distribution and future use of software (EFLOW system).
- Methodology for the energy forecast.
- Modelling of supply and demand forecasts
- Modelling EPOS (use of the EPOS model and logical link Eurostat (EFLOW) and (EPOS))

Deliverable:

An operational database for the energy sector in Lebanon with a web site access for the public and online communication between the Ministry and the Regulator.

Inputs:

- One Lebanese professional with higher education in mathematics, statistics, mathematical modelling and computer science. 4 man/months

- Team Leader ½ man/month
- Acceptance by the IEA, International Energy Agency, to train the Lebanese trainee. Cost?
- Air Travel to Paris and living allowance for 4 months
- Portable computer and software € 2500

Activity 2.13 Scholarship in Europe: Training the provisional Regulator in the management of a regulatory system

Objectives:

Train the provisional Regulatory Authority in the management of a Regulatory Authority

Mandate:

The provisional Regulatory Authority will reside during 2 or 3 months inside a Regulatory Authority in Europe to observe the operation and the management of a regulatory system in the energy sector at CEO level.

Deliverables:

Having the provisional Regulator obtaining a hand down knowledge on how to manage a regulatory system.

Inputs:

- Team Leader ½ man/month
- The provisional Regulator staying in Ofgem for 2 man/months
- Ofgem accepting to trainee the Lebanese provisional Regulator
- Air travel to Birmingham and living allowance for 2 months

Activity 2.14 Scholarship in Europe to obtain a comprehensive knowledge of how to organise the internal functioning of a regulatory system

Objectives:

Give the opportunity to a senior staff of the Regulatory Authority to obtain a knowledge how the internal functioning of a European Regulatory Authority.

Mandate:

- Obtain a working knowledge of the systems used by a regulator to carry out its mandate.
- How to gather, store and retrieve data/information coming from the ISO, IMO, the Grid, the traders and the distributors in order to develop a coherent regulation system.
- Ways and means of monitoring and controlling all the operators in the sector.
- How to prepare and define the content of a Regulator annual report.
- How to organise and manage public hearings.
- How to produce and renew the licences for all the operators.
- How to supervise and monitor the operator in the power and gas sub-sector (ISO, IMO, the grid, the distribution, the trader).
- Ways and means of monitoring the market efficiency.

Deliverables:

Having a senior staff of the Lebanese Regulatory Authority trained in the internal organisation and management of a European Regulatory Authority

Inputs:

- One local expert 2 man/months
- Team Leader ½ man/month

Activity 2.15 The Energy sector database

Objective and goals of the activity:

We understand that the current policy of the Lebanese Government is to establish a competitive market for the energy sector with a view to achieve economic efficiency, i.e. the **Objective**. Three sub-sectors, namely the electricity, the oil, and the gas sub-sectors have some natural monopoly features, which preclude efficient competition, like for instance, the wire aspect of the transmission grid and the system operator for the power sub-sector and for the gas sub-sector the pipeline. These natural monopoly features need to be regulated. Regulation without pertinent data and information is not effective, it is the purpose of the Database Operator to collect, process, store and retrieve on demand, all data needed for an efficient regulation, i.e. the **Goals**.

Organisation of the activity:

The Project Team Leader assisted by two foreign experts (software & hardware) and one local expert, i.e. (the Task Force) will be responsible to propose to the MEW and the Regulatory Authority, an integrated database system structure to suit the needs and purposes of both institutions. In the MEW, the principal interlocutor of the Team Leader will be the Ministry Coordinator. The following suggestions for the mandate of the experts are preliminary and not exhaustive, we expect from the two foreign experts comments, suggestions and full support to ensure a successful completion of the first phase. For liaison purposes and to gather information from the MEW and pass it on to the Task Force, the Project Team Leader will retain the services (on demand) of a local expert with a good knowledge of the MEW working procedures. The local expert(s) will be contracted by the Consultant and will report to the Project Team Leader.

Activity N° 2.14 will be divided into three distinct phases to ensure that the MEW and the project monitor can follow the progress of the activity and have the opportunity to inflect, modify or correct the work process step by step, until it is completed to the satisfaction of the MEW and the Authority.

Mandate:

Phase I. Assistance in the development of the structure and the architecture of the database needed by the MEW and the Authority

- Identification of the needs of the MEW and of the Authority for technical, financial, economic and operational information and data of the main actors in the power sub-sector.
- Identification of the sources/originators of the information and the exact nature and scope of the data needed.
- Identification of the users of the information and for which purpose.
- Decide on the level of confidentiality needed to protect commercially sensitive information, which could if made available to all actors, limit the level of competition.
- Assess the legal interfaces and constraints between the MEW, the Authority and the main actors in the power sub-sector.
- Propose a logical structure (hierarchical and/or relational) for the database, taking into account the current and future needs of the MEW and the Authority and the sources/originators of information.
- Submit a general architecture for the database showing in block diagrams the sources and destination of the information and the way it will flow (both ways), its treatment, processing, storage and retrieval. A preliminary itemised budget will be presented.

Within 6 weeks from the beginning of the activity (after the approval of the EC Delegation) the foreign experts will submit to the Project Team Leader a draft report, containing, without being exhaustive:

- i) The nature of the information and data needed by the MEW and the Authority to carry out their functions of Regulator and policy & strategy formulation for the energy sector.

- ii) The current availability of the required information and an opinion on the reliability of this information. Suggest ways and means to improve the current data collection system.
- iii) Determine with the MEW and the Authority the information needed (technical, operational, economic and financial), the sources of the data and the way to present the information. This activity will take into account the short, medium and long terms needs of the MEW and the Authority.
- iv) Present a list of suggestions to improve the current data gathering system of the MEW. Propose for the short and medium terms a list of actions to be undertaken to access and obtain the data/information required to give the MEW and the Authority the capability to regulate the energy sector and formulate sound policies and well-focused strategies.

Inputs:

- One International Expert 1 ½ man/months
- One short-term local Expert 3 man/months
- One LT Local expert 3 man/months
- Team Leader 1 man/month

Phase II. Assistance in the design of the database

When the structure and the architecture of the proposed database have been approved by the MEW and the EC Delegation then the detailed design of the database system will be initiated. The main purpose of this second phase is to produce a detailed technical and operational specification to allow the Consultant to call for competitive tenders for the supply of the hardware and software and their installation at the selected sites. This specification will include detailed requirements for the supply and installation of the necessary equipment for telecommunications for the secure and reliable transfer of data. The training of the personnel necessary for the efficient operation of the system will be specified. During the second phase the operating system will be selected and the application programs necessary for each function will be selected and if necessary modified to suit the required function specific to the needs of the MEW and the Authority. Particular attention will be given to ensure that the open system will allow all the necessary flexibility for updating, future expansion and capability to accept new software.

A suitable operating system well-adapted to the needs of the database management will be selected. Among many functions the operating system will ensure:

- i) Operation reliability and stability.
- ii) Information security.
- iii) Scalability.
- iv) Manageability and maintainability.
- v) Inter-operability and adaptability.
- vi) State of software development and updating flexibility and capability.

Then the choice of the software application programs will be made, taking into account the requirements of the MEW and the Authority and other governmental institutions authorised to access the database information (password).

Assess the nature, scope and frequency of the information flow required from the operators to the MEW and the Authority and vice versa. Some of the information obtained could be of a sensitive commercial nature and will be restricted to only authorised personnel; this will be clearly identified. Develop a system of access to the information which ensures confidentiality through a security code to be developed to restrict access to the information to authorised persons only.

Currently the main actors in the power sub-sector are EDL and some distribution concessions. Nonetheless, when the government begins to implement its policy of establishing a competitive market it is possible that the number of actors will increase significantly, like for instance, the IPPs, the IMO, the ISO, the transmission grid, the distribution grids and various power suppliers etc. It is possible that the consumers will, as individuals or groups, require access to information and data to support their rights. Furthermore, when the future Anti-Monopoly Commission will need information and data to build up a case against monopolistic

behaviour or market dominance by any actor in the sector, easy access to information and data stored in the database should be available to this Institution.

Then the choice of the software application programs will be made taking into account the requirements of the MEW and the Authority and other institutions having authorised access to the database.

- i) Data gathering, processing, and retrieval as per the needs of the users.
- ii) Easy access to the data by the MEW and the Authority to carry out their functions.
- iii) Minimise the interfaces with the external users.
- iv) Remote support to all departments of the MEW and the Authority like, software installation and reload and updating, administration and configuration of the system and application programs, back-up data replication, equipment and communication channels control, technical and consulting support and monitoring of staff actions.
- v) Remote network configuration, administration and monitoring of the regional hardware.
- vi) Provide information security, access right control, and system illegal access prevention.
- vii) System resources accounting, control of internal and external users/subscriber directories.
- viii) Events logging.

Inputs:

- One International short-term expert (system Engineer) 3 man/months
- One International short-term expert (Hardware specialist) 2.5 man/months
- One local IT expert 4 man/months
- Local long-term local expert 2 man/months
- Long-term international experts 2 man/months

Phase III. Supply and installation of the hardware and software, project implementation and training programme

(This phase will have to wait for the approval of the EC Delegations. Currently, the project does not have the funds to proceed with either Phase I & II and even less the Phase III considering the cost for the purchasing of the equipment and software required to make the database operational).

Should the budget be available, the company selected after competitive bidding, will install the data processing hardware and the telecommunication equipment. Then the software (operational and application programs) will be installed as per the operational specification produced during Phase II. The contractor will train inside the MEW and the Authority the personnel responsible for the operation of the system.

When approved by the EC Delegation, after competitive bidding, the Contractor selected for the physical implementation of the complete system will, in compliance with the EC procurement regulations, purchase the hardware, software, data processing and telecommunication equipment and install them as per the technical and operational specifications. A reasonable period of time will be necessary to get all the parts of the system running satisfactorily and reach an adequate level of smooth transfer of information and data between the MEW and the Authority headquarters and all the other actors. During this period, experts in IT and database operation will assist and train the MEW and the Authority's future operators of the system.

Deliverables:

When the operating system and the application programs have been selected to meet the needs of the users, the design of the information processing and management centre will be developed. This task will take into account the interfaces with all the actors in the sub-sector; its main functions will consist of:

- **Choice of the computer platform and data processing equipment.**

Reliability, operational stability, easy maintenance and upgrading will be the main characteristics of the hardware platform. The task force experts will, taking into account the needs of the MEW/Authority and other users of the system, select the equipment, which will offer the best ratio of value for money. Furthermore, the hardware will:

- i) Support multiprocessor systems with scalability.
- ii) Ensure multitasking and multithreading.
- iii) Support multi-user applications.
- iv) Support distributed network computing and Internet protocol (IP) as a system basic network protocol.
- v) Support cluster systems as needed.
- vi) Support RAID (redundant array of independent disks) operations.
- vii) Ensure operation in heterogeneous medium in accordance with OSI (open system interconnection) standards.
- viii) Support the main operating system currently fully developed and well accepted by the IT industry.

- **Selection of the communication and channelling equipment requirements.**

The communication and channelling equipment will establish the connections between LAN (local area networks) inside the MEW and the Authority and the entities/operators supplying information and data and the subscribers. This will require a significant number of channels of different nature, transmission speed and protocols. Furthermore, it is important to ensure hardware compatibility for the following types of channels:

- i) Fibre optic communication channels.
- ii) Dedicated digital and analogue telecommunication channels with appropriate transmission speed KB/sec.
- iii) Switched voice channels with adequate transmission speed.

- **Choice of the IP providers (Internet protocol)**

The communication infrastructure will use the existing network of the information service providers. Nonetheless, some consideration will be given to future upgrading when more advanced communication technology is available in the future.

When the precise needs of the MEW and the Authority, data suppliers and subscribers have been identified, the task force experts will assess the current availability and performance of the network information service providers with Lebanese coverage. Alternatively, after a cost/benefit analysis is done the advantages of direct communication through the existing telecommunication network of Lebanon will be ascertained. The least cost alternative, which meets the required transmission capacity and reliability needed, will be selected.

It is important that the system design proposed must incorporate all facilities for future upgrading and adding more functions when the need arises, taking into account the major changes to be implemented in the near future in the Lebanese power sub-sector. During the second phase the experts of the task force will present their suggestions and develop a consensus with the interlocutors from the MEW and the Authority and discuss adjustments, modifications and assess the budget for the implementation of the system.

- **Training programme**

When an accord has been reached between the expert and the MEW, the modalities for the implementation of the system will be prepared. The ToR, i.e. technical specifications for the software, hardware and the communication equipment will be prepared. The ToR will include a detailed training programme for the operators of the system, inside the MEW and the Authority

Assistance in the organisation of the Regulatory system
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Objective:

Assist the MEW to put in place a Regulatory Authority.

No two countries have the same structure for their energy sector Regulator. Following the study tour and the seminars on the restructuring of the power sub-sector and on the functions of the Regulator, an organisational chart specific to the needs of the Lebanon will be prepared. Experience obtained during the first study tour should be very useful to determine an organisational chart. Based on the experience of the other countries and taking into consideration the current government policy and strategy for the energy sector, the structure of the Regulatory Authority and its organisational chart reflecting the functions of the Regulator will be developed. This organisational chart will be supported by a list of the posts to be filled with a profile of the qualifications of the individuals needed for each post. Assistance from experienced European practitioners will help the Lebanese counterpart to set up their departments.

Goals:

- **Setting up a Provisional Regulatory Authority:** Even before the approval of the Energy Law by the Government, the Electricity Act and in particular the Regulator by-law, the Consultant will proceed to set up the office of the Regulatory Authority and install the systems and equipment needed for the operation of the Authority.
- **Assessment of the operational costs of the Regulatory System and budget suggestion:** Taking into account the experience of the other Regulatory systems and the benchmarking made by the EC a reasonable budget for the Lebanese Energy Regulatory Authority will be determined. It is assumed that the Lebanese Regulator will regulate the complete sector, namely power, oil and gas sub-sectors. If necessary, the Regulator could later add the function of water regulator. A review of the level of staffing necessary and through consultations determines the level of remuneration, which the private market pays for the services of the required professionals.

Assistance for the staffing of the Regulatory Authority. Taking the into account: the organisational chart; List of personnel required with the necessary professional profile; A pro-forma budget for the first year of operation of the Regulatory system; Detailed assessment of the initial costs for setting up the office of the Regulator; Organisational chart with the number of staff for each department; List of candidate profiles for each position needed for the Regulatory Authority; Comprehensive programme of training for the professional staff to be developed after the organisational chart is approved for implementation; Office with the systems, the equipment and the software needed for the smooth operation of the Authority; Assistance in the recruitment of personnel and their initial training; Advice to the Interim Regulator on the management of a Regulatory Authority; Well performing Public Relations Office adequately equipped for its task.

Activity 2.16 Assistance in setting up the DG of Legal Affairs

Assistance to the DG of Legal Affairs for:

- **Setting up a licensing department:** Within the Authority establish a department of licensing with the function of:
 - Preparing a coherent system of licensing
 - Issuing booklet/guidelines to assist the parties asking for a licence to become an operator in the sector
 - Setting up a system for the annual renewal of licences
 - Setting up a system for the monitoring of compliance to the terms of the licences
- **Organising a department of Arbitration & Complaints**
- **Setting up the Public Relations Office**

Inputs:

- Long-term international expert 2.5 man/months
- Short-term local expert 1 man/month
- Long-term local expert 1.5 man/months
- Team Leader 1 man/month

Activity 2.17 Assistance in setting up the DG of Safety & Engineering Department

Assistance to the DG of the Safety and Engineering Department for organising the department of:

- Power sub-sector technical and operational norms
- Quality of services and safety standards
- Environmental affairs

Inputs:

- Long-term international expert 2.5 man/months
- Short-term local expert 1 man/month
- Long-term local expert 1.5 man/months
- Team Leader 1 man/month

Activity 2.18 Assistance in setting up the DG of Economic & Financial Affairs

Assistance to the DG of the Department of Economic and Financial Affairs to:

- **Propose a system of economic regulation based on the best practice available:** Analyse the current practices in the European Regulatory Systems for economic regulation especially in relation to natural monopolies and select the one most adapted or adaptable to the Lebanese context.
- **Organise a system for monitoring and enforcement of the licensee:** All licences have strict conditions laid down in their licence in respect of quality of services, security, performance and respect of environmental rules. Regular reporting is one of the conditions in the licence. Nonetheless, routine monitoring is needed and in case of complaints the Regulator must carry out investigations and make reports. In case of violation of the conditions of the licence a fine will be imposed. The system of fines must be published and be accessible to everyone. The ultimate penalty for repeated violations and refusal to comply with the ruling of the Regulator is the suspension of the licence and the nomination of temporary management by the Regulator.
- **Organise a clear methodology for the setting of tariffs for the natural monopolies:** Anyone interested must have access to the method utilised by the Regulator to decide on the structure and the level of tariffs applied to the natural monopoly. This tariff methodology must be clear and transparent. Consistency in applying the method and in the ruling is a requirement for operators, new investors and consumers. Any change in the method of setting the tariff should be preceded by public hearings. Any decisions on tariffs must be published with adequate explanations.
- **Prepare in cooperation with the MEW a power expansion programme and tariffs setting guidelines.**
- **Monitoring the performance of the Operators.**

Inputs:

- Long-term international expert 2.5 man/months
- Short-term local expert 1 man/month
- Long-term local expert 1.5 man/month
- Team Leader 1 man/month

Activity 2.19 Assistance in setting up the DG of Administrative Affairs

Assisting the DG of the Administrative Affairs to set up:

- Set up a personnel management department
- Organising the accounting department and the financial controller
- A library & archives department
- An information and communication department (IT)

Inputs:

- Long-term international expert: 3 man/months
- Local expert: 1 man/month

Activity 2.20 Initial support to the operations of the Regulator

Objective:

Give the Regulator a full set of tools and rules on how to manage the regulatory system. This means that the Consortium provides assistance in the daily operations of the Regulator.

The aim is to establish, in relation to the conclusion of the organisation phase (relating to the operators, the criteria for assessment and the indicators permitting market monitoring), the rules of operation for the power sub-sector. The rights and obligations of each of the operators are defined, as well as the nature of the relations between these entities.

Work programme:

We assume there is sufficient and reliable data available to the Regulator, since without a continuous flow of information to the Regulator, the Regulator cannot fulfil its work. The activity includes the following support responsibilities to assist the regulator:

- **Drafting of regulations.** The Consultant will draft documents comprising rules related to the quality of service and its reliability of supply to different customer groups. Specification of the requirements for customers' electricity equipment in relation to safety and reliability. Establish a system for solving claims, disputes and others to be defined during the course of the project. **(3 man/months)**
- **Support to the operators for the supply of data.** First specify the current role of the operators in the new sub-sector organisation in the field of data collection. Data to be published regularly by the operators shall give information concerning the current state of the grid and report any interruption of services. For the generators, monthly generation figures, the type of generation, thermal or hydroelectric, the source of generation (including import), the estimated cost of generation at each power plant. Consumption for each class of customers (household, industry, etc.). Such data, currently collected by the operator, should be given to the new Regulator. The future status of the entities collecting this data will have to be examined during the course of the project. The Consortium will develop a format and the rules for reporting by the operators to the Regulator on a daily basis. **(4 man/months)**
- **Definition of performance data for the sector.** Identification of additional data (technical or commercial), which should be monitored in a competitive environment. It is necessary to put more defined indicators in place, which enable the monitoring of consumption figures according to the type of customer (load curves, load profiling). The Consultant will determine indicators, which will enable the Regulator to ensure that the competitive market for electricity works satisfactorily and that the accompanying regulations are complied with. This work will be done closely with the benchmarking indicators. Supply interruptions, in particular, must be registered. The project will develop criteria for the performance evaluation, including indicators. **(3 man/months)**
 - **Consumer complaints procedures:** The project will develop and implement a procedure to register and handle all consumer complaints. The project will develop consistent procedures for consumer complaints. The project will establish rules for claims, for investigations and for levying fines. The decisions of the Regulator are definitive and binding for both parties. **(3 man/months)**
 - **Assistance in the running of the Public relations department.** **(2 man/months)**
 - **Assistance in organising and conducting public hearings** **(1 man/month)**
 - **Assistance in producing an annual report** **(1 man/month)**
 - **Assistance in producing rulings** **(1 man/month)**

Deliverables:

A Regulatory Authority operational and adequately managed.

Inputs:

- International experts: 14 man/months
- Short-term local Experts: 8.5 man/months
- Long-term local expert 2 man/months
- Long-term international experts 3.5 man/months

Activity 2.21 General legal assistance for the Regulator

Objective:

As soon as the Regulatory Authority starts its operations, various legal opinions will be required concerning documents to be issued. Furthermore, the Regulator will occasionally need an opinion on some point of law.

Work programme:

Internal legal workload for the Regulator, like preparing decrees, ruling, opinions, licences etc.
Assisting the Regulator on demand for the public hearing.

Deliverables:

All documents to be issued by the Regulator which must conform legally to the Lebanese Law.

Inputs:

- Services of a local legal firm to supply legal services on demand 4½ man/months.
- Long-term local expert 2 man/months

Republic of Lebanon
Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
(C.P.S.P.S.)

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