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Agenda item 6

REVIEW OF THE PROGRAMME BUDGET 1984-1985
ON SECTOR BY SECTOR BASIS

Programme: Energy

83_0199



PROGRAMME STAFFING TABLE
(PROFESSIONAL AND GENERAL SERVICE POST REQUIREMENTS)

Organizational unit: ECONOMIC COMMISSION FOR WESTERN ASIA

Programme : ENERGY

	<u>Regular budget</u>		<u>Extrabudgetary sources</u>		<u>Total</u>	
	<u>1982-83</u>	<u>1984-85</u>	<u>1982-83</u>	<u>1984-85</u>	<u>1982-83</u>	<u>1984-85</u>
<u>Professional category</u>						
USG						
ASG						
D-2						
D-1	-	1				1
P-5	-	2				2
P-4	-	2				2
P-3	-	1				1
P-2/1	-	-				-
Total		6				6
<u>General Service category</u>						
		4		-		4
Grand total		10		-		10



ENERGY

A. Programme

This programme is carried under Natural Resources, Science and Technology Division and comprises the following three subprogrammes: Energy planning; regional co-operation on research, development and demonstration of new and renewable sources of energy; and energy conservation and efficiency. These three subprogrammes have been included in the 1984-1989 medium-term plan. Under the first subprogramme there are three programme elements which focus on priority areas encompassing energy resources assessment, energy supply and demand of selected sectors, identification of relevant energy institutions, and energy planning. Under the second subprogramme three elements will focus on the potential development of new and renewable sources of energy. Under the third subprogramme there are three programme elements which focus on finding measures for realizing energy conservation in three important areas: the transport, house-hold and industry sectors. The issues discussed under these three subprogrammes are particularly emphasized in the Nairobi Plan of Action (NPA). They also fit within the framework of the 1984-1989 medium term plan.

Programme elements 1.1, 1.3, 2.1, 3.1 and 3.3 are regarded as category I. Programme elements 2.2, 2.3, 1.1 and 3.2 are considered of category II. The nine programme elements and their related output are described below:

Subprogramme 1: Energy planning

(a) Resource requirements:

	<u>Thousands of US dollars</u>	<u>Percentage of programme total</u>
Regular budget	342.5	36.9
Extrabudgetary	90.0	100.0

(b) Reference: Medium-term plan for the period 1984-1989
(A/37/6), ch. XI, paras. 11.105-11.108.

(c) Programme elements:

1.1 Energy supply and demand of selected rural and remote areas in the ECWA region

Final output: A report on "The rural energy supply and demand in selected ECWA countries" will be submitted to the Commission by the end of 1985.

In the light of the Nairobi Plan of Action, a report will be prepared dealing with (a) the assessment of rural energy supply, demand and consumption in various geoclimatic conditions in selected ECWA countries; (b) the role of new and renewable sources of energy in the over-all energy supply of the rural areas; and (c) a careful investigation of the energy end-use structure pattern to provide an adequate energy supply to rural areas. Case studies on selected villages in ECWA region will be carried out. Expected starting and completion dates: First quarter 1984- Third quarter 1985.

Estimated work-months and other resources required for 1984-1985

	<u>Regular budget</u>	<u>Extrabudgetary resources</u>
Professionals	18 WM	-
General Service	10 WM	-
Consultants	-	-
Travel	\$ 2,000	-
Others	-	-

1.2 Identification of R,D & D and planning institutions in the field of energy in the ECWA region, with particular reference to the promotion of regional co-ordination**

Final output: A report on "Institutions dealing with energy in the ECWA region" will be submitted to the Commission by the end of 1985.

** Lowest priority.

The Nairobi Plan of Action placed heavy emphasis on the exchange and sharing of information for the enhancement of public awareness of the utilization of conventional and unconventional sources of energy. To this end, a report dealing with (a) identification of national and regional centres and focal points dealing with: energy planning, research, transfer, adaptation, assessment and demonstration of energy technologies; (b) promotion of regional co-ordination and joint projects in the field of conventional and unconventional sources of energy in the ECWA region. Expected starting and completion dates: First quarter 1985 - third quarter 1985.

Estimated work-months and other resources required for 1984-1985

	<u>Regular budget</u>	<u>Extrabudgetary resources</u>
Professionals	9 WM	-
General Service	8 WM	-
Consultants	-	-
Travel	\$ 2,000	-
Others	-	-

1.3 Integrated energy planning in selected ECWA countries*

Final output: (i) A report on "Energy planning in the ECWA region" will be submitted to the Commission in the first quarter of 1985.

(ii) Proceedings of the Workshop on Energy Planning, first quarter of 1986.

* Highest priority.

This programme element is part of a project carried out jointly by ECWA and the Commission of European Communities (CEC). In this programme element three case studies on energy planning of ECWA member countries with different profiles (oil exporter, oil importer and least developed) will be carried out. The proposed case studies will cover relevant social and economic data, estimates of energy needs, estimates of energy supply and the supply/demand balance pertaining to each country.

Expected starting and completion dates are the first quarter of 1984 and the fourth quarter of 1984. A workshop bringing together energy policy-makers and experts from the ECWA region, experts from CEC and the ECWA secretariat will be organized to share experiences related to integrated energy planning. In addition, the proposed energy planning methodology for the ECWA region and the case studies will be critically evaluated. The main topics which will be discussed in this workshop would include: (a) the role of energy planning in socio-economic development in the ECWA region; (b) instruments of energy planning (methodology proposed for the ECWA region, case studies for three ECWA countries... etc.); (c) data requirements for integrated energy planning; and (d) manpower training in the field of energy planning.

Estimated work-months and other resources required for 1984-1985

	<u>Regular budget</u>	<u>Extrabudgetary resources</u>
Professionals	24 WM	-
General Service	16 WM	-
Consultants	-	20.0
Travel	\$ 6,000	\$ 10,000
Others: Meeting	-	-

Subprogramme 2: Regional co-operation on research, development and demonstration of new and renewable sources of energy.

(a) Resource requirements:

	<u>Thousands of US dollars</u>	<u>Percentage of programme total</u>
Regular budget	320.9	34.5
Extrabudgetary	-	-
Subprogramme total	-	-

(b) Reference: Medium-term plan for the period 1984-1989
(L/37/6), paras. 11.109-11.112.

(c) Programme elements:

2.1 Assessment of biomass as a source of energy in the ECWA region

Final output: A report on "Biomass assessment in the ECWA region" will be submitted to the Commission by the end of 1985.

In the light of the Nairobi Plan of Action (NPA) and the General Assembly resolution 36/194 on the Substantial New Programme of Action for the 1980s for the Least Developed Countries (LDC's) a report will be prepared dealing with the assessment of biomass as a source of energy in the ECWA region. This report will complement the previous study carried out by NRSTD in 1980 pertaining to "Biomass Energy in the Arab World". The report will focus on the assessment of the resource availability and the examination of the techno-economic feasibility of an environmentally-sound utilization of biomass as a source of energy in the ECWA region. This assessment will fill a gap in the resource evaluation, which is a prerequisite for sound energy planning.

Expected starting and completion dates are the first quarter of 1984 and the second quarter of 1985.

Estimated work-months and other resources required for 1984-1985

	<u>Regular budget</u>	<u>Extrabudgetary resources</u>
Professionals	18 WM	-
General Service	10 WM	-
Consultants	1 WM (\$ 5,000)	-
Travel	\$ 2,000	-
Others: Meetings	-	-

2.2 Assessment of geothermal resources in the ECWA region

Final output: A report on "Assessment of geothermal resources in the ECWA region" will be submitted to the Commission by the end of 1985.

In the light of the Nairobi Plan of Action, a report will be prepared dealing with the assessment of geothermal potential in the ECWA region with particular emphasis on its utilization as a source of energy. The report will compile all national, regional and global studies undertaken to evaluate the geothermal potential in the ECWA region. The expected starting and completion dates are the second quarter of 1984 and the fourth quarter of 1985.

Estimated work-months and other resources required for 1984-1985

	<u>Regular budget</u>	<u>Extrabudgetary resources</u>
Professionals	18 WM	-
General Service	10 WM	-
Consultants	1 WM (\$ 5,000)	-
Travel	\$ 2,000	-
Others: Meetings	-	-

2.3 Assessment of hydropower resources in the ECWA region*

Final output: A report on "Hydropower resources in the ECWA region" will be submitted to the Commission by the end of 1985.

In the light of the immense and unused hydro potential that exists in some ECWA countries, a report will be prepared dealing with (a) the assessment of the hydro potential in the ECWA countries; (b) the state of utilization and potential for increased use in such countries; and (c) assessment of the possibilities establishing mini and micro-hydro plants. The findings of this study will provide the data to energy planners regarding the role which hydropower might play in the over-all energy balances of the selected ECWA countries. The expected starting and completion dates are the first quarter of 1984 and the second quarter of 1985.

Estimated work-months and other resources required for 1984-1985

	<u>Regular budget</u>	<u>Extrabudgetary resources</u>
Professionals	15 WM	-
General Service	12 WM	-
Consultants	1 WM (\$ 5,000)	-
Travel	\$ 2,000	-
Others: Meetings	-	-

Subprogramme 3: Energy conservation and efficiency

(a) Resource requirements:

	<u>Thousands of US dollars</u>	<u>Percentage of programme total</u>
Regular budget	265.8	28.6
Extrabudgetary	-	-
Subprogramme total	-	-

* Highest priority.

(b) Reference: Medium-term plan for the period 1984-1989
(A/37/6), paras. 11.113-11.116.

(c) Programme elements:

3.1 Energy conservation in the transport sector of a selected ECWA country*

Final output: A report to the Commission on a study reviewing the problem of energy conservation in various modes of transportation, with recommendations and policy action, first quarter 1986.

The absence of a common view among various ECWA countries on how to orient energy policy is reflected in uncertainty with regard to transportation policies oriented toward energy conservation. It is expected that this programme element will be based on extensive field work and will (a) investigate various modes of transportation in a selected ECWA country with a view to examining different measures to improve energy efficiency; (b) study the potential to reduce oil use through improved maintenance of existing vehicles and energy efficient driving habits; and (c) analyse aspects pertaining to human settlements and land use structure, including industrial sites, which influences energy costs for transportation. The expected starting and completion dates are the first quarter of 1984 and the second quarter of 1985.

Estimated work-months and other resources required for 1984-1985

	<u>Regular budget</u>	<u>Extrabudgetary resources</u>
Professionals	18 WM	-
General Service	10 WM	-
Consultants	1 WM (\$ 5,000)	-
Travel	\$ 2,000	-
Others	-	-

* Highest priority.

3.2 Energy conservation in the household sector of a selected ECWA country

Final output: A report on "Energy conservation in the household sector of a selected ECWA country" will be submitted to the Commission by the first quarter 1986.

In the light of the increasing rate of energy consumption in the household sector and the potential for energy conservation in this sector, a report will be prepared, based on field studies, dealing with (a) assessment of energy consumption in human settlements with particular reference to the residential/commercial sector; (b) a detailed assessment of energy requirements and consumption in the household sector; and (c) a set of recommendations to improve energy efficiency to control excess consumption of energy in the household sector. The expected starting and completion dates are the third quarter of 1984 and the fourth quarter of 1985.

Estimated work-months and other resources required for 1984-1985

	<u>Regular budget</u>	<u>Extrabudgetary resources</u>
Professionals	12 WM	-
General Service	10 WM	-
Consultants	-	-
Travel	-	-
Others	-	-

3.3 Energy conservation in the cement industry in ECWA countries**

Final output: A report will be submitted to the Commission on a study examining obstacles to energy conservation in industry in general, with a particular study of the cement industry in ECWA countries, by the first quarter of 1985.

** Lowest priority.

Under this programme (a) energy price (and taxes) will be investigated, since industries are generally very sensitive to cost increase; (b) the experience in energy conservation of the cement industry in other countries will be referred to as a base for the identification of specific measures to strengthen energy conservation in this sector. A set of recommendations will be suggested to the industrial decision-making process. The expected starting and completion dates are the first quarter of 1984 and the fourth quarter of 1984.

Estimated work-months and other resources required for 1984-1985

	<u>Regular budget</u>	<u>Extrabudgetary resources</u>
Professionals	12 WM	-
General Service	10 WM	-
Consultants	1 WM (\$ 5,000)	-
Travel	\$ 2,000	-
Others	-	-

B. Resource requirements

Established posts

Staff resources required to implement the above-outlined programmes are estimated at 144 work-months at the professional and higher levels (P-1 to USG) and 96 work-months at the local level. Under the regular budget there would be 144 work-months at the professional and higher levels (P-1 to USG). As to local-level posts, 96 work-months would be under the regular budget. The distribution of the professional resources by subprogramme would be as follows:

<u>Subprogramme</u>	<u>Work-months for established and temporary posts (P-1 - USG)</u>		
	<u>RB</u>	<u>XB</u>	<u>Total</u>
1	51	-	51
2	51	-	51
3	<u>42</u>	<u>-</u>	<u>42</u>
	144	-	144

Provision of the required 144 professional and higher level work-months of regular budget staff resources would be established in the natural resources programme under the energy subprogramme as follows: (a) existing posts, notably one D-1, one P-5, one P-4 and one P-3; and (b) redeployed posts from the natural resources programme after the termination of the minerals subprogramme by the end of 1983. The redeployed posts consist of one P-5 and one P-4. Provision of the required 96 general service work-months of regular budget resources would be made from three existing local-level posts (72 WM) plus the redeployed post from the natural resources programme (24 WM).

Consultants

A total of 5 work-months (\$ 25,000) of consultancy services are requested to assist in the implementation of the proposed programme, as follows:

Programme element 1.3: Two work-months of consultancy services are requested to assist in processing the data collected for the three case studies and to assist in preparing and executing computer programmes for the energy model for the case studies. The required expertise is not available among the staff of the programme;

Programme element 2.1: work-month of consultancy service of a specialist in biomass energy technology to examine from the collected data the feasibility of utilizing biomass as a source of energy;

Programme element 2.2: One work-month of consultancy service is envisaged for geological assessment of geothermal potential in the ECWA region;

Programme element 2.3: One work-month of consultancy service is requested to assess the technical feasibility of utilizing mini and micro-hydropower plants in the ECWA region.

Programme element 3.1: One work-month consultancy is requested to assist in the investigation of the engineering and technical parts pertaining to the efficiency of engines in various modes of transportation.

Programme element 3.3: One work-month of consultancy is requested to examine the cement plant engineering efficiency of various origins.

Travel

Total travel funds requested for this programme for the period 1984-1985 are estimated at \$ 20,000. The distribution of these funds among the programme elements of this programme is as follows:

Programme element 2.1: \$ 2,000 is requested from the regular budget to cover the travel expenses of one professional to collect data on biomass potential and use in the ECWA countries;

Programme element 2.2: \$ 2,000 is requested from the regular budget to cover travel cost of one professional to collect data pertaining to geothermal resources in the region;

Programme element 2.3: \$ 2,000 is requested from the regular budget to cover the travel expenses of one professional undertaking the assessment of hydropower resources in the ECWA region.

Programme element 1.1: The assessment of rural energy needs requires on-the-scene investigation of individual household demand for and supply of energy. This fact imposes the need for undertaking many trips to a cluster of villages in one area and a single mission to one or more country in the region for five to ten working days, which costs \$ 2,000.

Programme element 1.2: The identification of R, D & D and planning institutions engaged in energy in the ECWA region which aim towards the promotion of regional co-ordination calls for visits to the headquarters of OAPEC (Kuwait).

This, in addition to other visits to the most advanced institutions involved in the area of energy, is essential for any realistic promotion of regional co-operation. The cost of these visits is estimated to be \$ 2,000.

Programme element 1.3: \$ 6,000 is requested from the regular budget and \$ 10,000 from the extrabudgetary resources to cover all the travel expenses of two professionals, one from ECWA and one from CEC to three selected ECWA countries in order to collect the necessary data for the case studies and to get acquainted with the techniques and methods implemented in energy planning in these countries. The data collection and the discussions with policy-makers require missions to these countries for the duration of ten days or more.

Programme element 3.1: Specific energy consumption of different modes of transport, of both passenger transport and goods transport in a selected case study requires many trips to different areas of the country for specific operational investigations. The cost of these visits is estimated to be \$ 2,000.

Programme element 3.3: The newly established cement plants in various ECWA countries deserve on-the-site investigation, where energy efficiency methods and proposals will be discussed with the energy department of the plant. The estimated cost of travel is \$ 2,000.

Ad hoc meeting

The full implementation of programme element 1.3 necessitates the organization of an ad hoc meeting in the form of a one-week workshop on issues pertaining to energy planning in the ECWA region. About 20 energy policy-makers and 10 experts will be invited to present their experiences in energy planning. In addition five representatives of CEC, ECWA staff and other interested experts from both within and outside the region will attend. The total cost of the workshop is estimated at \$ 90,000 and is expected to be financed partly from the regular budget (\$ 30,000) and partly from the extrabudgetary resources (\$ 60,000 CEC). The \$ 90,000 requested covers travel and per diems for the participants, cost of publication of workshop proceedings, and all other conference services required.

