



International Atomic Energy Agency



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POWER DEVELOPMENT

(a) CO-ORDINATION

Joint progress report by the Board of Governors and the Director General

INTRODUCTION

1. This progress report is submitted under Resolution GC(VI)/RES/128 which calls for closer co-operation between the Agency, the United Nations, the specialized agencies and the World Power Conference in matters of power, "so as to achieve by joint effort a higher degree of co-ordination and efficiency".

2. The General Conference has recognized that the industrialization of developing countries will depend largely on their ability to produce plentiful and cheap electric power, and nuclear energy will provide a gradually growing share of their power needs.[1] country's plans for expanding the production of electricity must be based on assessments both of the energy resources of all kinds that would be available to it and of the expected growth in the demand for electricity. The international organizations dealing with this subject should therefore be in a position to arrange, on request, for comprehensive studies of a country's energy resources and future power needs; they should also be able subsequently to help with the making first of preliminary, and then of detailed estimates of the costs of alternative ways of meeting these needs. These desiderata require a higher degree of co-ordination between the international organizations concerned. Besides the Agency, the organizations in the United Nations family that deal at present with power to any large extent are the United Nations itself, which is concerned principally with conventional energy resources, and the International Bank for Reconstruction and Development (IBRD).

3. In the context of its work on the preparation of a long-term programme for the Agency's activities, the Scientific Advisory Committee (SAC) has made several recommendations about the responsibilities of the Agency in connection with energy and power. Amongst them are that the Agency, while retaining its special interest in nuclear power, should be equipped to give competent advice on all power development schemes including those for power networks that are to be supplied with energy generated by different means. It should continue to employ specialists in power engineering and economic development in its surveys, arranging for the participation in such surveys of experts from other organizations. The Agency should both acquire a staff of leading nuclear power economists and also engage experts in conventional power. SAC also considered the Agency should, to the appropriate extent, seek participation with IBRD in surveys and assessments of progress.

^[1] Resolution GC(VI)/RES/128, paras. (a) and (b).

CO-OPERATION WITH THE UNITED NATIONS AND THE SPECIALIZED AGENCIES

4. Resolution GC(VI)/RES/128 was brought to the notice of the Secretary-General of the United Nations and, as a result of subsequent consultations with the United Nations Secretariat, a power economist from the Agency's staff has been seconded to the Resources and Transport Branch of the Department of Economic and Social Affairs at United Nations headquarters, in order to enable the Agency to become completely familiar with the work done by the Branch. [2]

5. The responsibilities of the regional economic commissions of the Economic and Social Council of the United Nations (ECOSOC) in the domain of energy and power have grown in recent years, and it is expected that they will grow further during the United Nations Development Decade. The Agency has previously co-operated with the Economic Commission for Europe (ECE) in parallel studies of methods of estimating the generating costs of nuclear and conventional power [3]; the possibility is being considered of extending this co-operation by inviting ECE to join in a study that the Agency is planning to make of the economics of integrating nuclear power stations into electric power networks. The Agency also contributed a technical paper to the symposium on the covering of peak loads, The Agency and ECE are each represented at most of held by ECE in May of this year. the other's panels and similar meetings on the economic or technical aspects of energy and power, and there is close co-operation at the secretariat level.

6. Several nuclear power projects are planned or under way in the region covered by the Economic Commission for Asia and the Far East (ECAFE), and the 1963-64 programme of ECAFE provides for a regional study of power demand, including the contribution that nuclear power might make to meet it. The Director General has offered the Secretariat's co-operation in this study and broader arrangements for closer co-operation with ECAFE are being considered.

7. The Agency presented a paper on nuclear power costs and their trends to the seminar on electric power held by the Economic Commission for Latin America (ECLA) in Mexico in August 1961, and the Chief of ECLA's Programme of Energy and Water Resources spent a month at the Agency's headquarters that year to study the Agency's programmes. The work of the Economic Commission for Africa (ECA) on energy and power started relatively recently; arrangements have been made for the Agency and ECA to keep each other informed of their work on these subjects.

8. It is now the practice of the Agency to include conventional as well as nuclear power experts in its missions to Member States, such as the preliminary assistance mission to Africa in 1962 and the special missions sent in that year and early 1963 to the Philippines [4] and Thailand.

- [2] The Agency also contributed a paper entitled Prospects and Problems of Nuclear Power in Developing Areas to the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas. One of the conclusions of the paper was that "The question of introducing nuclear power reactors for developing countries with limited resources of conventional energy is therefore beginning to change from one of principle to one of suitable timing.... The problem of timing is, however, of fundamental importance and the best possible investment of large capitals depends on its correct solution ..." (United Nations document E/CONF.39/A.103, para. 70(d) and (e)).
- [3] The Agency's study was published in 1961 as No. 5 in the Technical Report Series (STI/DOC/10/5).
- [4] The Philippines has since submitted a request to the Special Fund for a "pre-investment study on power, including nuclear power, in Luzon".

9. By the end of June 1962 IBRD had made loans to the value of US \$2214 million to finance numerous conventional power plants and one nuclear power plant in its Member States; this sum represented 34% of the US \$6544 million that IBRD had lent for all purposes by that date. The Agency has not concluded a relationship agreement with IBRD, but satisfactory working arrangements have been made for the briefing of experts sent out by the Agency to study individual power projects.

CO-OPERATION WITH NON-GOVERNMENTAL ORGANIZATIONS

10. The World Power Conference, which has had consultative status with the Agency since July 1959, collects and publishes much material on energy resources and their utilization, and holds plenary international conferences at six-yearly intervals to review all aspects of the development and use of energy resources; it also holds "sectional conferences" on individual subjects at frequent intervals. It is regularly represented at the General Conference and is invited to attend technical meetings of the Agency that are of interest to it, such as the Panel on Economic Aspects of the Integration of Nuclear Power Plants in Electric Power Systems, which met in April 1963. The Agency's representative at the plenary conference of the World Power Conference in Melbourne in 1962 was chairman of the sessions that dealt with nuclear fuels and nuclear energy.

11. Another non-governmental organization having consultative status, the Union of Producers and Distributors of Electric Energy, has offered its support in achieving the objects of Resolution GC(VI)/RES/128.

CONCLUSIONS

12. The assignment of a power economist to the United Nations Secretariat may be regarded as a first step towards the closer administrative integration of the work of the United Nations and the Agency on energy and power. The General Assembly itself has recently considered the desirability of integrating the responsibilities of various members of the United Nations family for this and other aspects of industrial development; in December 1962 it recommended the Advisory Committee set up by ECOSOC under Resolution 873 (XXXIII) to examine what organizational changes would be needed to intensify "the United Nations effort for industrial development", to take account of the question "whether it is advisable to deal with problems of industrial development, natural resources, energy and possibly other related fields, within the framework of one organizational structure". [5] The Advisory Committee's views will be submitted to ECOSOC and the General Assembly this year.

13. The Board and the Director General consider that as far as energy and power are concerned, appropriate joint arrangements between the Agency and the United Nations (including its regional economic commissions) could go far towards meeting the desired concentration of responsibility. Hence they believe that closer substantive and organizational co-operation with the United Nations in matters of energy and power, and in particular the economics of power, should be promoted. It would also be timely to recall to the attention of the General Assembly Resolution GC(VI)/RES/128, the steps taken since that resolution was adopted and the views of the Board and the General Conference on further steps for the closer integration of the work of the Agency and the United Nations. They accordingly recommend the General Conference to consider the adoption of the draft resolution set out below.

^[5] General Assembly Resolution 1821 (XVII), part I, para. 1(a).

CO-OPERATION WITH THE UNITED NATIONS IN MATTERS OF ENERGY AND POWER

The General Conference,

(a) <u>Having received</u> from the Board of Governors and the Director General the progress report on co-ordination in power questions [*] which it requested in Resolution GC(VI)/RES/128,

(b) Noting that the General Assembly of the United Nations has been concerned with this matter in the context of industrial development, and has asked the Advisory Committee established by the Economic and Social Council under Resolution 873 (XXXIII) to take into account the recommendations it has made in Resolution 1821 (XVII), and

(c) <u>Recalling</u> that the Agreement Governing the Relationship Between the United Nations and the International Atomic Energy Agency provides that the Secretary-General of the United Nations and the Director General of the Agency may enter into such arrangements for the implementation of the Agreement as may be found desirable in the light of the operating experience of the two organizations, [**]

1. <u>Strongly recommends</u> a closer co-ordination of the Agency's activities in matters of energy and power, and its studies of the comparative economics of conventional power and nuclear power in particular, with those of the United Nations including its regional economic commissions and of interested intergovernmental organizations having relationship agreements with the United Nations or the Agency;

2. <u>Requests</u> the Board of Governors and the Director General to take action to this end in consultation with the Secretary-General of the United Nations; and

3. <u>Requests</u> the Director General, as a first step, to transmit to the Secretary-General, for the attention of the appropriate organs of the United Nations, the texts of Resolution GC(VI)/RES/128, of the progress report in document GC(VII)/229 and of the present resolution.

^[*] GC(VII)/229.

^[**] INFCIRC/11, Article XXII.