

INTERNATIONAL FORUM ON ENERGY ENVIRONMENT STUDIES

Annex 3

to the Implementing Agreement of the International Energy Agency
for a PROGRAMME OF ENERGY TECHNOLOGY SYSTEMS ANALYSIS

1. Background and Objectives

(a) Background. A co-operative energy systems analysis activity was begun in February 1976 for the purpose of providing the analytical basis for an IEA Strategy for Energy Research, Development and Demonstration. This co-operative work resulted in the development of a computer model, known as MARKAL, and a set of national and group analytical results. Subsequent activities included refinement of the model, improvement of the database, further national analytical studies and information exchange.

As a result of this work and other more specific national applications, a broad consensus has developed that environmental aspects of national energy systems are susceptible to analytical study. A major subject of concern is how various environmental constraints (e.g. SO₂ emissions, NO_x emissions) would affect the pattern of fuel and technology use and the choice and timing of implementation of abatement technologies.

There are many national studies on the relationship between energy use and the environment, but they all raise unanswered questions regarding how energy-environment options and basic scenarios and technical assumptions are interrelated.

A workable mechanism for comparing and evaluating national energy-environment analyses and rationalising differences is needed by the international community to supplement the apparatus of national studies in order to gain insights to assist in the development of energy and energy technology policy. The methods, models and skills for such comparative studies already exist and should be applied to this analysis.

(b) Objectives. The objectives of this Task are to provide for the continuation of a co-operative energy technology systems analysis activity and the establishment of such an activity within the context of energy and the environment:

- (1) To improve the technology characterizations by their updating and by the addition of data relating to emission release, emission control technologies and their costs;
- (2) To ensure the ability of the methodology to analyse environmental issues related to energy use; and
- (3) To promote the effective communication of the results of national and inter-country comparisons of the value of various options for emission control.

2. *Means*

The objectives shall be achieved by:

- (a) The development of technology characterizations, including environmental data, on a national level and the exchange of information regarding this work;
- (b) The exchange of work reports, memoranda and documents containing descriptions of methods, data inputs and results of energy systems studies;
- (c) The organization of workshops or seminar meetings, as necessary, to exchange information and experience in the areas of work covered by this Task;
- (d) The organization of annual meetings of an International Forum for Energy Environment Studies (FEEST) for the Task Participants, invited speakers and other interested persons, in order to deal with national, regional and/or inter-regional aspects of:
 - (i) Technology characterizations, with particular emphasis on environmental aspects;
 - (ii) Methodological treatment of environmental issues; and
 - (iii) Validation and communication of results of activities undertaken under this Annex;The FEEST's meetings should be immediately followed by an Executive Committee meeting;
- (e) The carrying out of such other co-operative analytical activities as may be agreed in the annual Programme of Work.

3. *Specific Responsibilities of the Operating Agent*

(a) *Project Staff.* For the purpose of carrying out the above objectives, the Operating Agent shall establish, within sixty days after the Annex has entered into force, a Project Staff composed of a half-time project head and such additional assistance as may be required to fulfil the Task. The total Project Staff shall amount to at least 1.25 staff years per annum.

(b) *Co-ordination.* The Operating Agent shall be responsible for overall co-ordination of the Task. Specifically, the Operating Agent shall have primary responsibility for reviewing the technology characterizations relating to emissions, for making efforts to improve them and for making them comparable. The Operating Agent shall monitor and encourage the exchange of Reference Energy System (RES) substructures among the Participants in order to ensure that the best data sources and model structures are generally known and widely implemented. In addition, the Operating Agent shall compile and review any other information and data provided under this Task.

(c) *Meetings and Seminars.* Upon request of the Executive Committee, the Operating Agent shall organize workshops and seminars and assist the Executive Committee and the host country in organizing the annual FEEST.

(d) *Preparation of Draft Programme of Work and Reports.* The Operating Agent shall prepare and submit to the Executive Committee, prior to its first meeting, a draft programme of work for the three-year period of the Task. The Operating Agent shall report to the Executive Committee at least once a year, on the progress of the activities under this Task. Upon termination of this Annex, the Operating Agent shall prepare and submit to the Executive Committee for approval a draft final report on the activities carried out during the period of this Annex. Following approval, the Operating Agent shall transmit the report to the Agency and to the members of the IEA Committee on Energy Research and Development.

The Committee on Energy Research and Development may, during this Task, propose additions to the Programme of Work. The Executive Committee shall, acting by unanimity, decide whether these proposals will be added to the Programme, provided such additional work can be carried out within the resource levels set out in paragraphs 3(a) above and 5(a) below.

4. *Specific Responsibilities of the Other Participants*

Participants shall carry out to the extent possible the following activities and communicate the results to the Operating Agent in the form of computer printouts and country reports:

- (a) Collection of national data on emission release and emissions control technologies;
- (b) Collection of information on RES structure and related data;
- (c) Establishment of data on technology characterizations and related data;
- (d) Performance of scenario analysis using the best available structures of the RES;
- (e) Discussions of the database, assumptions, methodology and results with the Members of the reference group installed in their respective countries.

5 *Funding*

(a) *Common Financial Obligations.* Based upon a Project Staff as described in paragraph 3 above, the Operating Agent estimates the annual costs of the activities of the Operating Agent under this Task at 1986 prices at \$US 150,000. The actual costs of the Operating Agent's activities under this Task will be divided equally among all Participants. If the number of Participants changes, the shares of contribution to the costs will be adjusted proportionally. New Participants will pay the full share of the costs beginning with the project year in which they become Participants.

(b) *Individual Financial Obligations.* In addition to the contributions set out in sub-paragraph (a) above, each Participant shall bear all costs it incurs in carrying out this Task including the costs of participation in workshops, seminars and the annual FEEST.

6. *Time Schedule*

This Annex entered into force with effect from 1st October 1986 and will remain in force for a period of three years. It may be extended by agreement of two or more Participants acting in the Executive Committee and taking into account any recommendation of the Agency's Committee on Energy Research and Development concerning the term of this Annex which shall thereafter apply only to those Participants.

7. *Operating Agent*

The United States Department of Energy, acting through the Brookhaven National Laboratory.

8. *Information and Intellectual Property*

(a) *Executive Committee Powers.* The publication, distribution, handling, protection and ownership of information and intellectual property arising from this Annex shall be determined by the Executive Committee, acting by unanimity, in conformity with this Agreement.

(b) *Right to Publish.* Subject only to copyright restrictions, the Participants in this Annex (referred to in this Annex as the "Participants") shall have the right to publish all information provided to or arising from this Annex except proprietary information, but they shall not publish it with a view to profit, except as agreed by the Executive Committee, acting by unanimity.

(c) *Proprietary Information.* The Operating Agent and the Participants shall take all necessary measures in accordance with this Annex, the laws of their respective countries, and international law to protect proprietary information. For the purposes of this Annex proprietary information shall mean information of a confidential nature such as trade secrets and know-how (for example, computer programmes, design procedures and techniques, chemical composition of materials, or manufacturing methods, processes, or treatments) that is appropriately marked, provided such information:

- (1) Is not generally known or publicly available from other sources;
- (2) Has not previously been made available by the owner to others without obligation concerning its confidentiality; and
- (3) Is not already in the possession of the recipient Participant without obligation concerning its confidentiality.

It shall be the responsibility of each Participant supplying proprietary information to identify the information as such and to ensure that it is appropriately marked.

(d) *Production of Relevant Information by Governments.* The Operating Agent should encourage the governments of all Agency Participating Countries to make available or to identify to the Operating Agent all published or otherwise freely available information known to them that is relevant to the Task. The Participants should notify the Operating Agent of all pre-existing information, and information developed independently of the Task known to them which is relevant to the Task and which can be made available to the Task without contractual or legal limitations.

(e) *Production of Available Information by Participants.* Each Participant agrees to provide to the Operating Agent all previously existing information and information developed independently of the Annex which is needed by the Operating Agent to carry out its function in this Task and which is freely at the disposal of the Participant and the transmission of which is not subject to any contractual and/or legal limitations:

- (1) If no substantial cost is incurred by the Participant in making such information available, at no charge to the Task;
- (2) If substantial costs must be incurred by the Participant to make such information available, at such charge to the Task as shall be agreed between the Operating Agent and the Participant with the approval of the Executive Committee.

(f) *Use of Proprietary Information.* If a Participant has access to proprietary information which would be useful to the Operating Agent in conducting studies, assessments, analyses, or evaluations, such information may be communicated to the Operating Agent in accordance with an agreement between the Operating Agent and the specific Participant setting forth the terms and conditions for such acceptance, but the proprietary information shall not become part of reports, handbooks, or other documentation, nor be communicated to the other Participants except as may be agreed in writing between the Operating Agent and the Participant which supplied such information.

(g) *Acquisition of Information for the Task.* Each Participant shall inform the Operating Agent of the existence of information known to the Participant that can be of value to the Task, but which is not freely available, and the Participant shall endeavour to make the information available to the Task under reasonable conditions, in which event the Executive Committee may, acting unanimously, decide to acquire such information.

(h) *Reports on Work Performed under the Task.* The Operating Agent shall provide reports on all work performed under the Task and the results thereof, including studies, assessments, analyses, evaluations and other documentation, but excluding proprietary information, to the Participants.

(i) *Authors.* Each Participant shall, without prejudice to any rights of authors under its national laws, take necessary steps to provide the co-operation with its authors required to carry out the provisions

of this paragraph. Each Participant will assume the responsibility to pay awards or compensation required to be paid to its employees according to the laws of its country.

9. Results

The results of this Task shall be:

- (a) Maintenance and improvement of an international capability for the analysis of energy technologies and their future prospects and establishment of such a capability within the context of energy and the environment;
- (b) Periodic reports on workshops or seminars and on analytical studies undertaken in connection with the Task; and
- (c) A final report on the activities carried out under this Task

10. Participants

The Contracting Parties, which are Participants in the Task, are the following: