

INTERNATIONAL ENERGY AGENCY

IMPLEMENTING AGREEMENT

FOR A PROGRAMME OF RESEARCH
AND DEVELOPMENT ON THE PRODUCTION
AND UTILIZATION OF HYDROGEN

(as amended to 2 April, 2004)

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IMPLEMENTING AGREEMENT

FOR A PROGRAMME OF RESEARCH AND DEVELOPMENT ON THE PRODUCTION AND UTILIZATION OF HYDROGEN

(as amended to 2 April, 2004)

The Contracting Parties

CONSIDERING that the governments of countries which are Members of the International Energy Agency (the "Agency") have agreed in Article 41 of the Agreement on an International Energy Program (the "I.E.P. Agreement") to undertake national programmes in the areas set out in Article 42 of the I.E.P. Agreement, including energy research and development;

CONSIDERING that the Contracting Parties, being the European Communities and either governments of Agency countries or parties designated by their respective governments, wish to take part in the establishment and operation of a Programme of Research and Development on the Production and Utilization of Hydrogen (the "Programme") as provided in this Agreement;

CONSIDERING that the Contracting Parties wish to hold open to governments of other Agency countries or parties designated by their respective governments, the opportunity to participate in the Programme as Contracting Parties, and to hold open to governments of non-Members of the Agency or their designees, and international organizations in which one or more such governments participate, the opportunity to participate in the Programme as Associate Contracting Parties;

CONSIDERING that the Governing Board of the Agency on 19th-20th March, 1975 approved the Programme as a special activity under Article 65 of the I.E.P. Agreement;

CONSIDERING that the Agency has recognized the establishment of the Programme as an important component of international co-operation in the field of energy research and development;

HAVE AGREED as follows:

Article 1

OBJECTIVES

(a) *Scope of Activity.* The Programme to be carried out by the Contracting Parties within the framework of this Agreement shall consist of co-operative research, development, demonstrations and exchanges of information regarding the production and utilization of hydrogen.

(b) *Method of Implementation.* The Contracting Parties shall implement the Programme by undertaking one or more tasks (the "Task" or "Tasks") each of which will be open to participation by two or more Contracting Parties as provided in Article 2 hereof. The Contracting Parties which participate in a particular Task are, for the purposes of that Task, referred to in this Agreement as "Participants".

(c) *Task Co-ordination and Co-operation.* The Contracting Parties shall co-operate in co-ordinating the work of the various Tasks and shall endeavour, on the basis of an appropriate sharing of burdens and benefits, to encourage co-operation among Participants engaged in the various Tasks with the objective of advancing the research and development activities of all Contracting Parties in the field of hydrogen production and utilization.

Article 2

IDENTIFICATION AND INITIATION OF TASKS

(a) *Identification.* The Tasks undertaken by Participants are identified in the Annexes to this Agreement. At the time of signing this Agreement, each Contracting Party shall confirm its intention to participate in one or more Tasks by giving the Executive Director of the Agency a Notice of Participation in the relevant Annex or Annexes and the Operating Agent for each Task shall give the Executive Director of the Agency a Notice of Acceptance of the Task Annex. Thereafter, each Task shall be carried out in accordance with the procedures set forth in Articles 2 to 11 hereof, unless otherwise specifically provided in the applicable Annex.

(b) *Initiation of Additional Tasks.* Additional Tasks may be initiated by any Contracting Party according to the following procedure:

(1) A Contracting Party wishing to initiate a new Task shall present to one or more Contracting Parties for approval a draft Annex, similar in form to the Annexes attached hereto, containing a description of the scope of work and conditions of the Task proposed to be implemented;

(2) Whenever two or more Contracting Parties agree to undertake a new Task, they shall submit the draft Annex for approval by the

Executive Committee pursuant to Article 3(e)(2) hereof; the approved draft Annex shall become part of this Agreement; Notice of Participation in the Task by Contracting Parties and acceptance by the Operating Agent shall be communicated to the Executive Director in the manner provided in paragraph (a) above;

(3) In carrying out the various Tasks, Participants shall co-ordinate their activities in order to avoid duplication of activities.

(c) *Application of Task Annexes.* Each Annex shall be binding only upon the Participants therein and upon the Operating Agent for that Task, and shall not affect the rights and obligations of other Contracting Parties.

Article 3

THE EXECUTIVE COMMITTEE

(a) *Supervisory Control.* Control of the Programme shall be vested in the Executive Committee constituted under this Article. Decisions made by the Executive Committee pursuant to this Agreement shall be binding on the Contracting Parties and Operating Agents to the extent that such decisions and their implementation are not inconsistent with the laws and regulations in force in their respective countries.

(b) *Membership.* The Executive Committee shall consist of one member designated by each Contracting Party; each Contracting Party shall also designate an alternate member to serve on the Executive Committee in the event that its designated member is unable to do so.

(c) *Responsibilities.* The Executive Committee shall:

(1) Adopt for each year, acting by unanimity, the Programme of Work and Budget, if foreseen, for each Task, together with an indicative programme of work and budget for the following two years; the Executive Committee may, as required, make adjustments within the framework of the Programme of Work and Budget;

(2) Make such rules and regulations as may be required for the sound management of the Tasks, including financial rules as provided in Article 7 hereof;

(3) Carry out the other functions conferred upon it by this Agreement and the Annexes hereto; and

(4) Consider any matters submitted to it by any of the Operating Agents or by any Contracting Party.

(d) *Procedures.* The Executive Committee shall carry out its responsibilities in accordance with the following procedures:

- (1) The Executive Committee shall every three years elect a Chairman and two Vice-Chairmen;
- (2) The Executive Committee may establish such subsidiary bodies and rules of procedure as are required for its proper functioning. Representatives of the Agency and a representative of each Operating Agent (in its capacity as such) may attend meetings of the Executive Committee and its subsidiary bodies in an advisory capacity;
- (3) The Executive Committee shall meet in regular session twice each year; a special meeting shall be convened upon the request of any Contracting Party which can demonstrate the need therefor;
- (4) Meetings of the Executive Committee shall be held at such time and in such office or offices as may be designated by the Executive Committee;
- (5) At least twenty-eight days before each meeting of the Executive Committee, notice of time, place and purpose of the meeting shall be given to each Contracting Party and to other persons or entities entitled to attend the meeting; notice need not be given to any person or entity otherwise entitled thereto if notice is waived before or after the meeting;
- (6) The quorum for the transaction of business in meetings of the Executive Committee shall be two-thirds of the members provided that any action relating to a particular Task shall require a quorum as aforesaid of members or alternate members designated by the Participants in that Task.

(e) *Voting.*

- (1) When the Executive Committee adopts a decision or recommendation for or concerning a particular Task, the Executive Committee shall act:
 - (i) When unanimity is required under this Agreement: by agreement of those members or alternate members which were designated by the Participants in that Task and which are present and voting;
 - (ii) When no express voting provision is made in this Agreement: by majority vote of those members or alternate members which were designated by the Participants in that Task and which are present and voting;

(2) In all other cases in which this Agreement expressly requires the Executive Committee to act by unanimity, this shall require the agreement of each member or alternate member present and voting, and in respect of all other decisions and recommendations for which no express voting provision is made in this Agreement, the Executive Committee shall act by a majority vote of the members or alternate members present and voting. Executive Committee members abstaining shall be considered as non-voting.

(3) If a government has designated more than one Contracting Party to this Agreement or more than one Participant for an Annex, those Contracting Parties or Participants may cast only one vote under this paragraph.

(4) The decisions and recommendations referred to in subparagraphs (1) and (2) above may, with the agreement of each member or alternate member entitled to act thereon, be made by mail, telefax, telex or cable without the necessity for calling a meeting. Such action shall be taken by unanimity or majority of such members as in a meeting. The Chairman of the Executive Committee shall ensure that all members are informed of each decision or recommendation made pursuant to this sub-paragraph.

(f) *Reports.* The Executive Committee shall, by 31st March each year, provide the Agency with 30 copies of a report containing technically substantive, non-proprietary information on the progress of the Programme and its results.

Article 4

THE SECRETARY

(a) *Designation of Secretary.* The Executive Committee, acting by unanimity, may designate a secretary ("the Secretary") of the Programme to make and distribute notes of the Executive Committee's meetings and to undertake such other administrative activities as may be required by the Executive Committee to assist it in carrying out its responsibilities under this Agreement.

(b) *Scope of Authority.* The Secretary shall carry out its functions under the supervision of the Executive Committee. Representatives of the Secretary may attend meetings of the Executive Committee and its subsidiary bodies in an advisory capacity, with no voting rights.

(c) *Reimbursement of Costs.* The Executive Committee, acting by unanimity, may provide that expenses and costs incurred by the Secretary under this Article shall be reimbursed to the Secretary from funds made available by the Contracting Parties pursuant to *Article 7(b)* hereof.

(d) *Replacement.* Should the Executive Committee wish to replace the Secretary with another entity, the Executive Committee may, acting by unanimity, take such action.

(e) *Resignation.* The Secretary shall have the right to resign at any time by giving six months written notice to that effect to the Executive Committee.

(f) *Information and Report.* The Secretary shall furnish to the Executive Committee such information concerning its work as the Committee may request.

Article 5

THE OPERATING AGENTS

(a) *Designation.* Participants shall designate in the relevant Annex an Operating Agent for each Task. References in this Agreement to the Operating Agent shall apply to each Operating Agent in respect of the Task for which it is responsible.

(b) *Scope of Authority.* Subject to the provisions of the applicable Annex:

(1) The Operating Agent may enter into any contract or perform any other legal act, not inconsistent with provisions of this Agreement or with decisions of the Executive Committee, that are required to administer the Task for the benefit of the Participants;

(2) The Operating Agent shall hold, in trust for and for the benefit of the Participants, the legal title to all property rights which may accrue to or be acquired for the Task.

The Operating Agent shall operate the Task under its supervision and responsibility, subject to this Agreement, in accordance with the laws of the country of the Operating Agent. Neither the Operating Agent, nor its experts, employees, agents, representatives or contractors shall be entitled to commit the Participants to any expenditure whatsoever.

(c) *Reimbursements of Costs.* The Executive Committee may provide that expenses and costs incurred by an Operating Agent in acting as such pursuant to this Agreement shall be reimbursed to the Operating Agent from funds made available by the Participants pursuant to Article 7 hereof.

(d) *Replacement.* Should the Executive Committee wish to replace an Operating Agent with another government or entity, the Executive Committee may, acting by unanimity and with the consent of such government or entity, replace the initial Operating Agent. References in this Agreement to the "Operating Agent" shall include any government or entity appointed to replace the original Operating Agent under this paragraph.

(e) *Resignation.* An Operating Agent shall have the right to resign at any time by giving six months written notice to that effect to the Executive Committee, provided that:

(1) A Participant, or entity designated by a Participant, is at such time willing to assume the duties and obligations of the Operating Agent and so notifies the Executive Committee and the other Participants to that effect, in writing, not less than three months in advance of the effective date of such resignation; and

(2) Such Participant or entity is approved in its function of Operating Agent by the Executive Committee, acting by unanimity.

(f) *Accounting.* An Operating Agent which is replaced or which resigns as Operating Agent shall provide the Executive Committee with an accounting of any monies and other assets which it may have collected or acquired for the Task in the course of carrying out its responsibilities as Operating Agent.

(g) *Transfer of Rights.* In the event that another Operating Agent is appointed under paragraph (d) or (e) above, the Operating Agent shall promptly transfer to such replacement Operating Agent any property rights which it holds in trust for and for the benefit of the Participants in the respective Annex, and shall assist the replacement Operating Agent for at least three months after the replacement Operating Agent has assumed its functions.

(h) *Information and Reports.* Each Operating Agent shall furnish to the Executive Committee such information concerning the Task as the Committee may request and shall each year submit to the Executive Committee and the Agency, not later than two months after the end of the financial year established pursuant to Article 7(f)(1) below, a report on the status of the Task.

Article 6

ADMINISTRATION, STAFF AND CONSULTANTS

(a) *Administration of Tasks.* Each Operating Agent shall be responsible to the Executive Committee for implementing its designated Task in accordance with this Agreement, the applicable Task Annex, and the decisions of the Executive Committee.

(b) *Staff.* It shall be the responsibility of the Operating Agent to retain such staff as may be required to carry out its designated Task in accordance with rules determined by the Executive Committee. The Operating Agent may also, as required, utilize the services of personnel employed by other Participants (or organizations or other entities designated by Contracting Parties) and made available to the Operating

Agent by secondment or otherwise. Such personnel shall be remunerated by their respective employers and shall, except as provided in this Article, be subject to their employers' conditions of service. The Contracting Parties shall be entitled to claim the appropriate cost of such remuneration or to receive an appropriate credit for such cost as part of the Budget of the Task, in accordance with Article 7(f)(6) hereof.

(c) *Consultants.* The Operating Agent consistent with the prior approval of the Executive Committee acting by unanimity, and in accordance with the Programme of Work and Budget for a particular Task, may enter into contracts for consultancy services to assist in administering the Task.

Article 7

FINANCE

(a) *Individual Financial Obligations.* Each Contracting Party shall bear the costs it incurs in carrying out Programme activities, including the costs of formulating or transmitting reports and of reimbursing its employees for travel and other per diem expenses incurred in connection with work carried out on the respective Tasks, unless provision is made for such costs to be reimbursed from common funds as provided in paragraph (b) below.

(b) *Common Financial Obligations.* The Executive Committee may agree, acting by unanimity, to establish a common fund to share the costs of its responsibilities and activities set forth under Article 3 above. In addition, Participants wishing to share the costs of a particular Task shall agree in the appropriate Task Annex to establish a separate common fund. The apportionment of contributions to such common funds (whether in the form of cash, services rendered, intellectual property or the supply of materials) as well as the management and the use of such common funds shall be governed by the regulations and decisions made pursuant to this Article by the Executive Committee, acting by unanimity.

(c) *Custodians and Beneficiaries of Common Funds.* Should the Executive Committee decide to establish a common fund to share the costs of its responsibilities and activities, it shall designate a custodian to hold the common fund in custody or possession for the benefit of the Contracting Parties. Should the Participants in a Task decide to establish a common fund to share the costs of that Task, the Operating Agent of that Task shall serve as custodian to hold the common fund of that Task in custody or possession for the benefit of the Participants in that Task. The custodians which hold common funds under this paragraph in custody or possession are referred to in this Article as the "Custodians", and the Contracting Parties or Participants in a Task for whose benefit the common funds are held by the Custodians are referred to in this Article as the "Beneficiaries".

(d) *Financial Rules, Expenditure.* The Executive Committee, acting by unanimity, may make such regulations as are required for the sound financial management of each common fund including, where necessary:

(1) Establishment of budgetary and procurement procedures to be used by the Custodians in making payments from the appropriate common fund or in making contracts on behalf of the Beneficiaries; and

(2) Establishment of minimum levels of expenditure for which Executive Committee approval shall be required, including expenditure involving payment of monies to the Custodian for other than routine salary and administrative expenses previously approved by the Executive Committee in the budget process.

In the expenditure of common funds, the Custodian shall take into account the necessity of ensuring a fair distribution of such expenditure in the Beneficiaries' countries, where this is fully compatible with the most efficient technical and financial management.

(e) *Crediting of Income to Common Fund.* Any income which accrues from the Programme shall be credited to the appropriate common fund.

(f) *Accounting.* The system of accounts employed by the Custodian shall conform to accounting principles generally accepted in the country of the Custodian and shall be consistently applied.

(g) *Programme of Work and Budget, Keeping of Accounts.* Should Contracting Parties or Participants agree to maintain common funds for the payment of obligations under the appropriate Programme of Work and Budget, the following provisions shall be applicable unless the Executive Committee, acting by unanimity, decides otherwise:

(1) The financial year shall correspond to the financial year of the Custodian;

(2) The Custodian shall, not later than three months before the beginning of each financial year, prepare and submit to the Executive Committee for unanimous approval a draft Programme of Work and Budget, together with an indicative Programme of Work and Budget for the following two years; the Executive Committee shall transmit the Programme of Work and Budget, once approved, to the Agency;

(3) The Custodian shall maintain complete and separate financial records which shall clearly account for all funds and property coming into the custody or possession of the Custodian in connection with this Agreement;

(4) Not later than three months after the close of each financial year, the Custodian shall submit to auditors selected by the Executive Committee for audit the annual accounts maintained for the Task; upon completion of the annual audit, the Custodian shall present the

accounts together with the auditors' report to the Executive Committee for approval at its next meeting thereafter;

(5) All books of account and records maintained by the Custodian for the Programme shall be preserved for at least three years from the date of termination of its services to the Programme; and

(6) Upon unanimous approval by the Executive Committee, a Beneficiary supplying services, materials or intellectual property to the Programme shall be entitled to a credit, against its contribution (or to compensation, if the value of such services, materials or intellectual property exceeds the amount of the Participant's contribution); such credits (or compensation) for services of staff shall be calculated on an agreed scale approved by the Executive Committee and shall include all payroll-related costs.

(h) Contribution to Common Funds. Should Contracting Parties or Participants in a Task agree to establish common funds under the appropriate annual Programme of Work and Budget, any financial contributions due from Beneficiaries shall be paid to the Custodian, in the currency of the country of the Custodian or in other currency specified by the Custodian in agreement with the Executive Committee, at such times and upon such other conditions as the Executive Committee, acting by unanimity, shall determine, provided, however, that:

(1) Contributions received by the Custodian shall be used solely in accordance with the appropriate Programme of Work and Budget; and

(2) The Custodian shall be under no obligation to carry out any work on the Programme until contributions amounting to at least fifty per cent (in cash terms) of the total due at any one time have been received.

(i) Ancillary Services. Ancillary services may, as agreed between the Executive Committee and the Custodian, be provided by that Custodian and the costs of such services, including overheads connected therewith, may be met from budgeted funds.

(j) Taxes. The Custodian shall pay all taxes and similar impositions (other than taxes on income) imposed by national or local governments and incurred by it in connection with the Programme, as expenditure incurred in the operation under the appropriate Budget; the Custodian shall, however, endeavour to obtain all possible exemptions from such taxes, and the Beneficiaries shall assist the Custodian in its endeavours.

(k) Audit. Each Beneficiary shall have the right, at its sole cost, to audit the accounts of any work in the Programme for which common funds are maintained, on the following terms:

(1) The Custodian shall provide the Beneficiaries with an opportunity to participate in such audits on a cost-shared basis;

- (2) Accounts and records relating to activities of the Custodian other than those conducted for the Programme shall be excluded from such audit, but if the Beneficiary concerned requires verification of charges to the Budget representing services rendered to the Programme by the Custodian, it may, at its own cost, request and obtain an audit certificate in this respect from the auditors of the Custodian;
- (3) Not more than one such audit shall be required in any financial year; and
- (4) Any such audit shall be carried out by not more than three representatives of the Participants.

Article 8

INFORMATION AND INTELLECTUAL PROPERTY

(a) *Application to Agreement and Annexes.* Pursuant to the General Guidelines Concerning Information and Intellectual Property, adopted by the Governing Board of the Agency on 21st November, 1975, and any modification thereof, the following information and intellectual property provisions shall apply generally to this Agreement and each of its constituent Annexes. Exceptions or additions to these provisions may be made in any particular Annex, in which case they shall apply to that Annex alone.

(b) *Executive Committee's Powers.* The publication, distribution, handling, protection and ownership of information and intellectual property provided under or arising from the Programme, shall be determined by the Executive Committee, acting by unanimity, in conformity with this Agreement and the laws of the countries of the Contracting Parties and Operating Agent. The Contracting Parties favour the widest possible dissemination of information provided to, exchanged or arising under the Programme, subject to the need to protect proprietary information.

(c) *Copyright.* With respect to Annex activities, each Participant shall hold the copyrights for its own work, and the Operating Agent shall hold other copyrights generated under the Annex in trust for and for the benefit of the Participants in accordance with Article 5(b)(2) above. With respect to common Programme activities, each Contracting Party shall hold the copyright for its own work, and the Contracting Party whose Executive Committee member serves as Chairman of the Executive Committee shall hold other copyrights generated under the Programme in trust for and for the benefit of the Contracting Parties, unless otherwise decided by the Executive Committee, acting by unanimity. The Contracting Parties shall take all appropriate measures necessary to protect copyrightable material generated under this Agreement.

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

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

(e) *Proprietary Information.* The Operating Agent and the Contracting Parties shall take all necessary measures in accordance with this Article, the laws of their respective countries, and international law to protect confidential information including that of proprietary nature. For the purposes of this Article, proprietary information shall include 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) which:

- (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 Participants without obligation concerning its confidentiality.

It shall be the responsibility of each Contracting Party supplying proprietary information, and of the Operating Agent for arising proprietary information, to identify the information as such and to ensure that it is marked "Proprietary Information".

(f) *Production of Relevant Information by Governments.* The Operating Agent shall encourage the governments of all Agency 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.

(g) *Production of Available Information by Participants.* Each Participant shall, in accordance with the terms and conditions agreed upon with the Operating Agent within the scope of rules, procedures and guidelines that may be established by the Executive Committee, provide, preferably in English, to the Operating Agent all previously existing information and information developed independently of the Task which is necessary to the Task and 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; and
- (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.

Such information shall be made available, preferably in English, in accordance with the definitions, rules and guidelines that may be established by the Executive Committee.

(h) *Use of Confidential Information.* If a Participant has access to confidential information which would be useful to the Operating Agent in conducting studies, assessments, analyses or evaluations, such information shall be communicated to the Operating Agent at no cost in accordance with an agreement between the Operating Agent and the specific Participant setting forth the terms and conditions for such acceptance; but the confidential 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.

(i) *Arising Proprietary Information.* It shall be the responsibility of the Operating Agent to promptly identify information arising from its respective Annex, including computer software developed under that Annex, which qualifies as proprietary information under this Article and to ensure that it is marked "Proprietary Information". If any Participant in the particular Task questions the decision of the Operating Agent regarding the proprietary nature of arising information, the question shall be submitted to the Executive Committee for decision. Proprietary information arising from any Task shall be owned by the Operating Agent, who shall hold it in trust for and for the benefit of the Participants in the Task.

(j) *Inventions.* For arising information regarding inventions, the following rules shall apply, except as otherwise directed with regard to any particular Annex by the Executive Committee, acting by unanimity:

(1) The Operating Agent shall promptly identify and report to the Executive Committee any arising information regarding inventions together with a recommendation of the countries in which patent applications should be filed. The Executive Committee shall, acting by unanimity of the Participants, determine whether, where and when patent applications shall be filed by the Operating Agent at the expense of the Task;

(2) Information regarding inventions on which patent protection is to be obtained shall not be published or publicly disclosed by the Operating Agent or the Participants until a patent application has been filed, provided, however, that this restriction on publication or disclosure shall not extend beyond twelve months from the date of reporting of the invention. It shall be the responsibility of the Operating Agent to appropriately mark Task reports which disclose inventions which have not been appropriately protected by the filing of a patent application; and

(3) Patents obtained shall be owned by the Operating Agent which shall hold the patent in trust for and for the benefit of the Participants.

(k) *Acquisition of Information.* Each Participant shall inform the Operating Agent of the existence of pre-existing information, and information developed independently of the Task, known to it that can be relevant to the Task, but which is not freely available. The Participant shall endeavour to make the information available to the Task under reasonable conditions, in which event the Executive Committee may, acting by unanimity, decide to authorize the Operating Agent to acquire, under terms and conditions stipulated by the Executive Committee, such information which the Operating Agent shall hold for the benefit of the Participants.

(l) *Exchange of Information with Others.* With regard to any particular Annex, the Executive Committee may, acting by unanimity, make arrangements for the acquisition of information from sources other than the Participants in an Annex. The Executive Committee, acting by unanimity, shall determine for any particular Annex the rules by which information available to Participants in that Annex may be made available to governments, utilities, research institutions, and other appropriate entities of countries which do not participate in that Annex.

(m) *Licensing of Arising and Pre-Existing Information.* The Operating Agent shall license acquired or arising proprietary information, including computer software, for non-exclusive use as follows:

- (1) To each Participant in the Task:
 - (i) On the most favourable terms and conditions for use by the Participant in its own country; and
 - (ii) On favourable terms and conditions for the purpose of sub-licensing others for use in its own country. In each case, the terms and conditions shall be stipulated by the Executive Committee taking into account the equities of the Participants based upon the sharing of obligations, contributions, rights and benefits of all Participants;
- (2) Subject to sub-paragraph (1) above, to each Participant in the Task for use in all countries, on reasonable terms and conditions stipulated by the Executive Committee, taking into account the equities of the Participants based upon the sharing of obligations, contributions, rights and benefits of all Participants;
- (3) To the government of any Agency country and nationals designated by it, for use in such country in order to meet its energy needs, on terms and conditions stipulated by the Executive Committee, taking into account any equitable conditions which might arise from the support provided by the Agency to the Task; and
- (4) To entities and persons not mentioned above in this paragraph, if agreed by the Executive Committee, on terms and conditions stipulated by the Executive Committee.

Royalties, if any, under licences pursuant to this paragraph shall be credited to the Budget of the Task, or, in the event that no Budget to the Task is foreseen, shall be held by the Operating Agent in trust for and for the benefit of the Participants.

(n) *Information Use and Application.* Information transmitted by one Participant to another Participant or the Operating Agent under any Annex, shall be accurate to the best knowledge and belief of the transmitting Participant, but the transmitting Participant does not warrant the suitability of the information transmitted for any particular use or application.

(o) *Reports on Work Performed.* Each Participant and 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 other Participants. Reports summarizing the work performed and the results thereof shall be prepared by the Operating Agent and forwarded to the Executive Committee and the Agency.

(p) *Access to Information and Reports.* Participants in each Annex shall be entitled without charge to have access to, to reproduce and, in accordance with the rules determined by the Executive Committee, to distribute to nationals of its country, the information and reports produced by the Operating Agent of that Annex. The Executive Committee may lay down guidance as to the use any Participant may make of the information and, where appropriate, the charges to be imposed, and may establish guidelines to determine what constitutes a "national".

(q) *Effect of Termination or Withdrawal.* The Executive Committee shall, at the time of the termination of this Agreement or any Annex or the withdrawal of any Contracting Party, adopt appropriate measures for the subsequent application of paragraph (o) above and related questions, which shall include rules as to the use any previous Participant may make of the information and, where appropriate, the charges to be imposed.

Article 9

LEGAL RESPONSIBILITY AND INSURANCE

(a) *Liability of the Operating Agent.* The Operating Agent shall use all reasonable skill and care in carrying out its duties under this Agreement in accordance with all applicable laws and regulations. Subject to paragraph (c) below, the cost of all damage to persons or property, and all expenses associated with claims, actions and other costs arising from work undertaken with common funds for a Task shall be charged to the Budget of that Task; such costs and expenses arising from work for a Task not undertaken with common funds shall be charged to the Budget of that Task if the Annex so provides or the Executive Committee, acting by unanimity, so decides.

(b) *Insurance.* The Operating Agent shall propose to the Executive Committee all necessary liability, fire and other insurance, and shall carry such insurance as the Executive Committee may direct. The cost of obtaining and maintaining insurance shall be charged to the Budget of the Task.

(c) *Responsibility of the Operating Agent.* Subject to the provisions of the applicable Annex, the Operating Agent shall be responsible, in its capacity as such, for any damage to persons or property and all legal liabilities, actions, claims, costs and expenses connected therewith to the extent that they:

- (1) Result from the failure of the Operating Agent to maintain such insurance as it may be required to maintain under paragraph (b) above; or
- (2) Result from the gross negligence or wilful misconduct of any officers or employees of the Operating Agent in carrying out their duties under this Agreement.

Article 10

LEGISLATIVE PROVISIONS

(a) *Accomplishment of Formalities.* Each Participant shall request the appropriate authorities of its country (or its Member States in the case of an international organization) to use their best endeavours, within the framework of applicable legislation, to facilitate the accomplishment of formalities involved in the movement of persons, the importation of materials and equipment and the transfer of currency which may be required to conduct the Task in which it is engaged.

(b) *Appropriation of Funds and Applicable Laws.* In carrying out this Agreement and its Annexes, the Contracting Parties shall be subject to the appropriation of funds by the appropriate governmental authority and to the constitutions, laws and regulations applicable to the respective Contracting Parties, including, but not limited to, laws establishing prohibitions upon the payment of commissions, percentages, brokerage or contingent fees to persons retained to solicit government contracts and upon any share of such contracts accruing to governmental officials.

(c) *Decisions of Agency Governing Board.* (c) The IEA Framework for International Energy Technology Co-operation, adopted by the IEA Governing Board on 3 April 2003, shall, together with any amendments thereto, be binding upon all Contracting Parties and Sponsors (as defined in the Framework) which have signed or acceded to, and not withdrawn from, this Agreement. A copy of the Framework is attached as Exhibit A to this Implementing Agreement and shall be an integral part thereof .

(d) *Settlement of Disputes.* Any dispute among the Contracting Parties concerning the interpretation or the application of this Agreement which is not settled

by negotiation or other agreed mode of settlement shall be referred to a tribunal of three arbitrators to be chosen by the Contracting Parties concerned who shall also choose the Chairman of the tribunal. Should the Contracting Parties concerned fail to agree upon the composition of the tribunal or the selection of its Chairman, the President of the International Court of Justice shall, at the request of any of the Contracting Parties concerned, exercise those responsibilities. The tribunal shall decide any such dispute by reference to the terms of this Agreement and any applicable laws and regulations, and its decision on a question of fact shall be final and binding on the Contracting Parties. Operating Agents which are not Contracting Parties shall be regarded as Contracting Parties for the purposes of this paragraph.

Article 11

ADMISSION AND WITHDRAWAL OF CONTRACTING AND ASSOCIATE CONTRACTING PARTIES

- (a) *(a) Admission of New Contracting Parties.* Upon the invitation of the Executive Committee, acting by unanimity, admission to this Agreement shall be open to:
- 1) the governments of both OECD member or OECD non-member countries;
 - 2) the European Communities;
 - 3) international organizations in which the governments of OECD member countries and/or OECD non-member countries participate; and
 - 4) any national agency, public organization, private corporation or other entity designated by the government of an OECD member country or an OECD non-member country, or by the European Communities.
- (b) *Conditions of Participation.* The Executive Committee shall establish the terms and conditions for the admission, participation and withdrawal of Contracting Parties, including their rights and obligations, subject always to the IEA Framework for International Energy Technology Co-operation as adopted by the Governing Board of the Agency on 3 April 2003, and any amendments thereto.”
- (c) *Admission of New Participants in Tasks.* Any Contracting Party may, with the agreement of the Participants in a Task, acting by unanimity, become a Participant in that Task. Such participation shall become effective upon the receipt by the Executive Director of the Agency of written notice of the participation in the appropriate Task Annex, and the adoption of consequential amendments thereto.
- (d) *Contributions.* The Executive Committee may require, as a condition to admission to participation, that the new Contracting Party or new Participant shall contribute (in the form of cash, services, materials or intellectual property) an appropriate proportion of the prior budget expenditure of any Task in which it participates.
- (e) *Replacement of Contracting Parties.* With the agreement of the Executive Committee, acting by unanimity, and upon the request of a government, a Contracting

Party designated by that government may be replaced by another party. In the event of such replacement, the replacement party shall assume the rights and obligations of a Contracting Party as provided in paragraph (a) above and in accordance with the procedure provided therein. In the event of such replacement, the replacement Contracting Party shall be deemed to have assumed any outstanding financial contributions of the replaced Contracting Party to any common fund established for a Task in accordance with Article 7(b) above.

(f) *Withdrawal.* Any Contracting Party may withdraw from this Agreement or from any Annex either with the agreement of the Executive Committee, acting by unanimity, or by giving twelve months written Notice of Withdrawal to the Executive Director of the Agency, such Notice to be given not less than one year after the date hereof. The withdrawal of a Contracting Party under this paragraph shall not affect the rights and obligations of other Contracting Parties: except that, where the other Contracting Parties have contributed to common funds for a Task, the Executive Committee, acting by unanimity, shall decide whether to adjust the proportionate shares of the Participants in the Task Budget or to adjust the Programme of Work and Budget of the Task to take account of such withdrawal.

(g) *Changes of Status of Contracting Party.* A Contracting Party other than a government or an international organization shall forthwith notify the Executive Committee of any significant change in its status or ownership, or of its becoming bankrupt or entering into liquidation. The Executive Committee shall determine whether any such change in status of a Contracting Party significantly affects the interests of the other Contracting Parties; if the Executive Committee so determines, then, unless the Executive Committee, acting upon the unanimous decision of the other Contracting Parties, otherwise agrees:

(1) That Contracting Party shall be deemed to have withdrawn from the Agreement under paragraph (f) above on a date to be fixed by the Executive Committee; and

(2) The Executive Committee shall invite the government which designated that Contracting Party to designate, within a period of three months of the withdrawal of that Contracting Party, a different entity to become a Contracting Party; if approved by the Executive Committee, acting by unanimity, such entity shall become a Contracting Party with effect from the date on which it signs or accedes to this Agreement and gives the Executive Director of the Agency a Notice of Participation in one or more Annexes.

(h) *Failure to Fulfil Contractual Obligations.* Any Contracting Party which fails to fulfil its obligations under this Agreement within sixty days after its receipt of notice from the Executive Committee, specifying the nature of such failure and invoking this paragraph, may be deemed by the Executive Committee, acting by unanimity of the other Contracting Parties, to have withdrawn from this Agreement.

Article 12

FINAL PROVISIONS

(a) *Term of Agreement.* This Agreement shall remain in force until 30th June, 1999. It may be extended for such additional periods as may be determined by the Executive Committee with the prior approval of the Governing Board of the Agency. Prior to the expiration of the initial or any extension period, the Executive Committee shall complete a review of the effectiveness of this Agreement in accordance with guidelines established by the Agency, and shall report the results of such review to the Committee on Energy Research and Technology (CERT). The Executive Committee may, acting by unanimity, terminate this Agreement at any time.

(b) *Legal Relationship of Contracting Parties and Participants.* Nothing in this Agreement shall be regarded as constituting a partnership between any of the Contracting Parties or Participants. Operating Agents which are not Contracting Parties shall be regarded as Contracting Parties for the purpose of this paragraph.

(c) *Termination.* Upon termination of this Agreement, or any Annex to this Agreement, the Executive Committee, acting by unanimity, shall arrange for the liquidation of the assets of the Task or Tasks; intellectual property held by the Operating Agents for the benefit of the Participants shall for this purpose be regarded as assets of the respective Task. In the event of such liquidation, the Executive Committee shall, so far as practicable, distribute the assets of the Task, or the proceeds therefrom, in proportion to the contributions which the Participants have made from the beginning of the operation of the Task, and for that purpose shall take into account the contributions and any outstanding obligations of former Contracting Parties. Disputes about the proportion allocated to a former Contracting Party under this paragraph shall be settled in accordance with Article 10(d) hereof, for which purpose the former Contracting Party shall be regarded as a Contracting Party.

(d) *Amendment.* This Agreement may be amended at any time by the Executive Committee, acting by unanimity, and any Annex to this Agreement may be amended at any time by the Executive Committee, acting by unanimity of the Participants in the Task to which the Annex refers. Such amendments shall come into force in a manner determined by the Executive Committee, acting under the voting rule applicable to the decision to adopt the amendment. The Chairman of the Executive Committee shall ensure that all Executive Committee members and the Agency are informed of each amendments to this Agreement, or any Annex thereto.

(e) *Deposit.* The original of this Agreement, including any amendments thereto, shall be deposited with the Executive Director of the Agency and a certified copy thereof may be furnished by the Secretariat of the Agency to each Contracting Party and to the Operating Agents. A copy of this Agreement may be furnished by the Secretariat of the Agency to each Agency Participating Country, to each Member country of the Organisation for Economic Co-operation and Development, and to the European Communities.

Done in Paris, this 6th day of October, 1977, and amended on 2 April 2004.*

- * Originally signed as the IEA Implementing Agreement for a Programme of Research and Development on the Production of Hydrogen from Water. On 9th May, 1990 the name of the Agreement was changed to the IEA Implementing Agreement for a Programme of Research and Development on the Production and Utilization of Hydrogen.

LIST OF CONTRACTING PARTIES
(as of 9 February 2006)

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH
ORGANIZATION (CSIRO) (Australia)
(designated by the Government of Australia)

DEPARTMENT OF ENERGY, MINES AND RESOURCES(Canada)
on behalf of Her Majesty the Queen in Right of Canada
(succeeded by Natural Resources Canada (NRCan))

ELECTROLYSER CORPORATION LIMITED
(designated by the Government of Canada)

COMMISSION OF THE EUROPEAN COMMUNITIES

DANISH ENERGY AUTHORITY
for and on behalf of the Government of Denmark

The NATIONAL TECHNOLOGY AGENCY OF FINLAND (TEKES)
for and on behalf of the Government of Finland

The COMMISSARIAT A L'ENERGIE ATOMIQUE (CEA) (France)
for and on behalf of the Government of France

The NATIONAL ENERGY AUTHORITY (Iceland)
for and on behalf of the Government of Iceland

COMITATO NAZIONALE PER L'ENERGIA NUCLEARE
(designated by the Government of Italy)
(succeeded by the Ente per le Nuove Tecnologie, l'Energie e l'Ambiente (ENEA))

The GOVERNMENT OF JAPAN
(replaced by the New Energy and Industrial Technology Development Organization
(NEDO))

The GOVERNMENT OF THE REPUBLIC OF KOREA

The LITHUANIAN ENERGY INSTITUTE
(designated by the Government of Lithuania)

NAAMLOZE VENOOTSCHAP DSM
(designated by the Government of the Netherlands)
replaced by the Centrale Organisatie TNO,
then later replaced by the Netherlands Agency for Energy and the Environment
(NOVEM),
(renamed following merger with Senter to SenterNovem)

NEW ZEALAND BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT
(NZBCSD)
(designated by the Government of New Zealand)

The RESEARCH COUNCIL OF NORWAY
(designated by the Government of Norway)

MINISTRY OF INDUSTRY AND ENERGY
for and on behalf of the Government of Spain
(which later changed its name to the Ministry of Science and Technology)

NATIONAL SWEDISH BOARD FOR ENERGY SOURCE DEVELOPMENT
(designated by the Government of Sweden)
replaced by the Swedish National Board for Industrial and Technical Development
(NUTEK),
then later by the Swedish National Energy Administration,
which changed its name to the Swedish Energy Agency

OFFICE FÉDÉRAL DE LA SCIENCE ET DE LA RECHERCHE DU
DÉPARTEMENT FÉDÉRAL DE L'INTÉRIEUR¹
for and on behalf of the Government of Switzerland
(succeeded by The Swiss Federal Office of Energy)

SCIENTIFIC AND TECHNICAL RESEARCH COUNCIL OF TURKEY²
(designated by the Government of Turkey)

The DEPARTMENT OF TRADE AND INDUSTRY (DTI) (United Kingdom)
for and on behalf of the Government of Great Britain and Northern Ireland

¹ Ratified on 23 January 1980.

² Turkey has been inactive since 1998 but has never withdrawn.

The DEPARTMENT OF ENERGY
for and on behalf of the Government of the United States of America
(replaced by The Government of the United States of America,
then again by the United States Department of Energy)

CONTRACTING PARTIES SINCE WITHDRAWN

CENTRE D'ETUDE DE L'ENERGIE NUCLÉAIRE
for and on behalf of the Government of Belgium

NORANDA MINES LTD.
(designated by the Government of Canada)

KERNFORSCHUNGSANLAGE JÜLICH GmbH³
(designated by the Government of Germany)
(which changed its name to Kernforschungsanlage Jülich GmbH)

KING'S COLLEGE LONDON, UNIVERSITY OF LONDON⁴
(designated by the Government of the United Kingdom of Great Britain and Northern
Ireland)

CITY UNIVERSITY (LONDON)⁵
(designated by the Government of the United Kingdom of Great Britain and Northern
Ireland)

³ Withdrawal effective as of 30 June 1999.

⁴ Withdrawal effective as of 9 February 1999.

⁵ Withdrawal effective as of 9 February 1999.

Exhibit A
**IEA FRAMEWORK
FOR INTERNATIONAL ENERGY TECHNOLOGY CO-OPERATION**

I. General Principles

Article 1

Mandate

- 1.1 In fulfilment of Chapter VII of the Agreement on an International Energy Program and in light of the Shared Goals of the IEA, the IEA operates Implementing Agreements to enable IEA Member countries to carry out programmes and projects on energy technology research, development and deployment.
- 1.2 An Implementing Agreement is a contractual relationship established by at least two IEA Member countries, and approved by the Governing Board, for the purpose set out in Article 1.1.
- 1.3 Participants in an Implementing Agreement shall contribute as fully as possible to the achievement of its objectives and shall endeavour to secure, through public and private support, the necessary scientific, technical and financial resources for the programmes and projects carried out under such an Implementing Agreement.
- 1.4 Each Implementing Agreement shall have an Executive Committee composed of representatives of all participants.

Article 2

Nature of Implementing Agreements

- 2.1 The activities of an Implementing Agreement may include, *inter alia*:
 - (a) co-ordination and planning of specific energy technology research, development and deployment studies, works or experiments carried out at a national or international level, with subsequent exchange, joint evaluation and pooling of the scientific and technical results acquired through such activities;
 - (b) participation in the operation of special research or pilot facilities and equipment provided by a participant, or the joint design, construction and operation of such facilities and equipment;
 - (c) exchange of information on (i) national programmes and policies, (ii) scientific and technological developments and (iii) energy legislation, regulations and practices;
 - (d) exchanges of scientists, technicians or other experts;
 - (e) joint development of energy related technologies; and
 - (f) any other energy technology related activity.

- 2.2 Participation in an Implementing Agreement shall be based on equitable sharing of obligations, contributions, rights and benefits. Participants in an Implementing Agreement shall undertake to make constructive contributions, whether technical, financial or otherwise, as may be agreed by the Executive Committee.
- 2.3 Some or all of the participants in an Implementing Agreement may choose to execute specific projects and/or programmes through Annexes to the Implementing Agreement.

II. Rules Applicable to IEA Implementing Agreements

Article 3

Participation, Admission and Withdrawal

- 3.1 An Implementing Agreement can be established by two or more IEA Member countries subject to approval of the Committee on Energy Research and Technology (CERT) and of the Governing Board. There are two possible categories of participants in Implementing Agreements: Contracting Parties and Sponsors.
- 3.2 Contracting Parties may be
- (a) the governments of both OECD member or OECD non-member countries;
 - (b) the European Communities;
 - (c) international organisations in which the governments of OECD member countries and/or OECD non-member countries participate; and
 - (d) any national agency, public organisation, private corporation or other entity designated by the government of an OECD member country or an OECD non-member country, or by the European Communities.
- 3.2.1 Participation in any Implementing Agreement for OECD non-member countries or for international organisations requires prior approval by the CERT. However, should the CERT consider a first time application by an OECD non-member country or an international organisation to be sensitive, it may refer the decision to the Governing Board as it deems appropriate.
- 3.2.2 Prior to CERT approval of participation of OECD non-member countries or international organisations in any Implementing Agreement, the Executive Committee shall:
- (a) have voted in favour of the applicant to join the Implementing Agreement and provide evidence of the same to the CERT;
 - (b) provide the CERT with a copy of the terms and conditions of the applicant's participation in the Implementing Agreement; and
 - (c) provide the CERT with a letter from the applicant expressing the applicant's desire to join the Implementing Agreement and specifying which Annexes it wishes to join; its acceptance of the terms and conditions of the Implementing Agreement; the name of its designated

entity if it is not the applicant itself; and the name of the entity that will sign the Implementing Agreement.

3.2.3 The terms and conditions for the admission, participation and withdrawal of Contracting Parties, including their rights and obligations, in Implementing Agreements and their Annexes, if any, shall be established by the Executive Committee of each Implementing Agreement.

3.2.4 Notwithstanding Article 3.2.3, no Contracting Party from an OECD non-member country or international organisation shall have greater rights or benefits than Contracting Parties from OECD member countries.

3.3 Sponsors may be

(a) entities of OECD member countries or OECD non-member countries who are not designated by the governments of their respective countries to participate in a particular Implementing Agreement; and

(b) non-intergovernmental international entities in which one or more entities of OECD member countries or OECD non-member countries participate.

3.3.1 Participation of Sponsors in Implementing Agreements requires prior approval by the CERT.

3.3.2 Prior to CERT approval of Sponsor participation in any Implementing Agreement, the Executive Committee shall:

(a) have voted in favour of the applicant to join the Implementing Agreement and provide evidence of the same to the CERT;

(b) provide the CERT with a copy of the terms and conditions of the applicant's participation in the Implementing Agreement; and

(c) provide the CERT with a letter from the applicant expressing the applicant's desire to join the Implementing Agreement and specifying which Annexes it wishes to join; its acceptance of the terms and conditions of the Implementing Agreement; and the name of the entity that will sign the Implementing Agreement.

3.3.3 The terms and conditions for the admission, participation and withdrawal of Sponsors, including rights and obligations, in Implementing Agreements and their Annexes, if any, shall be established by the Executive Committee of each Implementing Agreement.

3.3.4 Notwithstanding Article 3.3.3, no Sponsor shall have greater rights or benefits than Contracting Parties from OECD non-member countries and no Sponsor shall be designated Chair or Vice-chair of an Implementing Agreement.

3.3.5 The CERT shall have the right to not approve participation of a Sponsor if the terms and conditions of such participation do not comply with this Framework, any Decisions of the CERT or the Governing Board and the Shared Goals of the IEA.

Article 4

Specific Provisions

- 4.1 Unless the CERT otherwise agrees, based on exceptional circumstance and sufficient justification, Implementing Agreements shall be for an initial term of up to, but no more than, five years.
- 4.2 An Implementing Agreement may be extended for such additional periods as may be determined by its Executive Committee, subject to approval of the CERT. Any single extension period shall not be greater than five years unless the CERT otherwise decides, based on exceptional circumstances and sufficient justification.
- 4.3 Notwithstanding Paragraph 4.2, should the duration of the programme of work of an Annex exceed the term of the Implementing Agreement to which it relates, the CERT shall not unreasonably withhold approval to extend the Implementing Agreement for such additional period to permit the conclusion of the work then being conducted under the Annex.
- 4.4 Either the Contracting Parties or the Executive Committee of each Implementing Agreement shall:
 - 4.4.1 approve the programme activities and the annual programme of work and budget for the relevant Implementing Agreement;
 - 4.4.2 establish the terms of the contribution for scientific and technical information, know-how and studies, manpower, capital investment or other forms of financing to be provided by each participant in the Implementing Agreement;
 - 4.4.3 establish the necessary provisions on information and intellectual property and ensure the protection of IEA copyrights, logos and other intellectual property rights as established by the IEA;
 - 4.4.4 assign the responsibility for the operational management of the programme or project to an entity accountable to the Executive Committee of the relevant Implementing Agreement;
 - 4.4.5 establish the initial term of the Implementing Agreement and its Annexes;
 - 4.4.6 approve amendments to the text of the Implementing Agreement and Annexes; and
 - 4.4.7 invite a representative of the IEA Secretariat to its Executive Committee meetings in an advisory capacity and, sufficiently in advance of the meeting, provide the Secretariat with all documentation made available to the Executive Committee members for purposes of the meeting.

Article 5

Copyright

- 5.1 Notwithstanding the use of the IEA name in the title of Implementing Agreements, the Implementing Agreements, the Executive Committee or the entity responsible for

the operational management of the programme or project may use the name, acronym and emblem of the IEA as notified to the World Intellectual Property Organisation (WIPO) only upon prior written authorisation of the IEA and solely for the purposes of executing the Implementing Agreements.

- 5.2 The IEA shall retain the copyright to all IEA deliverables and published or unpublished IEA material. Implementing Agreements wishing to use, copy or print such IEA deliverables and/or material shall submit a prior written request of authorisation to the IEA.

Article 6

Reports to the IEA

- 6.1 Each Executive Committee shall submit to the IEA:
- 6.1.1 as soon as such events occur, notifications of any admissions and withdrawals of Contracting Parties and Sponsors, any changes in the names or status of Contracting Parties or Sponsors, any changes in the Members of the Executive Committee or of the entity responsible for the operational management of the programme or project, or any amendments to an Implementing Agreement and Annex thereto;
 - 6.1.2 annual reports on the progress of programmes and projects of the Implementing Agreement and any Annex;
 - 6.1.3 notwithstanding Article 6.1.1, in addition to and with the Annual Report, annually provide the IEA with the following information:
 - (a) the names and contact details of all current Contracting Parties and Sponsors;
 - (b) the names and contact details of all Contracting Parties and Sponsors who may have withdrawn from the Implementing Agreement or any Annex in the year covered by the Annual Report;
 - (c) the names and contact details of all new Contracting Parties and Sponsors who may have joined the Implementing Agreement or any Annex in the year covered by the Annual Report;
 - (d) any changes in the names or status of any Contracting Parties or Sponsors;
 - (e) the names and contact details of the Executive Committee members and the entity responsible for the operational management of the programme or project; and
 - (f) any amendments to the text of an Implementing Agreement and any Annex thereto.
 - 6.1.4 End of Term Reports, which shall include all the information and documentation required by Decisions of the CERT then in effect and relating thereto; and

- 6.1.5 at the request of the IEA, any other non-proprietary information as may be requested by the IEA in connection with the IEA's mandate.

Article 7

Effective Date

This Framework shall take effect and become binding on all participants in the Implementing Agreements and Annexes from the date of its approval as a decision by the Governing Board.

Annex X

PHOTO-PRODUCTION OF HYDROGEN

1. *Objective*

The objective of this Annex is to investigate and develop processes for producing hydrogen by direct conversion using solar energy. These processes should have the potential to be efficient, economically competitive and environmentally benign.

2. *Scope*

This Task will address photo-conversion processes by which solar energy can be stored and transported as chemical energy in the form of hydrogen. The focus will be primarily on water splitting, but some non oxygen-evolving systems will also be considered. Two types of processes will be explored:

(a) Photo-electrochemical processes in which light is absorbed in a semiconductor (or in a dye absorbed at the surface of a semiconductor), which is in contact with an electrolyte. The electrochemical reaction leads to the formation of hydrogen;

(b) Photo-biological processes, whereby hydrogen is metabolically produced by bacteria or algae using light as their energy source, or by isolated biochemically active substances derived from such micro-organisms.

This may involve an "up-hill reaction" (reaction with a positive change in free energy) or a "down-hill reaction" (reaction with a negative change in free energy).

3. *Means*

In order to accomplish the above objectives the Participants will carry out research activities within the framework of three Subtasks:

(a) Subtask A: Photo-Electrochemical Hydrogen Production

(1) Activity A1 Innovative Concepts for Water Splitting ("up-hill reactions")

Innovative concepts for photo-electrochemical water splitting, leading towards cost-effective technologies for hydrogen production will be explored. The experts will investigate new materials, structures and cell designs for improved light harvesting, energy transfer, redox reaction kinetics and corrosion protection.

(2) Activity A2 Non Oxygen-Evolving Systems
("down-hill reactions")

Photo-electrochemical processes for hydrogen production in non oxygen-evolving systems will be examined. Preference will be given to processes which produce useful by-products and/or which provide a solution to environmental problems. The feasibility of hydrogen production by means of sacrificial electron donors (such as chlorides in sea water, sulfides, sulfites or other contaminants in aqueous effluent streams) will be assessed.

(b) Subtask B: Photo-Biological Hydrogen Production

Organisms (1) Activity B1 Increasing the Hydrogen Production of Micro-

Strains of micro-organisms with high capacities for hydrogen production will be selected and developed by screening, cultivation and genetic manipulation.

Production (2) Activity B2 Development of Bio-Reactors for Hydrogen

Optimal conditions for industrial photo-production of hydrogen by micro-organisms will be identified. An information base for designing bio-reactors providing such conditions will be created. This will involve:

(i) Establishing how the productivity and endurance of hydrogen-producing micro-organisms are affected by immobilization or other techniques envisaged for industrial photo-biological hydrogen production;

(ii) Identifying optimal operating conditions (i.e. light-regimes, medium compositions and gaseous environments) for selected systems; and

(iii) Conducting a feasibility study for a selected system, operating under optimum conditions. Estimates for capital costs and operational costs will be included.

(c) Subtask C Standardization of Methods

Standardized procedures for measurement, calculation and reporting of the efficiencies in photo-conversion processes for hydrogen production will be defined. This will assure that reported

data are comparable. Both the photo-electrochemical and the photo-biological activities of Subtasks A and B will benefit from this activity. Recommendations will be developed by a panel of experts which will convene during the first year of the Task. They will present their recommendations at the end of that year.

4. *Results*

The collective efforts of this Task will result in the following outputs:

- (a) A feasibility study of photo-electrochemical hydrogen production in non-oxygen evolving systems (raw material potential, technical feasibility, economy and environmental aspects);
- (b) A feasibility study of industrial, photo-biological hydrogen production (specifications and cost estimates for an industrial bioreactor system);
- (c) An assessment of the feasibility of coupling hydrogen evolution to the photodegradation of waste or polluting organic substances;
- (d) A data bank on hydrogen-producing micro-organisms;
- (e) A standardized method for reporting efficiencies in photo-electrochemical and photo-biological systems; and
- (f) Publications of Task activities in scientific journals and in the proceedings of international conferences.

5. *Responsibilities*

- (a) In addition to the obligations enumerated in Article 8 of this Agreement, each Participant shall:
 - (1) Attend all Task meetings, and all Subtask meetings to which it contributes, and present a status report of the ongoing or completed work at such meetings;
 - (2) Provide the Operating Agent with a National Participation Letter, indicating their commitment and the level of contribution to the Annex. The National Participation Letters in aggregate represent the National Participation Plan;
 - (3) Contribute to the collective efforts of the Task in accordance with the Programme of Work approved by the Executive Committee pursuant to Article 5(c) and the National Participation Plan; and

(4) Assist in the review of technical reports produced by the Task.

(b) Each Subtask Leader shall:

(1) Assist the Operating Agent in preparing and updating the Programme of Work;

(2) Manage the Subtask work in co-ordination with the Operating Agent;

(3) Lead the experts in the production of technical reports and be responsible for the final editing;

(4) Organize and chair Subtask meetings as part of the Task meetings or as independent meetings as deemed appropriate by the Participants; and

(5) Provide the Operating Agent with an annual report of Subtask activities.

(c) The Operating Agent shall:

(1) Manage the overall Task in co-ordination with the Subtask Leaders;

(2) Implement decisions of the Executive Committee;

(3) Organize and conduct experts meetings;

(4) Submit a detailed Programme of Work to the Executive Committee for approval not later than two months after the adoption of this Annex;

(5) Provide the Executive Committee with written semi-annual reports of the status of the work being undertaken by the Task;

(6) Assume responsibility for the timeliness and technical content of all reports produced by the Task;

(7) Provide to the Executive Committee a final report on the work of the Task within six months after the completion date of the Task; and

(8) Perform such additional services and actions as may be decided by the Executive Committee acting by unanimity of the Participants.

6. *Inventions*

For the purpose of this Annex, the following provisions shall apply in lieu 8(j) of the Agreement:

(a) For arising information regarding inventions the following rules shall apply:

(1) Arising information regarding inventions shall be owned in all countries by the inventing Participant. The inventing Participant shall promptly identify and report to the Executive Committee any such information along with an indication whether and in which countries the inventing Participant intends to file patent application;

(2) Information regarding inventions on which the inventing Participant intends to obtain patent protection shall not be published or publicly disclosed by the Operating Agent of the other Participant until a patent application has been filed, provided, however, that this restriction on publication or disclosure shall not extend twelve months from the date of reporting of the invention. It shall be the responsibility of the inventing Participant to appropriately mark Task report which disclose inventions that have not been appropriately protected by the filing of the patent application.

(b) The inventing Participant shall license proprietary information arising from the Task for non-exclusive use as follows:

(1) To Participants in the Task:

(i) On the most favorable terms and conditions for use by the Participants in their own country; and

(ii) On favorable terms and conditions for the purpose of sub-licensing others for use in their own country.

(2) Subject to sub-paragraph (1) above, to each Participant in the Task for use in all country, on reasonable terms and conditions; and

(3) To the government of any Agency country and nationals designated by it, for use in such country in order to meet its energy needs.

Royalties, if any, under licenses pursuant to this paragraph shall be the property of the inventing Participant.

7. *Minimum Level of Effort*

(a) The Participant minimum level of effort is 1 person year ("py") per year, of which at least 0.5 py per year should be devoted to the common work of the Task. The Subtask Leaders shall each provide

an additional 0.2 py per year and the Operating Agent an additional 0.33 py per year for the duration of the Annex.

(b) Attendance by all Participants at the Task expert meetings is mandatory. Attendance at all the Subtask and Activity meetings is mandatory for all respective Participants.

8. *Funding*

(a) The Participants, Subtask Leaders and Operating Agent will bear the costs they incur in carrying out their work under this Annex, including the costs of preparing and distributing reports and travel expenses.

(b) The costs of organizing meetings and workshops shall be borne by the host Participant, excluding the travel, lodging and meal costs of the experts.

9. *Time Schedule*

This Annex shall enter into force on 1st March, 1995, and remain in force until 28th February, 1998. Within the limits of the term of the Agreement, this Annex may be extended by two or more Participants, acting in the Executive Committee, and shall thereafter apply only to those Participants.

10. *Operating Agent and Subtask Leaders*

The Operating Agent for this Annex shall be the Research Council of Norway (Norway), acting through the Institute for Energy Technology.

The Subtask Leaders shall be:

(a) Subtask A: The Swiss Federal Office of Energy, Switzerland;

(b) Subtask B: The National Institute of Bioscience and Human-Technology, Japan;

(c) Subtask C: The University of Uppsala, Sweden.

11. *Participants in this Annex*

The Contracting Parties which are Participants in this Annex are the following:

The Government of Japan,

The Research Council of Norway,

The Swedish National Board for Industrial and Technical Development (NUTEK),

The Swiss Federal Office of Energy,

The Scientific and Technical Research Council of Turkey,

The King's College London, University of London (The United Kingdom), and

The Government of the United States of America.

INTEGRATED SYSTEMS ANALYSIS

1. *Objective*

The Objective of this Annex is to develop a tool to assist in the design and evaluation of potential hydrogen demonstration projects and in the optimization of existing hydrogen demonstration projects. Emphasis will be placed in integrated systems covering all components, from input energy to end use. The activities will be focused on near- and middle-term applications, with consideration of the transition to sustainable hydrogen energy systems.

2. *Scope*

For hydrogen to become a competitive energy carrier, experience and operating data need to be generated and collected through demonstration projects. Hydrogen technologies must advance beyond the proof-of-concept stage before significant investments will be made in infrastructure changes. Hydrogen offers potential environmental and efficiency advantages over conventional fossil fuels. However, the technical and cost issues may prevent its wide-spread use, unless a framework of scientific principles, technical expertise, and analytical evaluation and assessment is developed. Existing and proposed hydrogen energy system demonstrations typically deploy technologies at different levels of development. A combination of data collection, demonstration case studies, component simulation, and integrated systems modelling with result in the development of design guidelines for future demonstrations. Systems under consideration include:

- (a) Stand-alone and grid-connected hydrogen production and hydrogenation systems;
- (b) Hydrogen and oxygen transport and storage systems;
- (c) Conversion devices including fuel cells, turbines, combustors, and hydrogenation units;
- (d) Electric load levelling systems; and
- (e) General characteristics of mobile applications.

3. *Means*

As appropriate, the work will be carried out in co-operation with other IEA Implementing Agreements. To accomplish the above objective, the Participants will undertake research within the framework of three highly co-ordinated Subtasks:

- (a) Subtask A: Case Studies

Hydrogen energy systems (pilot and demonstration projects) will be critically evaluated and compared. Measurement of systems performance will be the central focus, with safety and regulatory issues considered. The Subtask will include the following activities:

- (1) Compile a list of pilot and demonstration projects available for evaluation;
- (2) Select a limited number of projects for detailed evaluation;
- (3) Establish data requirements;
- (4) Obtain detailed information and data (performance, operating conditions, start-up, etc.) on selected projects;
- (5) Organize collected data to facilitate reporting and analysis;
- (6) Update data base and extend to include new projects and additional data according to requirements of Subtasks B and C; and
- (7) Produce a case study report to document the hydrogen energy systems.

(b) Subtask B: Analysis Tools

Simulation activities will build on existing modelling efforts. A number of commercially-available simulation tools were evaluated, and a common integrating platform was selected. Based on information gathered in Subtask A, a set of compatible component modules will be identified. The integrating platform will be adapted, if necessary, to accept the results of these models, independent of the component simulation.

- (1) Identify components to be modelled based on projects selected in Subtask A;
- (2) Validate component models;
- (3) Request additional data, if necessary (from Subtask A) to complete validation;
- (4) Adapt models into the integrating platform;
- (5) Perform parametric studies to identify promising strategies for improving the performance of selected systems;

(6) Produce a report describing the models; and

(7) Provide a library of component models to all Participants.

(c) Subtask C: Design Guidelines

Design guidelines will be established that will allow future demonstration plants to meet operating and user requirements, and facilitate the systematic integration of hydrogen into the energy systems.

These guidelines will be the result of analysis of integrated hydrogen energy systems.

(1) Identify baseline application requirements of conventional energy systems that should be met by hydrogen energy systems;

(2) Identify systems that can meet energy services that are currently not covered by the selected set of projects, and select the most promising hydrogen energy systems that have not been demonstrated;

(3) Request additional project data (Subtask A) and component models (Subtask B);

(4) Build system models in the integrating platform, based on the component models developed in Subtask B;

(5) Perform base case validation runs and compare results to data collected in Subtask A;

(6) Compare base case results with application requirements;

(7) Perform optimization runs and identify variances that require component model modification (Subtask B) or additional data (Subtask A); and

(8) Prepare recommendations for the optimization of existing hydrogen systems and design guidelines for new, promising, and desirable hydrogen systems.

4. *Results*

The collective efforts of this Task will result in the following outputs:

(a) Case study report to document the selected hydrogen energy systems;

(b) Report describing the component models, including the required inputs and the expected outputs, and limitations and capabilities of the models;

(c) Library of component models for use in the common integrating platform; and

(d) Report of recommendations for optimizing existing hydrogen energy systems and the set of design guidelines for planning future integrated hydrogen energy systems.

5. *Responsibilities*

(a) In addition to the obligations enumerated in Article 8 of this Agreement, each Participant shall:

(1) Attend all Task meetings, and all Subtask meetings to which it contributes, and present a status report of the ongoing or completed work at such meetings;

(2) Provide the Operating Agent with a National Participation Letter, indicating their commitment and the level of contribution to the Annex. The National Participation Letters in aggregate represent the National Participation Plan;

(3) Contribute to the collective efforts of the Task in accordance with the Programme of Work approved by the Executive Committee pursuant to Article 5(c) and the National Participation Plan; and

(4) Assist in the review of technical reports produced by the Task.

(b) Each Subtask Leader shall:

(1) Assist the Operating Agent in preparing and updating the Programme of Work;

(2) Manage the Subtask work in co-ordination with the Operating Agent;

(3) Lead the experts in the production of technical reports and be responsible for the final editing;

(4) Organize and chair Subtask meetings as part of the Task meetings or as independent meetings as deemed appropriate by the Participants; and

(5) Provide the Operating Agent with an annual report of Subtask activities.

(c) The Operating Agent shall:

(1) Manage the overall Task in co-ordination with the Subtask Leaders;

(2) Implement decisions of the Executive Committee;

(3) Organize and conduct experts meetings;

(4) Submit a detailed Programme of Work to the Executive Committee for approval not later than two months after the adoption of this Annex;

(5) Provide the Executive Committee with written semi-annual reports of the status of the work being undertaken by the Task;

(6) Assume responsibility for the timeliness and technical content of all reports produced by the Task;

(7) Provide to the Executive Committee a final report on the work of the Task within six months after the completion date of the Task; and

(8) Perform such additional services and actions as may be decided by the Executive Committee acting by unanimity of the Participants.

6. *Inventions*

For the purpose of this Annex, the following provisions shall apply in lieu 8(j) of the Agreement:

(a) For arising information regarding inventions the following rules shall apply:

(1) Arising information regarding inventions shall be owned in all countries by the inventing Participant. The inventing Participant shall promptly identify and report to the Executive Committee any such information along with an indication whether and in which countries the inventing Participant intends to file patent application;

(2) Information regarding inventions on which the inventing Participant intends to obtain patent protection shall not be published or publicly disclosed by the Operating Agent or the other Participant until a patent application has been filed, provided, however, that this restriction on publication or disclosure shall not extend twelve months from the date of reporting of the invention. It shall be the responsibility of the inventing Participant to appropriately mark Task report which

disclose inventions that have not been appropriately protected by the filing of the patent application.

(b) The inventing Participant shall license proprietary information arising from the Task for non-exclusive use as follows:

(1) To Participants in the Task:

(i) On the most favorable terms and conditions for use by the Participants in their own country; and

(ii) On favorable terms and conditions for the purpose of sub-licensing others for use in their own country.

(2) Subject to sub-paragraph (1) above, to each Participant in the Task for use in all country, on reasonable terms and conditions; and

(3) To the government of any Agency country and nationals designated by it, for use in such country in order to meet its energy needs.

Royalties, if any, under licenses pursuant to this paragraph shall be the property of the inventing Participant.

7. *Minimum Level of Effort*

(a) The Participant minimum level of effort is 0.67 person year ("py") per year. The Subtask Leaders shall each provide an additional 0.2 py per year and the Operating Agent an additional 0.33 py per year for the duration of the Annex.

(b) Attendance by all Participants at the Task meetings is mandatory. Attendance at all the Subtask meetings is mandatory for all Participants in that Subtask. Two Task meetings are scheduled in each year.

8. *Funding*

(a) The Participants, Subtask Leaders and Operating Agent shall bear the costs they incur in carrying out their work under this Task, including the costs of preparing and transmitting reports and travel expenses.

(b) The costs of organizing meetings and workshops shall be borne by the host Participant, excluding the travel, lodging and meal costs of the experts.

9. *Time Schedule*

This Annex shall enter into force on 1st August, 1995, and remain in force until 31st July, 1998. Within the limits of the term of the Agreement, this Annex may be extended by two or more Participants, acting in the Executive Committee, and shall thereafter apply only to those Participants.

10. *Operating Agent and Subtask Leaders*

The Operating Agent for this Annex shall be the Government of the United States of America.

The Subtask Leaders shall be:

(a) Subtask A: The Paul Scherrer Institute (Switzerland);

(b) Subtask B: The United States Department of Energy;

(c) Subtask C: The Netherlands Agency for Energy and the Environment (NOVEM).

11. *Participants in this Annex*

The Contracting Parties which are Participants in this Annex are the following:

The Electrolyser Corporation Limited (Canada),

The Ente per le Nuove Tecnologie, l'Energia e l'Ambiente (ENEA) (Italy),

The Government of Japan,

The Netherlands Agency for Energy and the Environment (NOVEM),

The Ministry of Industry and Energy (Spain)

The Swiss Federal Office of Energy, and

The Government of the United States of America.

Annex XII

HYDROGEN STORAGE IN METAL HYDRIDES

1. *Objectives*

Lack of convenient, cost-effective storage devices for hydrogen is one major limitation to wider-scale use of hydrogen. Achieving a storage device which uses minimal energy, is compact and does not add excessive weight has proven difficult. Metal hydrides offer a promising approach to storing hydrogen for both mobile and stationary systems. They are safe and capable of storing hydrogen for long periods at high volumetric density. The objectives of this Annex are to develop new hydride materials suitable for on-board hydrogen storage for vehicles, to develop new hydride surface treatments for a new generation of electrochemical applications, and to identify spin-off applications. Completion of this work should lead the way to commercialization of such systems.

2. *Scope*

The scope of this Task includes all aspects of investigating and developing metal hydrides for hydrogen storage and transportation. The collaborative work includes laboratory research to synthesize and characterize new hydride materials and surfaces, evaluation of the manufactur-ability of such systems, and identification of potential applications.

3. *Means*

Work on this Task will be carried out under four Subtasks:

(a) Subtask A: Synthesis Techniques

Through task-sharing Participants will develop techniques for synthesizing new materials and surfaces for hydrogen storage. Each participating country will develop such materials and surfaces for characterisation and analysis. Results will be shared among the Participants. Work will be carried out under the following project titles:

- (1) Synthesis of intermetallic hydrides based on transition metal hydrogen complexes;
- (2) Chemical synthesis of metal hydrides;
- (3) Development of new superior metal hydrides;
- (4) Controlling the micro-structure of hydride alloys;
- (5) Making alloys by means of rapid solidification; and
- (6) Chemical, metallurgical and physical modification of alloy surfaces.

(b) Subtask B: Characterization of New Materials and Surfaces

New materials developed within this Task will be characterized using available techniques making use of Participants' facilities. Specific projects include:

- (1) Determination of the lattice structure of metal hydrides;
- (2) Measurement of the pressure-composition-temperature relationships of synthesized hydrides;
- (3) Microstructural analysis to better understand hydriding behaviour;
- (4) Surface analysis and treatments to improve surface properties; and
- (5) Electrode evaluation of the effectiveness of new materials.

(c) Subtask C: Evaluation of Manufacturing Technology

The suitability of materials developed in this Task for economical scale production is the subject of this Subtask. Suitability criteria include cost and availability of raw materials, environmental considerations, state of the art and needed improvements to manufacturing techniques and estimated manufacturing costs.

(d) Subtask D: Applicability Analysis of Hydrogen Storage Materials

This Subtask will search for spin-off applications for hydrides developed in this Task. Characteristics of metal hydrides to be considered for evaluation include:

- (1) Weight and volume;
- (2) Energy efficiency;
- (3) Operating temperature and pressure;
- (4) Environmental considerations;
- (5) Economics (initial cost / life cycle cost);
- (6) Safety and reliability; and
- (7) Tolerance to hydrogen impurities.

4. *Results*

The collective efforts of this Task will result in the following outputs:

- (a) A comprehensive review of metal hydrides for hydrogen storage (May 1996);
- (b) A technical workshop on hydrogen storage with recommendations and proceedings (September 1996);
- (c) Final reports from the shared project; and
- (d) One or more improved metal hydrides with properties suitable for transportation application or other uses to be identified.

5. *Responsibilities*

(a) In addition to the obligations enumerated in Article 8 of this Agreement, each Participant shall:

(1) Attend all Task meetings, and all Subtask meetings to which it contributes, and present a status report of the ongoing or completed work at such meetings;

(2) Provide the Operating Agent with a National Participation Letter, indicating their commitment and the level of contribution to the Annex. The National Participation Letters in aggregate represent the National Participation Plan;

(3) Contribute to the collective efforts of the Task in accordance with the Programme of Work approved by the Executive Committee pursuant to Article 5(c) and the National Participation Plan; and

(4) Assist in the review of technical reports produced by the Task.

(b) Each Subtask Leader shall:

(1) Assist the Operating Agent in preparing and updating the Programme of Work;

(2) Manage the Subtask work in co-ordination with the Operating Agent;

(3) Lead the experts in the production of technical reports and be responsible for the final editing; and

(4) Provide the Operating Agent with an annual report of Subtask activities.

(c) The Operating Agent shall:

(1) Manage the overall Task in co-ordination with the Subtask Leaders;

(2) Implement decisions of the Executive Committee;

- (3) Organize and conduct experts meetings;
- (4) Submit a detailed Programme of Work to the Executive Committee for approval not later than two months after the adoption of this Annex;
- (5) Provide to the Executive Committee with written semi-annual reports of the status of the work being undertaken by the Task;
- (6) Assume responsibility for the timeliness and technical content of all reports produced by the Task;
- (7) Provide the Executive Committee with a final report on the work of the Task within six months after the completion date of the Task; and
- (8) Organize and chair Subtask meetings as part of the Task meetings or as independent meetings as deemed appropriate by the Participants; and
- (9) Perform such additional services and actions as may be decided by the Executive Committee acting by unanimity of the Participants.

6. *Inventions*

For the purpose of this Annex, the following provisions shall apply in lieu 8(j) of the Agreement:

(a) For arising information regarding inventions the following rules shall apply:

(1) Arising information regarding inventions shall be owned in all countries by the inventing Participant. The inventing Participant shall promptly identify and report to the Executive Committee any such information along with an indication whether and in which countries the inventing Participant intends to file patent application;

(2) Information regarding inventions on which the inventing Participant intends to obtain patent protection shall not be published or publicly disclosed by the Operating Agent of the other Participant until a patent application has been filed, provided, however, that this restriction on publication or disclosure shall not extend twelve months from the date of reporting of the invention. It shall be the responsibility of the inventing Participant to appropriately mark Task report which disclose inventions that have not been appropriately protected by the filing of the patent application.

(b) The inventing Participant shall license proprietary information arising from the Task for non-exclusive use as follows:

- (1) To Participants in the Task:

- (i) On the most favorable terms and conditions for use by the Participants in their own country; and
 - (ii) On favorable terms and conditions for the purpose of sub-licensing others for use in their own country.
- (2) Subject to sub-paragraph (1) above, to each Participant in the Task for use in all country, on reasonable terms and conditions; and
 - (3) To the government of any Agency country and nationals designated by it, for use in such country in order to meet its energy needs.

Royalties, if any, under licenses pursuant to this paragraph shall be the property of the inventing Participant.

7. *Minimum Level of Effort*

The minimum level of effort is participation in one or more Subtasks with a minimum total effort of 1 person year (“py”) per year. The Operating Agent shall provide an additional 0.3 py per year for the duration of the Annex. Attendance by all Participants at scheduled workshops and expert meetings is mandatory.

8. *Funding*

(a) The Participants, Subtask leaders and Operating Agent will bear the costs they incur in carrying out their work under this Task, including the costs of preparing and transmitting reports and travel expenses.

(b) The costs of organizing meetings and workshops shall be borne by the host Participant, excluding the travel, lodging and meal costs of the experts.

9. *Time Schedule*

The Annex shall enter into force on 27th September, 1995, and remain in force until 30th September, 1997. Within the limits of the term of the Agreement, this Annex may be extended by two or more Participants, acting in the Executive Committee, and shall thereafter apply only to those Participants.

10. *Operating Agent*

The Operating Agent for this Annex shall be the Government of the United States of America.

11. *Participants in this Annex*

The Contracting Parties which are Participants in this Annex are the following:

The Government of Japan,

The Research Council of Norway,

The Swedish National Board for Industrial and Technical Development (NUTEK),

The Swiss Federal Office of Energy, and

The Government of the United States of America.

The Legal Counsel of the International Energy Agency hereby certifies that the present copy conforms to the original text deposited with the Executive Director of the International Energy Agency (as amended to the date hereof, by agreement of the Contracting Parties).

Paris,

THE LEGAL COUNSEL:

CRAIG BAMBERGER