
INTERNATIONAL ENERGY AGENCY

IMPLEMENTING AGREEMENT

FOR A PROGRAMME OF RESEARCH,
DEVELOPMENT, DEMONSTRATION, AND
PROMOTION OF HEAT PUMPING TECHNOLOGIES

as amended on 6 November 2009

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HEAT PUMPING TECHNOLOGIES
AS AMENDED ON 6 NOVEMBER 2009

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List of Annexes

Annex No	Title	Participants (Operating Agent underlined)	Completed
1.	Common Study of Advanced Heat Pumps	Austria, Belgium, Canada, Denmark, <u>Germany</u> , Italy, Japan, the Netherlands, Spain, Sweden, Switzerland, United Kingdom, the United States	1980
2.	Vertical Earth Heat Pump Systems	Austria, Canada, Denmark, <u>Sweden</u> , the United States	1983
3.	Heat Pump Systems Applied in Industry	Austria, <u>Belgium</u> , Canada, Denmark, Finland, Germany, Italy, Japan, the Netherlands, Sweden	1984
4.	Heat Pump Centre	Austria, Belgium, Canada, Finland, <u>Germany</u> , Italy, Japan, the Netherlands, Norway, Sweden, the United States	1990
5.	Integration of Large Heat Pumps into District Heating and Large Housing Blocks	Denmark, Germany, Italy, <u>Sweden</u>	1986
6.	Study of Working Fluid Mixtures and High Temperature Working Fluids for Compressor Driven Systems	Austria, Denmark, Finland, Germany, Japan, <u>Sweden</u> , the United States	1986
7.	New Development of the Evaporator Part of Heat Pump Systems	Canada, Denmark, Finland, Norway, <u>Sweden</u>	1989
8.	Advanced in-ground Heat Exchange Technology for Heat Pump Systems	<u>Canada</u> , Germany, Switzerland, the United States	1992
9.	High Temperature Industrial Heat Pumps	<u>Belgium</u> , Germany, Finland, Japan, the Netherlands, Sweden, Switzerland, the United States	1990
10.	Technical and Market Analysis of Advanced Heat Pumps	Sweden, <u>the United States</u>	1991
11.	Stirling Engine Technology for Application in Buildings	Japan, Sweden, <u>the United States</u>	1989

Annex No	Title	Participants (Operating Agent underlined)	Completed
12.	Modelling Techniques for Simulation and Design of Compression Heat Pumps	Austria, Belgium, Germany, <u>Italy</u> , Japan, Switzerland, <u>the United States</u>	1992
13.	State and Transport Properties of High Temperature Working Fluids and Non-Azeotropic Mixtures	Canada, Germany, Japan, Norway, <u>Sweden</u> , the United States	1992
14.	Working Fluids and Transport Phenomena in Advanced Absorption Heat Pumps	Belgium, Denmark, Germany, <u>Japan</u> , Sweden, the United States	1991
15.	Heat Pump Systems with Direct Expansion Ground Coils	Austria, <u>Canada</u> , Japan, the United States	1993
16.	Heat Pump Centre	Austria, Japan, <u>the Netherlands</u> , Norway, United Kingdom, the United States	2003
17.	Experiences with New Refrigerants in Evaporators	Canada, the Netherlands, Norway, <u>Sweden</u> , Switzerland	1993
18.	Thermophysical Properties of Environmentally Acceptable Refrigerants	Austria, Canada, Germany, Japan, Sweden, United Kingdom, <u>the United States</u>	1999
19.	Cancelled		
20.	Working Fluid Safety	<u>Belgium</u> , Japan, the Netherlands, Norway, Switzerland	1993
21.	Global Environmental Benefits of Industrial Heat Pumps	Canada, France, Japan, the Netherlands, Norway, Sweden, United Kingdom, <u>the United States</u>	1996
22.	Compression Systems with Natural Working Fluids	Canada, Denmark, Japan, the Netherlands, <u>Norway</u> , Switzerland, United Kingdom, the United States	1999
23.	Heat Pump Systems for Single-Room Applications	<u>Canada</u> , France, Switzerland, Sweden, the United States	1999
24.	Ab-Sorption Machines for Heating and cooling in Future Energy Systems	Canada, Italy, the Netherlands, Norway, Japan, <u>Sweden</u> , United Kingdom, the United States	2000
25.	Year-Round Residential Space Conditioning Systems using Heat Pumps	<u>France</u> , the Netherlands, Sweden, the United States	2005
26.	Advanced Supermarket Refrigeration/Heat Recovery	Canada, Denmark, Sweden, United Kingdom, <u>the United States</u>	2003
27.	Selected Issues on CO ₂ as Working Fluid in Compression Systems	Japan, <u>Norway</u> , Sweden, Switzerland, United Kingdom, the United States	2004
28.	Test Procedure and Seasonal Performance Calculation of Residential Heat Pumps with Combined Space and Domestic Hot Water Heating	Austria, Canada, France, Germany, Japan, Norway, Sweden, <u>Switzerland</u> , United Kingdom (partly), the United States	2005

Annex No	Title	Participants (Operating Agent underlined)	Completed
29.	Ground Source Heat Pumps – Overcoming Market and Technical Barriers	<u>Austria</u> , Canada, Japan, Norway, Sweden, the United States	Ongoing
30.	Retrofit Heat Pumps for Buildings	France, <u>Germany</u> , the Netherlands	Ongoing
31.	Advanced Modeling and Tools for Analysis of Energy use in Supermarkets	Canada, Germany, <u>Sweden</u> , the United States	Ongoing
32.	Economical Heating and Cooling Systems for Low Energy Houses	Austria, Canada, Germany, Japan, the Netherlands, Norway, Sweden, <u>Switzerland</u> , the United States	Ongoing
33.	Compact Heat Exchangers in Heat Pumping Equipment	Japan, Sweden, <u>United Kingdom</u> , the United States	Ongoing
34.	Thermally Driven Heat Pumps	Text not attached	Ongoing

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The Contracting Parties

CONSIDERING that the Contracting Parties, being either governments or international organizations or parties designated by their respective governments pursuant to Article' III of the Guiding Principles for Co-operation in the Field of Energy Research and Development adopted by the Governing Board of the International Energy Agency (the "Agency") on 28th July, 1975, wish to take part in the establishment and operation of a Programme of Research and Development on Advanced Heat Pump Systems (the "Programme") as provided in this Agreement;

CONSIDERING that the Contracting Parties which are governments and the governments of the other Contracting Parties (referred to collectively as the "Governments") participate in the Agency and 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 research and development on energy conservation in which field the Programme will be carried out;

CONSIDERING that the Agency has decided that non-members of the Agency may participate in the Programme subject to the regulations and provisions as set out in Document IEA/IGB(91)72/FINAL and any modification by the Governing Board of the Agency thereof;

CONSIDERING that in the Governing Board of the Agency on 13th April, 1978 the Governments approved the Programme as a special activity under Article 65 of I. E. P. Agreement;

CONSIDERING that the Agency has recognised the establishment of the Programme as an important component of international co-operation in the field of energy conservation 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, promotion, and exchanges of information aimed at supporting heat pumping technologies as realistic, reliable, and well known devices to save energy resources and to reduce local and global emissions to protect the environment.
- (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, development and promotion activities of all Contracting Parties in the field of heat pumping systems.

Article 2

IDENTIFICATION AND INITIATION OF TASKS

- (a) *Initiation of Tasks.* 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, containing a description of the scope of work and conditions of the Task proposed to be performed;
 - (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 of the Agency;
 - (3) In carrying out the various Tasks, Participants shall co-ordinate their activities in order to avoid duplication of activities.
- (b) *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 or 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.

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

(1) The Executive Committee shall each year elect a Chairman and one or more Vice-Chairmen; a Chairman shall be limited to serving seven terms.

(2) The Executive Committee may establish such subsidiary bodies and rules of procedure as are required for its proper functioning. A representative 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 sessions twice each year; a special meeting shall be convened upon the request of any Contracting Party which can demonstrate the need therefore;

(4) Meetings of the Executive Committee shall be held at such time and in such office or offices as may be designated by the Committee;

(5) At least twenty-eight days before each meeting of the Executive Committee, notice of the 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 one-half of the members plus one (less any resulting fraction) 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. If a government has designated more than one Contracting Party to this Agreement, those Contracting Parties may cast only one vote under this paragraph.

(3) The decisions and recommendations referred to in sub-paragraphs (1) and (2) above may, with the agreement of each member or alternate member entitled to act thereon, be made by mail, e-mail, telex, telefax, 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 subparagraph.

(f) Reports. The Executive Committee shall, at least annually, provide the Agency with periodic reports on the progress of the Programme.

Article 4

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 to Act on Behalf of Participants. Subject to the provisions of the applicable Annex:

(1) All legal acts required to carry out each Task shall be performed on behalf of the Participants by the Operating Agent for the Task;

(2) The Operating Agent shall hold, 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 law of the country of the Operating Agent.

(c) *Reimbursement 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 6* hereof.

(d) *Replacement.* Where an important reason exists 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 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 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 transfer to such replacement Operating Agent any property rights which it may hold on behalf of the Task.

(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, not later than two months after the end of the financial year, a report on the status of the Task.

Article 5

ADMINISTRATION AND STAFF

(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, utilise the services of personnel employed by other Participants (or organisations 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 Agreement, 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 6 (f) (6)* hereof.

Article 6

FINANCE

(a) *Individual Financial Obligations.* Each Contracting Party shall bear the costs it incurs in carrying out this Agreement, 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 (g) below.

(b) *Common Financial Obligations.* Participants wishing to share the costs of a particular Task shall agree in the appropriate Task Annex to do so. The apportionment of contributions to such costs (whether in the form of cash, services rendered, intellectual property or the supply of materials) and the use of such contributions shall be governed by the regulations and decisions made pursuant to this Article by the Executive Committee.

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

(1) Establishment of budgetary and procurement procedures to be used by the Operating Agent in making payments from any common funds which may be maintained by Participants for the account of the Task or in making contracts on behalf of the Participants;

(2) Establishment of minimum levels of expenditure for which Executive Committee approval shall be required, including expenditure involving payment of monies to the Operating Agent 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 Operating Agent shall take into account the necessity of ensuring a fair distribution of such expenditure in the Participants' countries, where this is fully compatible with the most efficient technical and financial management of the Task.

(d) *Crediting of Income to Budget.* Any income which accrues from a Task shall be credited to the Budget of that Task.

(e) *Accounting.* The system of accounts employed by the Operating Agent shall be in accordance with accounting principles generally accepted in the country of the Operating Agent and consistently applied.

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

(1) The financial year of the Task shall correspond to the financial year of the Operating Agent;

(2) The Operating Agent shall each year prepare and submit to the Executive Committee for approval a draft Programme of Work and Budget, together with an indicative programme of work and budget for the following two years, not later than three months before the beginning of each financial year;

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

(4) Not later than three months after the close of each financial year the Operating Agent 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 Operating Agent shall present the accounts together with the auditors' report to the Executive Committee for approval;

(5) All books of account and records maintained by the Operating Agent for the Programme shall be preserved for at least three years from the date of termination of the Task;

(6) Where provided in the relevant Annex, a Participant supplying services, materials or intellectual property to the Task as provided in the applicable Annex shall be entitled to a credit, determined by the Executive Committee, acting by unanimity, 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 for services of staff shall be calculated on an agreed scale approved by the Executive Committee and include all payroll-related costs.

(g) *Contribution to Common Funds.* Should Participants agree to establish common funds under the annual Programme of Work and Budget for a Task, any financial contributions due from Participants in a Task shall be paid to the Operating Agent in the currency of the country of the Operating Agent 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 Operating Agent shall be used solely in accordance with the Programme of Work and Budget for the Task;

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

(h) *Ancillary Services.* Ancillary services may, as agreed between the Executive Committee and the Operating Agent, be provided by that Operating Agent for the operation of a Task and the costs of such services, including overheads connected therewith, may be met from budgeted funds of that Task.

(i) *Taxes.* The Operating Agent shall pay all taxes and similar impositions imposed by national or local governments and incurred by it in connection with a Task, as expenditure incurred in the operation of that Task under the Budget; the Operating Agent shall, however, endeavour to obtain all possible exemptions from such taxes.

(j) *Audit.* Each Participant shall have the right, at its sole cost, to audit the accounts of any work in a Task for which common funds are maintained on the following terms:

(1) The Operating Agent shall provide the other Participants with an opportunity to participate in such audits on a cost-shared basis;

(2) Accounts and records relating to activities of the Operating Agent other than those conducted for the Task shall be excluded from such audit, but if the Participant concerned requires verification of charges to the Budget representing services rendered to the Task by the Operating Agent, it may at its own cost request and obtain an audit certificate in this respect from the auditors of the Operating Agent;

(3) Not more than one such audit shall be required in any financial year;

(4) Any such audit shall be carried out by not more than three representatives of the Participants.

Article 7

INFORMATION AND INTELLECTUAL PROPERTY

It is expected that for each Task agreed to pursuant to this Agreement, the applicable Annex will contain information and intellectual property provisions. The General Guidelines Concerning Information and Intellectual Property, approved by the Governing Board of the Agency on 21st November, 1975, shall be taken into account in developing such provisions.

Article 8

LEGAL RESPONSIBILITY AND INSURANCE

(a) *Liability of 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. Except as otherwise provided in this Article, the cost of all damage to 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 other work undertaken for a Task shall be charged to the Budget of that Task if the Task 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) *Indemnification of Contracting Parties.* The Operating Agent shall be liable, in its capacity as such, to indemnify Participants against the cost of any damage to 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 9

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 organisation) 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 shall 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, where necessary, and to the constitution, 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 governmental contracts and upon any share of such contracts accruing to governmental officials.

(c) *Decisions of Agency Governing Board.* 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 concerned. Operating Agents which are not Contracting Parties shall be regarded as Contracting Parties for the purpose of this paragraph.

ADMISSION AND WITHDRAWAL OF CONTRACTING PARTIES

- (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 Sponsors.* Upon the invitation of the Executive Committee, acting by majority vote, participation in this Agreement shall be open to Sponsors, as set forth in the IEA Framework. Participation of Sponsors requires prior CERT approval. The specific terms and conditions, including rights and obligations, of Sponsors' participation in this Agreement shall be established by the Executive Committee, provided that no Sponsor be accorded greater rights than those permitted to Sponsors in the IEA Framework International Energy Technology Co-operation as adopted by the Governing Board of the Agency on 3 April 2003, and any amendments thereto. The Sponsor shall have no voting rights at the Executive Committee.
- (d) *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 Contracting Party's giving the Executive Director of the Agency a Notice of Participation in the appropriate Task Annex and the adoption of consequential amendments thereto.
- (e) *Contributions.* The Executive Committee may require, as a condition to admission to participation, that the new Contracting Party, Sponsor 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.
- (f) *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.
- (g) *Withdrawal.* Any Contracting Party or Sponsor may withdraw from this Agreement or from any Task 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 the other Contracting Parties or Sponsors; except that, where the other Contracting Parties and Sponsors have contributed to common funds for a Task, their proportionate shares in the Task Budget shall be adjusted to take account of such withdrawal.

(h) *Changes of Status of Contracting Party.* A Contracting Party other than a government or an international organisation 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.

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

Article 11

HEAT PUMP CENTRE

(a) *Designation.* From 1 January 2004, SP Energy Technology in Borås, Sweden, shall become the HPC (Heat Pump Centre) focal point for the Implementing Agreement to carry out such functions as the Executive Committee may request it to perform.

(b) *Scope of Authority.* The HPC shall conduct the international co-ordination referred to in *Article 1(c)* of this Agreement especially the technical and administrative interface management between the Tasks. The HPC shall carry out its functions under the supervision of the Executive Committee. Representatives of the HPC may attend meetings of the Executive Committee and its subsidiary bodies in an advisory capacity.

(c) *Reimbursement of Costs.* The Executive Committee may provide that expenses and costs incurred by the HPC in acting as such pursuant to this Agreement shall be reimbursed to SP Energy Technology from funds made available by all Contracting Parties that participate in one or more Tasks in the Implementing Agreement.

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

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

(f) *Information and Report.* The HPC shall furnish to the Executive Committee such information concerning its work as the Committee may request and shall each year submit a summary report on the status of all Tasks.

Article 12

FINAL PROVISIONS

(a) *Term of Agreement.*

This Agreement shall remain in force for an initial period of three years and, thereafter, may be extended for such additional periods of not greater than five years as may be determined by the Executive Committee, acting by unanimity and subject to the approval of the Committee for Energy Research and Technology of the Agency. The Executive Committee, acting by unanimity, may 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.

(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. In the event of such liquidation, the Executive Committee shall, so far as practicable, distribute the assets of the Task, of 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 with a former Contracting Party about the proportion allocated to it under this paragraph shall be settled under *Article 9 (d)* hereof, for which purpose a 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.

(e) *Deposit.* The original of this Agreement shall be deposited with the Executive Director of the Agency and a certified copy thereof shall be furnished to each Contracting Party and to the Operating Agent. A copy of this Agreement shall be furnished 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 27th of July, 1978

Amended: 1988, October 1992, 15 October 1998, 29 October 2003, 10 November 2006, 15 November 2007, 6 November 2009

CONTRACTING PARTIES

(as of 27 July 2010)

The Republic of Austria

The National Research Council Canada (NRC)
(replaced by **Natural Resources Canada (NRCan)**)

Tekes, the Finnish Funding Agency for Technology and Innovation

L'Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME) (France)

Kernforschungszentrum Jülich GmbH
(which subsequently changed its name to **Forschungszentrum Jülich GmbH**)

The Italian Research Council

The Government of Japan
(replaced by the **New Industrial Technology Development Organization (NEDO)**)
(for the Government of Japan)

The Ministry of Commerce, Industry and Energy (MOCIE) (Korea)

Nijverheidsorganisatie T.N.O (Netherlands)
(replaced by the Netherlands Agency for Energy and the Environment (NOVEM))
(renamed following merger with Senter to SenterNovem)
(renamed following merger with EVD, the Netherlands Patent Office, to **NL Agency**)

The Norwegian Council for Scientific and Industrial Research
replaced by the Research Council of Norway
replaced by **ENOVA**

The Swedish Council for Building Research
(replaced by the **Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (FORMAS)**)
The Swedish National Energy Administration
(renamed the **Swedish Energy Agency**)

The Swiss Federal Office of Energy

The Government of the United Kingdom

The United States Department of Energy
(replaced by The Government of the United States of America,
then again by the United States Department of Energy)

CONTRACTING PARTIES SINCE WITHDRAWN

The Government of Belgium¹

The Ministry of Trade and Industry (Denmark)²
(succeeded by the Ministry of Energy, then
replaced by the Ministry of Environment and
Energy, Danish Energy Agency,
then by **the Ministry of Economy and Business Affairs, Danish Energy Authority**)

The **Ministry of Trade and Industry** (Finland)³ (re-joined in 2009)

AGIP (S.p.a.) (Italy)⁴
(replaced by the **Ente per le Nuove Tecnologie, l'Energia e l'Ambiente (ENEA)**)
(Italy re-joined in 2008)

The **Departamento de Sistemas Energéticos
of the Autonomous National University of Mexico (UNAM/CIE)**⁵

The Ministry of Industry and Energy (Spain)⁶
which later changed its name to **the Ministry of Science and Technology**

AEA Technology plc.⁷
(replaced by The Department for the Environment, Transport and the Regions,
then by the **Department for Environment, Food and Rural Affairs (DEFRA)**)
International Research and Development (United Kingdom)
The National Engineering Laboratory (United Kingdom)

¹ Withdrawal effective as of 16.03.00

² Withdrawal effective as of 31.12.02

³ Withdrawal effective as of 03.05.93. Re-signed on 24.09.09.

⁴ Withdrawal effective as of 23.09.04

⁵ Withdrawal effective as of 30.05.07

⁶ Withdrawal effective as of 30.01.06

⁷ Withdrawal effective as of 15.11.07

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.