

AGREEMENT BETWEEN THE UNITED STATES ENERGY RESEARCH AND
DEVELOPMENT ADMINISTRATION AND THE FEDERAL MINISTER FOR
RESEARCH AND TECHNOLOGY OF THE FEDERAL REPUBLIC OF
GERMANY IN THE FIELD OF GAS-COOLED REACTOR CONCEPTS
AND TECHNOLOGY

The United States Energy Research and Development Administration (ERDA) and the Federal Minister for Research and Technology of the Federal Republic of Germany (BMFT), hereinafter called the Parties;

having a mutual interest in developing the High Temperature Gas-Cooled Reactor (HTR) and the Gas-Cooled Fast Breeder Reactor (GCFR), both types of reactors hereinafter referred to as Gas-Cooled Reactors (GCR);

recognizing the important roles of both ERDA and BMFT in such research and development;

believing that the solution to problems of obtaining energy from the GCR should also provide for an amelioration of environmental problems;

believing that the introduction and utilization of gas-cooled reactors should provide needed energy options;

and recognizing the need to establish procedures governing the protection of privileged information provided in connection with activities under this Agreement;

have agreed as follows:

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ARTICLE 1

Cooperation between the Parties in the development of the GCR will be directed towards finding solutions to mutually agreed upon problems connected with the design, development, construction and operation of nuclear power systems utilizing GCR's, and to exchange information developed during the resolution of these problems. This cooperation may include: exchange of experience and results of theoretical, experimental and conceptual design programs, and agreed upon research and development projects. This cooperation may also lead to joint planning, construction, operation and utilization of experimental and demonstration type facilities, as may be agreed in the future. Cooperation between the two Parties will be on the basis of mutual benefit, equality and reciprocity.

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ARTICLE 2

The areas of cooperation in the development of GCR's covered by this Agreement may include:

1. Development of GCR technology including work on fuels, graphites, materials, fission product and coolant technology, primary circuit components, pressure vessel and thermal barrier technology and design, construction and operation of prototype and demonstration plants.
2. HTR fuel recycle technology including work on reprocessing, refabrication, waste treatment and disposal, recycle fuel-element performance, engineering and economic studies and the design, construction, operation and utilization of associated test, pilot plant, experimental and demonstration type facilities.
3. HTR steam cycle (HTR-SC) technology including all related R&D work, components, design, construction and operation of test, prototype and demonstration facilities.
4. HTR direct cycle (HTR-DC) technology including work on the reactor and turbomachinery systems, fission product effects, reactor fuels, materials and components, design, construction and operation of test, prototype and demonstration facilities.
5. Very High Temperature Reactor and Process Heat (HTR-PH) technology including work on reactor fuels, materials, components, systems and chemical heat pipe technology, design, construction and operation of test, prototype and demonstration facilities.

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6. Development of GCFR technology including related R&D work, components, fuel fabrication and testing, design, construction and operation of test, prototype and demonstration facilities.
 7. Safety technology as it relates to all the gas-cooled reactor activities listed above.
 8. Economic and environmental studies in the field of GCR's.
- Other areas of cooperation may be added by mutual agreement.

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ARTICLE 3

Cooperation in accordance with this Agreement may include but is not limited to the following forms:

1. Exchange of scientists, engineers and other specialists for participation in agreed to research, development, analysis, design and experimental activities conducted in scientific centers, laboratories, engineering offices and reactor facilities of each of the Parties or its contractors for agreed upon periods.
2. Exchange of samples, materials, instruments and components for testing; and exchange of scientific and technical information and results and methods of research and development.
3. The organization of seminars and other meetings on agreed to topics covering basic problems of research and development in the areas enumerated in Article 2, in a manner agreed to by the Joint Committee (Article 5).
4. Short visits by specialist teams or individuals to GCR facilities of the other Party.

Other specific forms of cooperation may be jointly agreed to by the Parties and approved by the Joint Committee (Articles 5 and 6).

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ARTICLE 4

1. It is recognized by the Parties that there are organizational differences in their respective programs, and that BMFT may implement this Agreement through a GCR development company, which may also serve on behalf of BMFT as the focal point for communication and coordination for the ERDA/BMFT GCR research and technology exchange. ERDA may implement this Agreement, in whole or in part, through its contractors and subcontractors. In the event that any or all of the cooperative activities under this Agreement are implemented by a contractor, subcontractor or GCR development company, as contemplated above, such implementation shall in all respects be in accordance with the provisions of this Agreement.
2. Entities of other countries which become participants in the GCR program of the Federal Republic of Germany may then participate in this Agreement on terms to be agreed by the Parties.
3. BMFT and ERDA agree that the French CEA has the option to join this Agreement on terms to be agreed upon by the Parties.

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ARTICLE 5

1. For the implementation of this Agreement, there is established a Joint ERDA/BMFT Committee on Cooperation in the Field of GCR's. This committee will implement, coordinate and review all aspects of this Agreement and, where necessary, make recommendations which each of the delegations will present to its Party covering specific means by which this Agreement shall be implemented.
2. The United States members of the Joint Committee shall be appointed by ERDA. The German members of the Joint Committee shall be appointed by BMFT. Each Party shall appoint the head of its delegation to the Joint Committee.
3. The Joint Committee will consist of ten members, five of which will be appointed by each of the Parties to this Agreement, meeting as agreed upon by the heads of the two delegations, at least once a year or at other times by agreement (alternately in the United States of America and in the Federal Republic of Germany) at an agreed to place. Each Party has the right to invite advisers as necessary. The head of the delegation of the receiving Party shall act as Chairman of the Joint Committee whenever it meets.
4. At least once a year, the Parties will provide the Joint Committee with a comprehensive review of GCR program status and plans which concern cooperation under this Agreement.

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ARTICLE 6

1. Major new proposals for cooperation by either of the Parties would be reviewed, if deemed sufficiently important, by either the Joint Committee or by a joint ad hoc group appointed by the Joint Committee.

2. Where a cooperative program or project under this Agreement necessitates a formalized specific memorandum of agreement executed by both Parties, the specific agreement should cover all detailed provisions for implementing that agreement, including such matters as patents, exchange of equipment and information disclosure specific to the particular program or project.

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ARTICLE 7

1. The Parties will exchange, as agreed on a mutually beneficial basis, scientific and technical information, documents and results of research and development related to work carried out under this Agreement. Such information will be limited to that which they have the right to disclose, either in their possession or available to them, from the technical areas described in Article 2.
2. Seminar proceedings and reports of joint programs carried out under this Agreement will be published as joint publications, as mutually agreed to by both Parties.
3. Both Parties agree that information developed or exchanged under this Agreement should be given wide distribution. Such information, except as noted in paragraphs 4 and 5, may be made available to the public by either Party through customary channels and in accordance with normal procedures of the Parties.
4. It is recognized by both Parties that in the process of exchanging information, or in the process of other cooperation, the Parties may provide to each other "industrial property of a proprietary nature". Such property, including trade secrets, inventions, patent information and know-how, made available hereunder, but acquired by either Party prior to, or outside, the course of those activities, and which bears a restrictive designation, shall be respected by the receiving Party and shall not be used for commercial purposes or made public without the consent of the transmitting

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Party. Such property is defined as:

- a. Of a type customarily held in confidence by commercial firms;
 - b. Not generally known or publicly available from other sources;
 - c. Not having been made available previously by the transmitting Party or others without an agreement concerning its confidentiality; and
 - d. Not already in the possession of the receiving Party or its contractors.
5. Recognizing that "industrial property of a proprietary nature", as defined above, may be necessary for the conduct of a specific cooperative project or may be included in an exchange of information, such property shall be used only in the furtherance of GCR programs in the receiving country. Its dissemination will, unless otherwise mutually agreed upon, be limited as follows:
- a. To individuals within or employed by the receiving Party and to other concerned Government agencies and institutions of the receiving Party; and
 - b. To prime or subcontractors of the receiving Party for use only within the territory of the receiving Party and within the framework of their contract(s) with the respective Party engaged in work relating to the subject matter of the information so disseminated;

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provided that the information disseminated to any person under subparagraphs a. or b. above shall bear a marking restricting dissemination outside the recipient's organization. Each Party will use its best efforts to ensure that the dissemination of information so marked is controlled as prescribed herein.

ARTICLE 8

The information exchanged under this Agreement shall be subject to the patent provisions in Article 10.

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ARTICLE 9

The application or use of any information exchanged or transferred between the Parties under this Agreement shall be the responsibility of the Party receiving it, and the transmitting Party does not warrant the suitability of such information for any particular use or application.

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ARTICLE 10

1. With respect to any invention or discovery made or conceived in the course of or under this Agreement, if not agreed upon otherwise (especially under Article 6):
 - a. If made or conceived by personnel of one Party (the Assigning Party) or its contractors while assigned to the other Party (Recipient Party) or its contractors, in connection with exchanges of scientists, engineers and other specialists:
 - (1) The Recipient Party will acquire all right, title and interest in and to any such invention, discovery, patent application, or patent in its own country and in third countries; and
 - (2) The Assigning Party will acquire all right, title, and interest in and to any such invention, discovery, patent application, or patent in its own country.
 - b. If made or conceived by a Party or its contractors as a direct result of employing information which has been communicated to it under this Agreement by the other Party or its contractors or communicated during seminars or other joint meetings, the Party making the invention or discovery will acquire all right, title and interest in and to any such invention, discovery, patent application, or patent in all countries.

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- c. With regard to other specific forms of cooperation, including exchanges of materials, instruments and equipment for special joint research projects, the Parties shall provide for appropriate distribution of rights to inventions resulting from such cooperation. In general, however, each Party should normally determine the rights to such inventions in its own country, and the rights to such inventions and discoveries in other countries should be agreed upon by the Parties on an equitable basis.
- d. It is understood that after the European Patent Conventions (Uebereinkommen ueber die Erteilung europaeischer Patente, Uebereinkommen ueber das europaeische Patent fuer den Gemeinsamen Markt) have come into force, either Party may request a modification of this paragraph 1 for the purpose of according equivalent rights as provided in subparagraphs 1.a. - c. above under the European Patent Conventions.
2. The Party owning a patent covering any invention or discovery referred to in paragraph 1 above shall license the patent to nationals or licensees of the other Party upon request of such other Party on non-discriminatory terms and conditions. At the time of such a request, the other Party will be informed of all licenses already granted under such patent.
3. Each Party waives any and all claims against the other Party for compensation, royalty or award as regards any invention, discovery, patent application, or patent, made or conceived under this Agreement, and releases

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the other Party with respect to any and all such claims, including any claims under the provisions of the U.S. Atomic Energy Act of 1954, as amended, and the German Employees' Inventions Law (Arbeitnehmererfindergesetz) of July 25, 1957 (BGBl, 1957, Part I, page 756), as amended.

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ARTICLE 11

1. By mutual agreement the sending Party may provide equipment to be utilized in joint projects and experiments. In such cases the sending Party shall supply as soon as possible a detailed list of the equipment to be provided together with the relevant specifications and technical and informational documentation.
2. The equipment and necessary spare parts supplied by the sending Party for use in joint projects and experiments shall remain its property and shall be returned to the sending Party upon completion of the joint project or experiment, unless otherwise agreed.
3. The above-mentioned equipment shall be brought into operation at the host establishment only by mutual agreement between the Parties or between their senior representatives at the host establishment.
4. The host establishment shall provide the necessary premises for the equipment and shall provide for electric power, water, gas, etc., in accordance with technical requirements which shall be mutually agreed upon.
5. The responsibility and expenses for the transport of equipment and materials from the United States of America by plane or ship to an authorized port of entry in the Federal Republic of Germany convenient to the ultimate destination and return, and also responsibility for their safekeeping and insurance en route shall rest with ERDA.

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6. The responsibility and expenses for the transport of equipment and materials from the Federal Republic of Germany by plane or ship to an authorized port of entry in the United States of America convenient to the ultimate destination and return, and also responsibility for their safekeeping and insurance en route shall rest with the BMFT.
7. The equipment provided by the sending Party for carrying out joint projects or experiments will be considered to be scientific, not having a commercial character.

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ARTICLE 12

1. Each Party shall ensure the selection of adequate staff with the skills and competence necessary to conduct agreed upon joint projects. In carrying out such joint projects, selected staff of both Parties shall be attached to the host establishment.
2. Each Party shall be responsible for the salaries, insurance and allowances to be paid to its personnel.
3. Each Party shall pay for the travel and living expenses of its personnel when staying at the establishment of the host Party unless otherwise agreed.
4. The host establishment shall arrange for comparable accommodations for the other Party's personnel and their families on a mutually agreeable reciprocal basis.
5. Each Party shall provide all necessary assistance to the specialists (and their families) of the other Party as regards administrative formalities (travel arrangements, etc.).
6. The personnel of each Party shall conform to the general rules of work and safety regulations in force at the host establishment.

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ARTICLE 13

Both Parties agree that the following provisions shall apply concerning compensation for damages incurred during the implementation of joint projects. It is understood that such compensation will be in accordance with the laws of the country on whose territory damages will have been incurred, except as otherwise provided.

1. First and Second Party Damages

- a. Each Party shall alone be responsible for payment of compensation for damages suffered by its staff regardless of where the damages have been incurred, and will not bring suit or lodge any other claims against the other Party for damages to its property, except as noted, in subparagraphs 1.b and 1.c.
- b. If the damages suffered by the staff of one of the Parties are due to the gross negligence or intentional misconduct of the staff of the other Party, the latter shall reimburse the former an agreed to sum of money which the former would be obliged to pay to the person or persons suffering the damages.
- c. If damages to the property of one Party are due to the gross negligence or intentional misconduct of the staff of the other Party, the latter shall compensate the former for the damages suffered.

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2. Third Party Damages

a. Defective Equipment

Damages caused to the staff or property of a Third Party by defective equipment of a Party will be compensated for by the Party to which the equipment belongs, except as noted in subparagraph 2.c.

b. By Staff

Damages caused to the staff or property of a Third Party by the staff of a Party will be compensated for by the Party in whose territory the damages occurred, except as noted in subparagraph 2.c.

c. Gross Negligence or Intentional Misconduct

If damages referred to in subparagraphs 2.a. and 2.b. were due to the gross negligence or intentional misconduct of the staff of a Party, that Party will bear the financial responsibility in regard to the Third Party.

d. Damages by Third Party

In the event of damages of any kind caused by a Third Party to the staff or property of one or both of the Parties, each of the two contracting Parties, upon the request of the other Party, will render the other aid in the corroboration of claims on the Third Party.

e. Resolution of Questions

The Party on whose territory the damages were incurred will, in consultation with the other Party, take upon itself the resolution, with the Third Party, of

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all questions connected with the determination of the causes, extent and necessity for compensation for damages incurred. Any such resolution shall have the concurrence of the other Party. After resolution of the matter, both Parties will decide, between themselves, the questions relating to compensation for damages incurred.

3. In the event of any dispute between the two Parties, a Committee shall be appointed by the Parties, with equal representation. The conclusions of the Committee will be presented to ERDA and BMFT who will review the conclusions and arrive at a mutual agreement concerning final disposition.
4. The foregoing provisions of this Article shall have no applicability to damages caused by a nuclear incident as defined by the laws of the Parties. Compensation for damage caused by such a nuclear incident shall be in accordance with the laws of the Parties.
5. Definitions
 - a. "Staff" of a Party means the employees of the Party, its contractors and subcontractors performing services under this Agreement, and employees of these contractors and subcontractors performing services under this Agreement.
 - b. "Equipment" or "Property" of a Party means the equipment or property owned by that Party, or by the contractor and subcontractors of that Party who perform services in connection with joint projects under this Agreement.

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ARTICLE 14

1. The provisions of this Agreement shall not affect the rights or duties of the Parties hereto under other agreements or arrangements. This Agreement also in no way precludes commercial firms or other legally constituted enterprises in each of the two countries from engaging in commercial dealings in accordance with the applicable laws of each country; nor does it preclude the Parties from engaging in activities with other Governments or persons except that industrial property of a proprietary nature will have limited distribution as set forth in Article 7, paragraphs 4 and 5, of this Agreement. Moreover, it is expected that the present Agreement should facilitate industrial and commercial exchanges in the field of GCR between the firms of the countries of the Parties with a view to mutual benefits from such exchanges for both countries.

2. ERDA and BMFT will act as the point of coordination for contracts and arrangements between commercial firms of the United States of America and the Federal Republic of Germany when such firms act on behalf of their respective governments under the terms of this Agreement. It is understood that all such contracts and arrangements shall conform with applicable laws and regulations of the Parties. BMFT has a right to designate a GCR development company as stated in Article 4. ERDA has a right to implement this Agreement, in whole or in part, through its industrial contractors and subcontractors, as stated in Article 4.

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ARTICLE 15

Cooperation under this Agreement shall be in accordance with laws and regulations of the respective countries. All questions related to the Agreement arising during its term shall be settled by the Parties by mutual agreement.

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ARTICLE 16

Each Party shall bear the costs of its participation in the activities under this Agreement. It is understood that the ability of the Parties to carry out their obligations is subject to the availability of appropriated funds.

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ARTICLE 17

This Agreement shall also apply to Land Berlin, provided that the Government of the Federal Republic of Germany has not made a contrary declaration to the Government of the United States of America within three months from the date of entry into force of this Agreement.

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ARTICLE 18

1. This Agreement shall enter into force upon signature, shall continue for a ten-year period and shall be extendable by mutual consent. The implementation of, and progress under, this Agreement may be subject to annual review by the Parties.
2. This Agreement may be terminated at any time at the discretion of either Party, upon one year's advance notification in writing by the Party seeking to terminate the Agreement. Such termination shall be without prejudice to the rights which may have accrued under this Agreement to either Party up to the date of such termination.
3. In the event that during the period of this Agreement, the nature of either Party's GCR program should change substantially, whether this be by substantial expansion, reduction, transformation or amalgamation of major elements with the GCR Program of a Third Party, either Party shall have the right to request revisions in the scope and/or terms of this Agreement.
4. All joint efforts and experiments not completed at the termination of the Agreement will be continued with their completion under terms of this Agreement.

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Done at Bonn in duplicate in the English and German languages,
each text being equally authentic,

this 11th day of February 1977.

Bruce J. Strossel -

For The United States
Energy Research and
Development Administration

Hans Matthies

The Federal Minister for
Research and Technology
of the Federal Republic
of Germany