AGREEMENT
BETWEEN
THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF VIET NAM
AND
THE GOVERNMENT OF THE REPUBLIC OF INDIA
ON
COOPERATION IN THE PEACEFUL USES OF ATOMIC ENERGY

The Government of the Socialist Republic of Viet Nam (hereinafter referred to as "Viet Nam") and Government of the Republic of India (hereinafter referred to as "India"), both hereinafter referred to as the "Parties";

RECALLING the beneficial cooperation and exchanges under the *Agreement on Cooperation between the Government of the Socialist Republic of Viet Nam and the Government of the Republic of India for Cooperation for the Utilization of Atomic Energy for Peaceful Purposes*(March 25, 1986);

DESIRING to renew and develop deeper mutually beneficial economic, scientific and technical cooperation for the peaceful uses of atomic energy;

WHEREAS the Parties are Members of the International Atomic Energy Agency (hereinafter referred to as "the IAEA") and affirm their commitment to support the objectives and act in full conformity with Agreements entered into with the IAEA in the pursuit of cooperative endeavours aforementioned;

RECOGNIZING that India has concluded the "*Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities"* (INFCIRC/754) done at Vienna on 2 February 2009 and the Protocol additional to the said Agreement, done at Vienna on 15 May 2009 (INFCIRC/754/Add.6);

RECOGNIZING that Viet Nam has concluded the "*Agreement of 2 October 1989 between the Socialist Republic of Viet Nam and the International Atomic Energy Agency for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons"* (INFCIRC/376) done at Vienna on 2 October 1989 and the Protocol additional to the said Agreement, done at Vienna on 10 August 2007 (INFCIRC/376/Add.1);

RECALLING the Statute of the IAEA and Convention on Early Notification of a Nuclear Accident (1986), the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (1986), the Convention on Physical Protection of Nuclear Material (1987) and the Convention on Nuclear

Safety (1994) and adopted in the IAEA and to which both Viet Nam and India are parties to;

MINDFUL that international cooperation in the field of atomic energy for peaceful purposes can play a crucial role in augmenting the contribution of non-fossil fuel sources of energy and thus sustainable development, especially for developing countries;

NOTING the commitment of both Parties to achieve the highest standards of radiation and nuclear safety based on scientific approaches and best practices in order to ensure that the use of radiation and atomic energy in all its applications is safe for the health of radiation workers, members of public and the environment;

DESIRING in the interest of the Parties to develop such cooperation on the basis of mutual respect for sovereignty, non-interference in each other's internal affairs, equality, mutual benefit, reciprocity, with due respect for each other's nuclear programmes and in accordance with the principles governing the respective nuclear policies and the respective international obligations;

HAVE AGREED AS FOLLOWS:

ARTICLE 1

DEFINITIONS

For the purposes of this Agreement:

(a) "Component" means a component part of equipment, or other item so designated by the Parties or as included in the Annex to this Agreement;

(b) "Development" refers to all stages prior to "Production" such as design, design research, design analysis, design concepts, assembly and testing of prototypes, pilot production schemes, design data, process of transforming design data into a product, configuration design, integration design, layouts;

(c) "Equipment" means any equipment in nuclear operation including nuclear reactor, nuclear pressure vessel, reactor fuel charging and discharging equipment, reactor control rods, reactor pressure tubes, reactor primary coolant pumps, zirconium tubing, nuclear reactor internals, equipments for fuel fabrication and any other item as determined by the Parties as per the national control lists or as included in the Annex to this Agreement;

(d) "In the public domain" as it applies herein, means technology that has been made available without restrictions upon its further dissemination;

(e) "Information" means any information that is not in public domain and is transferred in any form pursuant to this Agreement and is so designated and documented in hard copy or digital form by agreement of the Parties that it shall be subject to this Agreement, but will cease to be information whenever the Party transferring the information or any Third Party legitimately releases it in public domain;

(f) "Intellectual Property" means intellectual property rights as provided in Article 1 of the Agreement on Trade-related Aspects of Intellectual Property Rights *(TRIPS Agreement)*;

(g) "Items" subject to this Agreement mean:

(i) nuclear material, non-nuclear material, equipment, components and technology transferred between the Parties whether directly or through a third country;
(ii) equipment produced by the application of technology so transferred;
(iii) nuclear material and non-nuclear material that is produced or processed by the use of any equipment, components or technology subject to this Agreement; and
(iv) nuclear material that is produced or processed by the use of any nuclear material or non-material subject to this Agreement;

(h) "Non-nuclear Material" means material listed in the Annex to this Agreement, or as amended from time to time by mutual determination in writing by the Parties;

(i) "Nuclear Material" means any "source material" or "special fissionable material" as those terms are defined in Article XX of the Statute of the IAEA;

(j) "Person" shall mean any natural person or legal entity;

(k) "Production" means all production phases such as construction, production engineering, manufacture, integration, assembly (mounting) inspection, testing, and quality assurance;

(l) "Technology" means the specific information necessary for the "development", "production" or "use" of items such as material, nuclear material, component and equipment with the exception of data "in the public domain" or of "basic scientific research";

(m)"Use" means operation, installation (including on-site installation), maintenance, repairs, overhaul and refurbishing.

ARTICLE 2

SCOPE OF COOPERATION

1. The Parties shall develop cooperation in the use of atomic energy for peaceful purposes as per the provisions of this Agreement.

2. The Parties hereby agree to pursue cooperation in the following areas:

a. Transfer and exchange of knowledge, expertise & technology as appropriate, research & development, consultancy services, sharing of resources & experience and capacity building, in various aspects of peaceful uses of atomic energy;
b. Technical training & education related to various aspects of peaceful uses of atomic energy, including nuclear technology research and applications, nuclear safety, nuclear security, safeguards and non-proliferation;
c. Basic and applied research in the peaceful uses of nuclear technology including nuclear physics, reactor physics, neutron physics and reactor engineering, research reactors, accelerators, nuclear physics experiments using accelerators, applications of nuclear physics in different fields of life sciences and technology of isotope and radiation applications;
d. Front end of the nuclear fuel cycle including mineral exploration, prospecting, mining, processing and refining; conversion to nuclear fuel;
e. Study, development, construction, operation, refurbishment, maintenance; and decommissioning of nuclear power plants;
f. Supply and manufacture of components, equipment, nuclear material or non-nuclear material for use in nuclear power plants ;
g. Supply of radioactive sources for civil use;
h. Exchange of operational and maintenance experiences between utilities;
i. Research, production and application of radioisotopes and radiation in industry, medicine, agriculture, water management and the environment;

j. Treatment and management of radioactive wastes;
k. Nuclear safety, radiation safety, inspection programmes, nuclear and radiological disaster mitigation, radiation monitoring and environmental protection and other relevant safety aspects related to nuclear facilities through cooperation between regulatory authorities and relevant organizations;

l. Following best practices in minimizing the impact on public health and environment from any radioactive or other contamination arising from peaceful nuclear activities under this Agreement;
m. Cooperation in the use of radiation for cleaning municipal and domestic waste (dry Sludge Hygienisation Technology and Nisarguna Technology);
n. Safe, secure, sustainable and safeguarded use of civil nuclear energy including related regulatory and technological advancements;
o. Development of legal documents, standards and regulations in the fields of the peaceful uses of atomic energy;
p. Such other areas of cooperation as are mutually agreed upon by the Parties in writing.

ARTICLE 3

FORMS OF COOPERATION

1. The cooperation agreed upon under Article 2 may be carried out in the following forms:

a. Development and implementation of joint programmes;
b. Establishment of bilateral working groups for implementation of specific projects and scientific research;
c. Organisation of meetings, workshops, symposia and short term schools;
d. Participation in each other's relevant exhibitions/expositions, conferences and mutual expert level visits;
e. Consultations on scientific and technological issues, human resource development, nuclear knowledge management, exchange of scientific and technical information and documentation;
f. Education and training of scientific, technical and management personnel;
g. Exchange of experts, scientists, engineers and academic personnel ;
h. Joint studies and research and /or development projects;
i. Exchange of unclassified scientific & technical publications and reports on research & development work, carried out for the utilisation of atomic energy for peaceful purposes, except for information which either party is not free to exchange, *inter alia,* because it has been obtained from or developed in collaboration with a third party;
j. Provision of relevant technical assistance, supply of components, equipments, nuclear material, non-nuclear material or services related to nuclear power programmes;
k. Developing and executing nuclear power projects;
l. Other forms of cooperation determined by the Parties by amending and supplementing this Agreement.

2. The Parties shall exchange scientific & technical personnel as well as equipment, samples and materials necessary for the implementation of cooperative programme under this Agreement in areas specified in Article I, for such periods of time as may be mutually agreed upon.

ARTICLE 4

LEGAL IMPLEMENTATION

1. Cooperation in a specific field or project pursuant to this Agreement may be carried out by virtue of a written arrangement between the Parties, the designated authorities, or legal entities authorised by the designated authorities.

2. These written arrangements shall conform to the Parties' respective national legislations, regulations and international obligations to which both sides are parties and may include provisions dealing with intellectual property rights protection where such rights exist or arise.

ARTICLE 5

JOINT COMMITTEE

1. The Parties shall, immediately upon the entry into force of this Agreement, establish a Joint Committee to identify the specific projects in relation to the areas of cooperation set out in Article 2 to be implemented by the Parties in terms of this Agreement and to monitor the implementation progress of projects so defined.

2. The Joint Committee shall comprise the designated authorities of the Parties. For the Socialist Republic of Viet Nam, the designated authority shall be the Viet Nam Atomic Energy Institute of the Ministry of Science and Technology and for India, the designated authority shall be the Nuclear Controls and Planning Wing of the Department of Atomic Energy.

3. Meeting of the Joint Committee shall be held on dates and at venues mutually agreed upon by the Parties.

ARTICLE 6

FINANCE

Cost sharing between both Parties for cooperative activities stated in this Agreement shall be mutually agreed upon based on specific projects, programs or other activities implemented in accordance with this Agreement.

ARTICLE 7

PEACEFUL USES

The Parties shall ensure that nuclear material, non-nuclear material, radiological material, components, equipment and technology exchanged under this Agreement as well as nuclear material and technologies produced through the use of such nuclear materials, non-nuclear materials, components, equipments and technologies shall not be used for the manufacture of nuclear weapons or other nuclear explosive devices or for any military purposes.

ARTICLE 8

IAEA SAFEGUARDS

1. Each Party shall maintain IAEA safeguards with respect to nuclear material, non-nuclear material, equipment and components transferred pursuant to this Agreement in accordance with their respective Safeguards Agreements with the IAEA. Such safeguards shall also be maintained with respect to all special fissionable material used in or produced through the use of such nuclear material, non-nuclear material, equipment and components.

2. With regard to items transferred to India, they will remain subject to IAEA safeguards in accordance with *the "Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities"*, contained in the document published by the Agency as INFCIRC/754, as supplemented by a Protocol additional to the said Agreement, done at Vienna on 15 May 2009 and contained in the document published by the Agency as INFCIRC/754/Add.6.

3. Where items subject to this Agreement are within the territory of Viet Nam, under its jurisdiction or under its control anywhere, they shall remain subject to IAEA safeguards in accordance with the "*Agreement of 2 October 1989 between the Socialist Republic of Viet Nam and the International Atomic Energy Agency for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons*" (INFCIRC/376) done at Vienna on 2 October 1989 and the Protocol additional to the said Agreement, done at Vienna on 10 August 2007 and contained in the document published by the Agency as INFCIRC/376/Add.1.

ARTICLE 9

PHYSICAL PROTECTION

1. Each Party shall ensure that all nuclear material, non-nuclear material, radioactive material, components, equipment and technology thereof, as are produced, used, exchanged or dealt with in any other manner for any purpose whatsoever, in pursuance of any project implemented or any form of cooperation pursued in terms of this Agreement, is protected in compliance with applicable standards and guidelines set by the IAEA, from time to time, by the Party in whose jurisdiction the specified item is located at any given time.

2. In addition to its obligations under the Convention on the Physical Protection of Nuclear Material, done at Vienna in 3 March 1980 and as amended and in force for each Party from time to time, each Party shall apply the recommendations of IAEA document INFCIRC/225/Rev.5 entitled, *"Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities"*. Any alteration to or replacement of the document INFCIRC/225/Rev.5 shall have effect under this Agreement only when the Parties have informed each other in writing through diplomatic channels that they accept such an alteration or replacement.

ARTICLE 10

RETURN OF SPENT FUEL

Modalities for the return of spent fuel from any reactor built by the Indian side in Viet Nam would be established by the Parties through a separate Protocol to this Agreement.

ARTICLE 11

RETRANSFERS

1. Items subject to this Agreement shall not be transferred beyond the territory, jurisdiction or control of the recipient Party without the prior written consent of the supplier Party, except in accordance with this Article.

2. Items subject to this Agreement shall not be transferred by the recipient Party to a third country except when the recipient Party has obtained assurances from the third country of peaceful use, of implementation of the Agency's safeguards and of adequate measures of physical protection comparable to Article 9 of this Agreement. All such transfers shall be subject to the respective national legislation and regulations of the Parties.

3. The Parties shall exchange and keep up to date lists of third countries to which transfers by the other Party pursuant to paragraph 1 of this Article are authorised and the nuclear fuel cycle processes that may apply in each third Country to the nuclear material transferred.

4. The designated authority of the recipient Party shall promptly notify the designated authority of the supplier Party of transfers by the recipient Party pursuant to paragraph 1 of this Article.

ARTICLE 12

INTELLECTUAL PROPERTY RIGHTS

1. The Parties shall, in accordance with the applicable domestic laws of the country and related international agreements to which both Parties are party, ensure the effective protection of rights to intellectual property generated through projects implemented in terms of this Agreement and such rights shall not be transferred to a third party without the express written approval of both Parties.

2. Intellectual property rights of any Party in respect of information or technologies shared, utilized or transferred in pursuance of any project under this Agreement, shall remain with that Party.

ARTICLE 13

PROTECTION OF INFORMATION AND CONFIDENTIALITY

The Parties shall, in relation to information shared, pursuant to cooperation under this Agreement, ensure that:

a. Information which is required to be maintained as confidential in terms of the applicable domestic laws of either of the Parties, is not disclosed to any person and is maintained as confidential at all times;

b. Sensitive or confidential information is clearly defined and marked as such by either Party and is handled in such manner as is authorized by that Party;

c. Information transferred by one Party to the other is not divulged to a third party without the express and written consent of the transferring Party.

ARTICLE 14

AMENDMENTS

This Agreement may be amended with the mutual consent of the Parties in writing.

ARTICLE 15

SETTLEMENT OF DISPUTES

Any dispute that may arise in the interpretation and implementation of this Agreement shall be settled amicably through discussion and negotiation by the Parties.

ARTICLE 16

ENTRY INTO FORCE, DURATION AND TERMINATION

1. This Agreement shall enter into force on the date of receipt of the last notification whereby the Parties notify each other in writing, through the diplomatic channel that their respective internal legal procedures required for its entry into force have been completed. Upon the entry into force of this Agreement, it shall also supercede the *Agreement on Cooperation between the Government of the Socialist Republic of Viet Nam and the Government of the Republic of India for Cooperation for the Utilization of Atomic Energy for Peaceful Purposes* (March 25, 1986). Any form of existing cooperation initiated under the latter Agreement would be governed by the terms and provisions of this Agreement.

2. This Agreement shall remain in force for a period of Forty (40) Years unless previously terminated by either party by giving Twelve (12) months notice to the other Party of its intention to so terminate.

3. Upon the expiry of the Forty (40) years, the Agreement shall continue to be in force for another period of Twenty (20) years unless a notice for termination is given by either Party Twelve (12) months in advance to the other Party of its intention to so terminate.

4. The termination of this Agreement with effect from any date shall not affect projects that are ongoing as at that date nor shall it affect the obligations assumed under Articles 5, 7, 8, 9, 10, 11, 12 & 13 of this Agreement.

5. Any notifications required to be given under this Article shall be communicated through diplomatic channels.

2 **Non-nuclear materials for reactors:**

2.1 **Deuterium and heavy water:** Deuterium, heavy water (deuterium oxide) and any other deuterium compound in which the ratio of deuterium to hydrogen atoms exceeds 1:5000 for use in a nuclear reactor as defined in paragraph 1.1 above in quantities exceeding 200 kg of deuterium atoms in any period of 12 months.

2.2 **Nuclear grade graphite:** Graphite having a purity level better than 5 parts per million boron equivalent and with a density greater than 1.50 g/cm^3 for use in a nuclear reactor as defined in paragraph 1.1 above in quantities exceeding 30 metric tons in any period of 12 months.

3 Plants for the reprocessing of irradiated fuel elements, and equipment especially designed or prepared therefor.

4 Plants for the fabrication of fuel elements, and equipment especially designed or prepared therefor.

5 Plants for the separation of isotopes of natural uranium, depleted uranium or special fissionable material and equipment, other than analytical instruments, especially designed or prepared therefor.

6 Plants for the production or concentration of heavy water, deuterium and deuterium compounds and equipment especially designed or prepared therefor.

7 Plants for the conversion of uranium and plutonium and equipment especially designed or prepared therefor.

IN WITNESS WHEREOF, the undersigned being duly authorized by their respective Governments sign this Agreement.
Done at New Delhi, India on December 09th 2016, in two originals in English.

For the Government of the Socialist Republic of Viet Nam

Signature:
Name: Dr. Pham Cong Tac
Title: Deputy Minister of Science and Technology

For the Government of the Republic of India

Signature:
Name: Dr. Sekhar Basu
Title: Secretary
Department of Atomic Energy

ANNEX

1. Nuclear Reactors and Equipment for Reactors

1.1 **Complete nuclear reactors:** Nuclear reactors capable of operation so as to maintain a controlled self- sustaining fission chain reaction.

1.2 **Reactor pressure vessels:** Metal vessels, as complete units or as major shop-fabricated parts therefor, which are especially designed or prepared to contain the core of a nuclear reactor as defined in paragraph 1.1 above and are capable of withstanding the operating pressure of the primary coolant.

1.3 **Reactor fuel charging and discharging machines:** Manipulative equipment especially designed or prepared for inserting or removing fuel in a nuclear reactor as defined in paragraph 1.1 above capable of on-load operation or employing technically sophisticated positioning or alignment features to allow complex off-load fuelling operations such as those in which direct viewing of or access to the fuel is not normally available.

1.4 **Reactor control rods:** Rods especially designed or prepared for the control of the reaction rate in a nuclear reactor as defined in paragraph 1.1 above.

1.5 **Reactor pressure tubes:** Tubes which are especially designed or prepared to contain fuel elements and the primary coolant in a reactor as defined in paragraph 1.1 above at an operating pressure in excess of 5.1 MPa.

1.6 **Zirconium tubes:** Zirconium metal and alloys in the form of tubes or assemblies of tubes, and in quantities exceeding 500 kg in any period of 12 months, especially designed or prepared for use in a reactor as defined in paragraph 1.1 above, and in which the relation of hafnium to zirconium is less than 1:500 parts by weight.

1.7 **Primary coolant pumps:** Pumps especially designed or prepared for circulating the primary coolant for nuclear reactors as defined in paragraph 1.1 above.

1.8 **Nuclear reactor internals:** Support columns and plates for the core and other vessel internals, control rod guide tubes, thermal shields, baffles, core grid plates, diffuser plates etc.