AGREEMENT

BETWEEN

THE GOVERNMENT OF THE REPUBLIC OF INDIA

AND

THE GOVERNMENT OF CANADA

FOR CO-OPERATION IN

PEACEFUL USES OF NUCLEAR ENERGY

THE GOVERNMENT OF THE REPUBLIC OF INDIA AND THE GOVERNMENT OF CANADA, (hereinafter referred to as the "Parties"),

DESIRING to strengthen the friendly relations that exist between the Parties;

RECALLING the existence of past cooperation between the Parties in the use of nuclear energy for peaceful purposes;

NOTING that nuclear energy provides a safe, environmentally friendly and sustainable source of energy;

AFFIRMING the desire of the Parties, as States with comprehensive capabilities in advanced nuclear technologies to develop full civil nuclear cooperation and to promote the use of nuclear energy for peaceful purposes;

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

DESIRING to establish bilateral cooperation for the development and use of nuclear energy for peaceful purposes with a view to achieving sustainable development and strengthening energy security on a reliable, stable and predictable basis;

NOTING that the Parties share common concerns and objectives regarding the non-proliferation of weapons of mass destruction and their means of delivery, including possible linkages to terrorism, and affirm that international cooperation in peaceful uses of nuclear energy should be consistent with these objectives;

HAVE AGREED as follows:

ARTICLE I

Definitions

For the purpose of this Agreement:

"Appropriate Government Authority" means, for Canada the "Canadian Nuclear Safety Commission" and for India the "Department of Atomic Energy";

"Basic scientific research" means experimental or theoretical work undertaken principally to acquire new knowledge of the fundamental principles of phenomena and observable facts, not primarily directed towards a specific practical aim or objective;

"By-products" means any radioactive material (except special fissionable material) yielded in or made radioactive by exposure to the radiation incident to the process of producing special fissionable material or utilizing source material or special fissionable material;

"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;

"Equipment" means any of the equipment listed in Annex B to this Agreement;

"Facility" means a reactor, a critical facility, a conversion plant, a fabrication plant, a reprocessing plant, an isotope separation plant or a separate storage installation;

"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;

"Intellectual property" has the meaning given by article 2 of the constituent instrument of the World Intellectual Property Organization (WIPO) signed in Stockholm on 14 July 1967;

"In the public domain", as it applies herein, means technology that has been made available without restrictions upon its further dissemination. (Copyright restrictions do not remove technology from being in the public domain);

"Material" means any of the material listed in Annex A to this Agreement;

"Nuclear Material" means any "source material" or "special fissionable material" as those terms are defined in Article XX of the Statute of the IAEA, as amended and accepted by both Parties in writing;

"Person" shall mean any natural person or legal entity subject to the territorial jurisdiction of either Party but does not include the Parties;

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

"Technology" means the specific information necessary for the "development", "production" or "use" of items such as material, nuclear material and equipment with the exception of data "In the public domain" or of "Basic scientific research";

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

ARTICLE 2

Objective and Scope

1. In terms of the provisions of this Agreement, the Parties agree to cooperate in the use of nuclear energy for peaceful and non-explosive purposes, in good faith and with due regard for the principles of international law.

2. Nothing in this Agreement will affect the rights and obligations of the Parties in terms of their respective national laws and policies, as well as in terms of their membership of international treaties to which they are a party at the time of the signing of this Agreement.

3. The Parties may promote cooperation in the following areas:

- Basic and applied research regarding peaceful uses of nuclear energy;
- Co-operation between persons in Canada and India, in conformity with regulatory requirements and including the design, construction, operating experience, maintenance and decommissioning of nuclear reactors;
- The development and use of nuclear energy applications in the fields of agriculture, health care, industry, and the environment;
- The supply of uranium and other natural resources;
- Nuclear fuel and nuclear fuel cycle management;
- Nuclear waste management;
- Nuclear safety, radiation safety and environmental protection;

- The prevention of, and response to, emergency situations resulting from radioactive or nuclear accidents;

and any other field as jointly decided by the Parties.

4. Cooperation under the Agreement may take the following forms:

- Supply of material, nuclear material, equipment and technology, as well as facilities and services, between the Parties or persons duly authorized for that purpose;

- Technology transfer on an industrial or commercial scale between the Parties or persons duly authorized for that purpose;

- Exchange and training of scientific and technical staff;

- Exchange of scientific and technical information;

- Participation by scientific and technical staff of one Party in research and development activities conducted by the other Party;

- Joint conduct of research and engineering activities, including joint research and experimentation based on balanced contributions;

- Organization of scientific and technical conferences and symposia;

- Consultations and cooperation in relevant international fora;

- Nuclear cooperation projects in third countries;

and any other form of cooperation as jointly decided by the Parties.

5. The Parties affirm that the purpose of this Agreement is to provide for peaceful nuclear cooperation and not to affect nuclear activities developed by them independent of this Agreement. Accordingly, nothing in this Agreement shall be interpreted as affecting the rights of the Parties to use for their own purposes nuclear material, material, equipment, information or technology produced, acquired or developed by them independent of any nuclear material, material, equipment, information or technology transferred to them pursuant to this Agreement. This Agreement shall be implemented in a manner so as not to affect any other activities involving the use of nuclear material, material, equipment, information or technology and nuclear facilities produced, acquired or developed by them independent of this Agreement for their own purposes.

ARTICLE 3

Implementing Provisions

1. Cooperation as defined in Article 2 may be carried out by means of:

- specific agreements and Memoranda of Understanding between the Parties or persons duly authorized for that purpose, intended in particular to detail scientific and technical programs and arrangement for scientific and technical exchanges;

- memoranda of understanding or contracts signed by the persons duly authorized for that purpose on industrial manufacturing and the supply of material, nuclear material, services, equipment, setting up of facilities and localization issues and transfer of technology as appropriate.

2. Transfer of nuclear material, material, equipment, and technology under this Agreement may be undertaken directly between the Parties or through persons duly authorized for that purpose. Such transfers shall be subject to this Agreement and the Parties shall notify each other in writing, in advance of each transfer. Nuclear material, material, equipment, and technology transferred from the territory of one Party to the territory of the other Party, whether directly or through a third country, will be regarded as having been transferred pursuant to the Agreement only upon confirmation, by the appropriate authority of the recipient Party to the appropriate authority of the supplier Party, that this nuclear material, material, equipment, and technology has been received.

3. In addition to the items subject to this Agreement pursuant to Article 3.2 above, the following material, nuclear material and equipment will be subject to this Agreement:

(i) Material and nuclear material that is produced or processed by the use of any equipment subject to this Agreement;

(ii) Nuclear material that is produced or processed by the use of any nuclear material or material subject to this Agreement; and

(iii) Equipment which the recipient Party, or the supplying Party after consultation and agreement with the recipient Party, has designated as being designed, constructed, manufactured or operated on the basis of, or by the use of technology subject to this Agreement, transferred pursuant to Article 3.2 above.

4. Persons duly authorized to supply uranium may enter into long term supply contracts and arrangements.

5. The supply of material, nuclear material, equipment, and services under this Agreement may be undertaken directly by the Parties or through persons duly authorized by them.

6. Each Party shall ensure that the material, nuclear material, equipment, facilities and technology subject to the provisions of this Agreement, as well as the nuclear material recovered or obtained as by-products and tritium, are exclusively held by persons under the Party's jurisdiction and authorized by the Party to hold those items.

ARTICLE 4

Facilitation of Visits

Parties will facilitate visits of experts to their territory for implementation of the provisions of this Agreement on a reciprocal basis. When execution of an agreement, Memorandum of Understanding or contract pursuant to this Agreement between the Parties or persons duly authorized by them requires exchanges of experts, the Parties shall facilitate entry of the experts to their territory and their stay therein, consistent with national laws, regulations and practices. When other cooperation pursuant to this Agreement or under the aegis of international organizations requires visits of experts, the Parties shall facilitate entry of the experts to their territory and their stay therein, consistent with national laws, regulations and practices.

ARTICLE 5

Nuclear Trade

1. Duly authorized Canadian and Indian persons may cooperate in the design, construction, commissioning of, and services for, nuclear power plants in third countries, in conformity with relevant regulatory requirements of the Parties.

2. The Parties shall facilitate nuclear trade between themselves and between persons duly authorized by them, and where appropriate, trade between either Party and third countries, of items obligated to the other Party.

3. A Party shall not use the provisions of this Agreement for the purpose of securing commercial advantage or for the purpose of interfering with the commercial relations of the other Party

4. The Parties shall fulfill the terms of this Agreement within the framework of their respective national legislations, international obligations and administrative, tax and customs regulations and procedures.

ARTICLE 6

Reprocessing and Enrichment

1. The Government of Canada grants consent to the Government of the Republic of India for reprocessing or otherwise altering in form or content nuclear material transferred pursuant to this Agreement and nuclear material used in or produced through the use of material, nuclear material, equipment or technology so transferred.

2. The provisions of paragraph 1 shall only apply:

(a) where such reprocessing takes place in IAEA safeguarded facilities with the aim of producing nuclear fuel for use in nuclear facilities under IAEA safeguards to implement India's planned nuclear energy programme;

(b) where any special fissionable material that may be separated thereby is stored and utilized in national facilities in India under IAEA safeguards; and

(c) as long as the India – IAEA Safeguards Agreement remains in force.

3. Enrichment may be carried out up to a maximum of twenty percent in the isotope 235 of uranium transferred pursuant to this Agreement, as well as uranium used in or produced through the use of equipment transferred pursuant to this Agreement.

ARTICLE 7

Confidentiality of Information and Intellectual Property Rights

1. Parties shall take reasonable measures to protect information and technology subject to this Agreement against unauthorized use or disclosure. These measures shall comply with this Agreement, with the Parties' respective legislation as well as with applicable international treaties and conventions relating to intellectual property to which both Canada and India are party.

2. The information and technology exchanged under this Agreement shall not be communicated to third parties, whether public or private, without prior written approval from the Party providing that information or technology.

ARTICLE 8

Peaceful Use and IAEA Safeguards

1. The Parties shall ensure that the material, nuclear material, equipment, facilities and technology transferred under this Agreement, as well as by-products are used for peaceful and non-explosive purposes.

2. Both Parties shall comply with the provisions contained in the IAEA document GOV/1999/19/Rev.2 with regard to by-product material subject to the Agreement. The Parties agree that reporting and exchanges of information on tritium subject to the Agreement will be limited to an annual exchange of information pertaining to its disposition for peaceful purposes consistent with Article 8.1 of this Agreement.

3. Safeguards shall be maintained with respect to all nuclear materials and equipment transferred pursuant to this Agreement, and with respect to all special fissionable material used in or produced through the use of such nuclear materials and equipment, so long as the material or equipment remains under the jurisdiction or control of the cooperating Party.

4. Material, nuclear material, equipment and facilities transferred under this Agreement and notified by the supplier Party to that end, and also successive generations of nuclear material recovered or obtained as by-products shall remain subject to IAEA safeguards:

(a) With regard to such items transferred to India, they will remain subject to IAEA safeguards in accordance with An Agreement with the Government of India for the Application of Safeguards to Civilian Nuclear Facilities that entered into force on May 11, 2009 (IAEA document INFCIRC 754 of May 29, 2009);

(b) With regard to such items transferred to Canada, they will remain subject to IAEA safeguards in accordance with the Agreement of 21 February 1972 between Canada and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons (INFCIRC/164 June 1996).

5. The material, nuclear material, equipment, facilities and technology subject to this Agreement, as well as by-products shall remain subject to the provisions of this Agreement until:

(a) They have been transferred or retransferred beyond the jurisdiction of the recipient Party in accordance with the provisions of Article 10 of this Agreement, or returned to the Party having initially transferred them, or until

(b) The Parties decide by mutual agreement that they are no longer subject to this Agreement and withdraw them from that jurisdiction, or until

(c) In the case of nuclear material, it has been established by the IAEA, in accordance with the provisions for the termination of safeguards in the agreements between the Government of the Republic of India and the Agency or between the Government of Canada and the Agency, that it has been consumed or diluted to the extent that it is no longer usable for any nuclear activity relevant from the point of view of Agency safeguards, or that it is no longer practically recoverable

6. If the IAEA decides that the application of IAEA safeguards is no longer possible, the supplier country and the recipient country should consult and agree on appropriate verification measures.

ARTICLE 9

Physical Protection

1. Each Party shall make sure that, within its territory, or outside its territory to the point where that responsibility is taken over by the other Party or by a third State, adequate measures to ensure the physical protection of the material, nuclear material, equipment and facilities referred to in this Agreement are adopted, in accordance with its national legislation and the international commitments to which it is a signatory, in particular the Convention on the Physical Protection of Nuclear Material of 26 October 1979 and its amendment adopted on 8 July 2005 (hereinafter referred to as "the Convention").

2. In regard to nuclear material, the minimum levels of physical protection shall be those specified in Annex 1 of the Convention. Within its own jurisdiction, each Party reserves the right, where necessary and in accordance with its national regulations, to apply stricter physical protection criteria.

3. Each Party is responsible for implementing measures of physical protection within its own jurisdiction. In the implementation of those measures, each Party will be guided by the IAEA recommendations contained in the Agency document INFCIRC 225/Rev.4.

4. Amendments to IAEA recommendations on physical protection shall only be effective under the terms of this Agreement after each Party has given written notice to the other of their approval of these amendments.

ARTICLE 10

Retransfers

A Party shall only allow the transfer or retransfer of material, nuclear material, equipment, facilities and technology subject to this Agreement to a third State after having obtained the written consent for this purpose from the other Party, and a commitment by the recipient of such a transfer or retransfer that:

- such transfer or retransfer shall only be used for peaceful and non-explosive purposes;

- IAEA safeguards shall be implemented on such transfer or retransfer, except for technology; and

- adequate physical protection measures will be implemented on all such transfers or retransfers.

ARTICLE 11

Consultations and Appropriate Arrangements

1. The Parties undertake to consult at the request of either Party regarding the implementation of this Agreement and the development of further cooperation in the field of peaceful uses of nuclear energy on a stable, reliable and predictable basis. The Parties shall consult in accordance with paragraph 2 of this Article in order to realize the cooperation envisaged in Articles 2 and 3 and to effectively implement this Agreement. Such consultations shall be formalized through a joint Committee established for this purpose.

2. Representatives of the Parties shall meet at the request of either Party to consult on matters arising from the application of this Agreement.

3. The Parties, through their respective governmental authorities, shall establish an appropriate arrangement to facilitate the effective implementation of this Agreement. This arrangement will include such exchange of information as is mutually agreed by the respective Appropriate Governmental Authorities to implement and administer the provisions of this Agreement.

4. Upon the request of either Party, the other Party shall permit the IAEA to share with the requesting Party the status of all inventories of material and nuclear material subject to this Agreement.

ARTICLE 12

Dispute Settlement

1. The Parties shall promptly seek to settle any dispute concerning the interpretation or implementation of the provisions of this Agreement through negotiations.

2. Disputes regarding the interpretation, implementation or performance of subsequent commercial contracts or Memoranda of Understanding shall be dealt with in accordance with the provisions found in the contracts or Memoranda of Understanding.

ARTICLE 13

Amendments

1. Both Parties agree that terms and provisions contained in this Agreement shall not be amended throughout the period this Agreement is in force unless both Parties decide otherwise by mutual consent through written agreement between the Parties.

2. Any amendment to this Agreement shall be subject to ratification, acceptance or approval by the Parties, in accordance with their respective constitutional provisions. Each Party shall notify the other in writing of the completion of these procedures. Amendments shall enter into force on the date of the later of these notifications.

ARTICLE 14

Ratification, Duration and Termination

1. Each Party shall notify the other of the completion of the procedures it requires for the entry into force of this Agreement.

2. This Agreement shall enter into force on the date the later of these notifications is received.

3. This Agreement shall remain in force for a period of forty (40) years and it shall be automatically renewable for periods of twenty (20) years. A Party that does not wish to renew this Agreement shall notify the other Party by giving six months' written notice.

4. Either Party shall have the right to terminate this Agreement prior to its expiration on one year's written notice to the other Party. A Party giving notice of termination shall provide the reasons for seeking such termination. Both Parties consider it extremely unlikely that actions would be taken by either Party which would cause the other Party to terminate this Agreement. If a Party seeking termination cites a violation of the Agreement as the reason for notice for seeking termination, Parties shall consider whether the action was caused inadvertently or otherwise and whether the violation could be considered as material. The Party seeking termination has the right to cease further cooperation under this Agreement if it determines that a mutually acceptable resolution of outstanding issues has not been possible or cannot be achieved through consultations.

5. The Agreement shall terminate one year from the date of the written notice, unless the notice has been withdrawn by the providing Party in writing prior to the date of termination.

6. In the event this Agreement is not renewed in accordance with the procedure referred to in paragraph 3 of this Article or is terminated in accordance with the procedure referred to in paragraph 4 of this Article, the relevant provisions of Articles 6, 7, 8, 9, 10, 11 and 12, shall continue to apply, when applicable, to the material, nuclear material, equipment, facilities and technology subject to the provisions of this Agreement and transferred pursuant to this Agreement, as well as to the nuclear material recovered or obtained as by-products and will remain in force.

IN WITNESS WHEREOF, the representatives of the two Governments, being duly authorized thereto, have signed this Agreement.

DONE at Toronto, this 27th day of June 2010, in duplicate, in the English, French and Hindi languages, all texts being equally authentic.

Srikumar Banerjee

FOR THE GOVERNMENT OF THE REPUBLIC OF INDIA

FOR THE GOVERNMENT OF CANADA

ANNEX A

This Annex is an integral part of the Agreement.

Material

(1) Deuterium and heavy water:

deuterium and any deuterium compound in which the ratio of deuterium to hydrogen exceeds 1:5000 for use in a nuclear reactor, as defined in paragraph (1) of Annex B, in quantities exceeding 200 kg of deuterium atoms in any period of 12 months.

(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 grams per cubic centimetre in quantities exceeding 30 metric tons in any period of 12 months.

ANNEX B

This Annex is an integral part of the Agreement.

Equipment

(1) Nuclear reactors:

capable of operation so as to maintain a controlled self-sustaining fission chain reaction, excluding zero energy reactors, the latter being defined as reactors with a designed maximum rate of production of plutonium not exceeding 100 grams per year.

A "nuclear reactor" basically includes the items within or attached directly to the reactor vessel, the equipment which controls the level of power in the core, and the components which normally contain, or come in direct contact with, or control the primary coolant of the reactor core.

It is not intended to exclude reactors which could reasonably be capable of modification to produce significantly more than 100 grams of plutonium per year. Reactors designed for sustained operation at significant power levels, regardless of their capacity for plutonium production, are not considered as "zero energy reactors".

(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) above and are capable of withstanding the operating pressure of the primary coolant.

A top plate for a reactor pressure vessel is a major shop-fabricated part of a pressure vessel.

(3) 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.

(4) 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) 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.

(5) Reactor control rods:

rods especially designed or prepared for the control of the reaction rate in a nuclear reactor as defined in paragraph (1) above. This item includes, in addition to the neutron absorbing part, the support or suspension structures therefor if supplied separately.

(6) 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) above at an operating pressure in excess of 50 atmospheres.

(7) Zirconium tubes:

zirconium metal and alloys in the form of tubes or assemblies of tubes and in quantities exceeding 500 kg per year, especially designed or prepared for use in a reactor as defined in paragraph (1) above, and in which the relationship of hafnium to zirconium is less than 1:500 parts by weight.

(8) Primary coolant pumps:

pumps especially designed or prepared for circulating the primary coolant for nuclear reactors as defined in paragraph (1) above.

(9) Plants for the reprocessing of irradiated fuel elements, and equipment especially designed or prepared therefor:

A "plant for the reprocessing of irradiated fuel elements" includes the equipment and components which normally come in direct contact with and directly control the irradiated fuel and the major nuclear material and fission product processing streams. Items of equipment that are considered to fall within the meaning of the phrase "and equipment especially designed or prepared therefor" include:

(a) Irradiated fuel element chopping machines: remotely operated equipment especially designed or prepared for use in a reprocessing plant as identified above and intended to cut, chop or shear irradiated nuclear fuel assemblies, bundles or rods; and

(b) Critically safe tanks (e.g. small diameter, annular or slab tanks) especially designed or prepared for use in a reprocessing plant as identified above, intended for dissolution of irradiated nuclear fuel and which are capable of withstanding hot, highly corrosive liquid, and which can be remotely loaded and maintained.

(10) Plants for the fabrication of fuel elements:

A "plant for the fabrication of fuel elements" includes the equipment:

(a) which normally comes into direct contact with, or directly processes, or controls, the production flow of nuclear material, or

(b) which seals the nuclear material within the cladding, and

(c) the whole set of items for the foregoing operations, as well as individual items intended for any of the foregoing operations, and for other fuel fabrication operations, such as checking the integrity of the cladding or the seal, and the finish treatment to the sealed fuel.

(11) Equipment, other than analytical instruments, especially designed or prepared for the separation of isotopes of uranium:

"Equipment, other than analytical instruments, especially designed or prepared for the separation of isotopes of uranium" includes each of the major items of equipment especially designed or prepared for the separation process. Such items include:

- gaseous diffusion barriers;
- gaseous diffuser housings;
- gas centrifuge assemblies, corrosion-resistant to UF6;
- jet nozzle separation units;
- vortex separation units;
- large UF6 corrosion-resistant axial or centrifugal compressors; and
- special compressor seals for such compressors.

(12) Plants for the production of heavy water:

A "plant for the production of heavy water" includes the plant and equipment especially designed or prepared for the enrichment of deuterium or its compounds, as well as any significant fraction of the items essential to the operation of the plant.

(13) Any major components or components of items (1) to (12) above.