

Information Circular

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Communication dated 19 May 2011 received from the Resident Representative of the United Kingdom of Great Britain and Northern Ireland to the Agency regarding Assurance of Supply of Enrichment Services and Low Enriched Uranium for Use in Nuclear Power Plants

The Secretariat has received a letter dated 19 May 2011 from the Resident Representative of the United Kingdom of Great Britain and Northern Ireland to the Agency, attaching the Proposal for the Assurance of Supply of Enrichment Services and Low Enriched Uranium for Use in Nuclear Power Plants, as described in document GOV/2011/10.

As requested by the Resident Representative, the letter and its attachment are circulated herewith for information of all Member States.



United Kingdom Mission

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Yukiya Amano
Director General
International Atomic Energy Agency
1400 Vienna

19 May 2011

Dear Director General

Following on from the successful adoption of the March 2011 Board of Governors Resolution on the Assurance of Supply of Enrichment Services and Low Enriched Uranium for Use in Nuclear Power Plants (GOV/2011/17), the United Kingdom Mission would like to request that this letter together with the enclosed Proposal for the Assurance of Supply of Enrichment Services and Low Enriched Uranium for Use in Nuclear Power Plants, as described in GOV/2011/10 and its attachment, be circulated in the INFCIRC series of documents.

I would like to thank you for your cooperation in this matter.

Please accept, sir, the continuing assurance of my highest consideration.

Sincerely,

Simon Smith

Simon Smith
Governor and Permanent Representative

Proposal by Member States of the European Union (Belgium, Czech Republic, Denmark, France, Germany, Italy, the Netherlands, Portugal, the United Kingdom of Great Britain and Northern Ireland), the Russian Federation and the United States of America for the Assurance of Supply of Enrichment Services and Low Enriched Uranium for Use in Nuclear Power Plants¹

1. Since 2005, a number of proposals have been put forward by IAEA Member States concerning assurance of supply and international nuclear fuel centres, including assurance of supply of low enriched uranium (LEU). While it is acknowledged that the international market in nuclear fuel continues to operate effectively and efficiently, confidence in the ability to secure assured and predictable supplies of nuclear fuel is a major consideration for those States wishing to continue or introduce civil nuclear power programmes to meet energy security goals. The United Kingdom (UK), at the December 2010 meeting of the IAEA Board of Governors, indicated its wish to bring forward its proposal for a Nuclear Fuel Assurance (NFA) to the Board at an early opportunity. Although conceived by the UK, the NFA proposal is open to all eligible IAEA Member States interested in supplying or receiving LEU and contributes to a ‘menu of options’ being made available to Member States in order to help assure the reliable supply of fuel for nuclear power plants.

Relevant Provisions of the IAEA Statute

2. The NFA proposal is in accordance with Article III of the IAEA Statute, whereby the Agency is authorized, inter alia, to encourage and assist research on, and development and practical application of, atomic energy for peaceful uses throughout the world; and, if requested to do so, to act as an intermediary for the purposes of securing the performance of services or the supplying of materials, equipment, or facilities by one member of the Agency for another; and to perform any operation or service useful in research on, or development or practical application of, atomic energy for peaceful uses.

Description of the NFA Proposal

3. The idea of a voluntary scheme for reliable access to nuclear fuel was first outlined by the UK in INFCIRC/707 (4 June 2007) under the working title of “Enrichment Bonds”. That idea was further developed in a paper on “Progress on the UK-led proposal for a Nuclear Fuel Assurance (NFA) based on non-interruption of commercial contracts for enrichment services” (GOV/INF/2009/7 of 31 August 2009), and constitutes the basis for the present NFA proposal by the UK. The proposal has benefited from considerable input from potential Recipient States and established Supplier States.

4. On 13 June 2007, the Director General presented to the Board a report entitled “Possible New Framework for the Utilization of Nuclear Energy: Options for Assurance of Supply of Nuclear Fuel”. The report suggested a possible assurance of supply framework for LEU with three levels. All three levels of assurance are complementary and not mutually exclusive:

- a) Level 1: existing global market arrangements for nuclear fuel supply;

¹ The following Member States not currently on the Board of Governors support the proposal for the Assurance of Supply of Enrichment Services and Low Enriched Uranium for Use in Nuclear Power Plants: Member States of the European Union (Austria, Bulgaria, Cyprus, Estonia, Finland, Greece, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Malta, Poland, Romania, Slovakia, Slovenia, Spain and Sweden) and Norway.

- b) Level 2: back-up commitments provided by suppliers of enrichment services underpinned by commitments from their respective governments to allow such supply. The back-up commitments could be utilized when pre-determined criteria are met following a political disruption; and
- c) Level 3: a physical LEU reserve under IAEA control, stored in one or several separate locations in the form of uranium hexafluoride (UF₆) or uranium oxide (UO₂), or a virtual LEU reserve based on commitments by governments to make LEU available to the Agency. Such a reserve, either physical or virtual, could be utilized when Level 2 commitments cannot be fulfilled and the same pre-determined criteria are met.

5. The NFA proposal provides a Level 2 type of assurance.

6. The NFA shall be available for use by interested Supplier States and all eligible IAEA Member States wishing to continue or introduce civil nuclear power programmes. The NFA shall not limit a Recipient State's right to access an LEU bank, for example, but shall rather reinforce existing market mechanisms and complement other initiatives on assurance of supply provided under Levels 1 and 3. The NFA shall be entirely voluntary, shall not distort the functioning of the commercial market, and shall not have any disadvantages for those States which choose not to join the mechanism. The NFA shall have the advantage of being straightforward to introduce, at little or no cost to any of the Parties. It shall not interfere with the implementation of a supply contract between a Supplier State (or an undertaking within its jurisdiction) and a Recipient State (or an undertaking within its jurisdiction) to which the NFA would apply.²

7. At the heart of this proposal is a draft Model NFA Agreement (Attachment 1) to be used as a standard text for the conclusion of subsequent NFA Agreements between a Supplier State, a Recipient State and the IAEA that will provide additional assurance underpinning an existing supply contract for the provision of enrichment services and LEU. The draft Model NFA Agreement sets out the conditions for access to the NFA and details the respective undertakings of the Parties. Under the draft Model NFA Agreement, the Supplier State undertakes not to interrupt the supply of enrichment services and LEU to the Recipient State, without any additional demands beyond compliance with the international obligations and published export licensing standards³ of the Supplier State. Thus, the Recipient State shall benefit from a further reassurance of the supply of enrichment services and of LEU.

Eligibility Criteria

8. Under the draft Model NFA Agreement, the Recipient State, in order to benefit from the NFA, needs to fulfil the following criteria: it must be a Party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT); it must have concluded and brought into force a comprehensive safeguards agreement (CSA) with the IAEA; it must be a State in respect of which the IAEA has drawn the conclusion in the most recent Safeguards Implementation Report (SIR) that there has been no diversion of declared nuclear material; and no issues relating to safeguards implementation are under consideration by the Board of Governors (Article II.1 of the NFA Agreement).

9. At the same time, the Recipient State undertakes, inter alia, to use the LEU supplied under the supply contract exclusively for fuel fabrication for nuclear power generation and to apply the relevant

² The 'Supplier' or 'Recipient' of fuel cycle services may, or may not, be wholly or partially owned or controlled by its respective State Government.

³ This includes both domestic legislation and published principles set out under that legislation.

IAEA safety standards and adequate physical protection measures (Article III of the NFA Agreement).

Functions of the IAEA

10. The IAEA shall be a co-signatory of the NFA Agreement. Pursuant to the NFA Agreement, the Director General shall be requested to confirm that: the Recipient State is a Party to the NPT (on the basis of information received from a Depository Government of the NPT); the Recipient State has concluded and brought into force a CSA with the IAEA; the IAEA has drawn a conclusion on the non-diversion of declared nuclear material in the most recent SIR; and no safeguards implementation issues relating to the Recipient State are under consideration by the IAEA Board of Governors.

Process of Implementation of the NFA

11. The NFA shall be implemented through the following process:

- a) the text of the NFA Agreement shall be agreed between the Supplier and the Recipient State, on the basis of the Model NFA Agreement, in liaison with the IAEA and alongside commercial discussions on the terms and conditions of the supply contract. A copy of the export licence to be issued by the Supplier State shall be annexed to the NFA Agreement;
- b) the supply contract shall be signed;
- c) the NFA Agreement shall be signed by all parties and enter into force;
- d) the Director General shall confirm that the Recipient State meets the eligibility criteria referred to in Article II.1 of the NFA Agreement; and
- e) the export licence shall be issued and shall remain in force for the period stipulated in the export licence, provided that the Director General is able to confirm that the Recipient State meets the conditions set out in Article II.1 of the NFA Agreement, and subject to the criteria noted in paragraphs 12 and 13 below.

12. The Supplier State shall undertake not to revoke or suspend the export licence, except where it is required to do so in accordance with its international obligations relevant to the supply of enrichment services and the export of the LEU, or its published export licensing standards. In addition, for any such period as the Director General is not able to confirm that a Recipient State meets all of the conditions of the NFA, the export licence shall be suspended (Article IV of the NFA Agreement).

13. In the event that the Recipient State is in breach of any of its undertakings under the NFA Agreement, or the export licence is suspended or revoked as set out in paragraph 12 above, the Supplier State may require the return of the LEU supplied under the supply contract, and of any nuclear material, including subsequent generations of special fissionable material, produced, processed or used in or by the use of the supplied LEU, and the Recipient State shall do so as soon as reasonably practicable (Article V of the NFA Agreement).

Future Options for NFA Application

14. In developing the NFA proposal, the UK has focused on the supply of enrichment services and LEU, and therefore has engaged in discussions with existing and established suppliers. However, it is possible that in the future the general principle of introducing an NFA Agreement which ensures

a continuity of supply of fuel cycle services based on freely negotiated contracts between suppliers and recipients could also be applied to a provider of fuel fabrication services.

MODEL AGREEMENT BETWEEN
THE GOVERNMENT OF [...*SUPPLIER STATE* ...],
THE GOVERNMENT OF [...*RECIPIENT STATE*...] AND
THE INTERNATIONAL ATOMIC ENERGY AGENCY
FOR THE ASSURANCE OF SUPPLY OF ENRICHMENT SERVICES AND LOW
ENRICHED URANIUM FOR USE IN NUCLEAR POWER PLANTS

BEARING IN MIND the need to meet in an assured manner the demand of Member States of the International Atomic Energy Agency (hereinafter referred to as the “IAEA”) for nuclear fuel for electricity generation and secure reliable access to uranium enrichment services;

BEARING IN MIND that, under its Statute, the IAEA is authorized, inter alia, to encourage and assist research on, and development and practical application of, atomic energy for peaceful uses throughout the world; and, if requested to do so, to act as an intermediary for the purposes of securing the performance of fuel cycle services;

WHEREAS the Board of Governors of the IAEA approved on 27 November 2009 the “Agreement between the Government of the Russian Federation and the International Atomic Energy Agency Regarding the Establishment on the Territory of the Russian Federation of a Physical Reserve of Low Enriched Uranium and the Supply of Low Enriched Uranium therefrom to the International Atomic Energy Agency for its Member States”, which entered into force on 29 January 2011, and also approved a “Model Agreement” as the standard text for agreements that are to be concluded with Member States for the supply of low enriched uranium (hereinafter referred to as the “LEU”) by the IAEA from the reserve;

WHEREAS the Board of Governors of the IAEA approved on 3 December 2010 the “Establishment of an IAEA Low Enriched Uranium (LEU) Bank for the Supply of LEU to Member States” and also approved a “Model Agreement” as the standard text for agreements that are to be concluded with Member States for the supply of LEU from the IAEA LEU Bank;

WHEREAS the Government of [...*Supplier State*...] wishes to contribute to the further development of cooperation in the field of the peaceful uses of atomic energy through the development of proposals for the assurance of supply of nuclear fuel, without affecting the operation of the commercial market and without interference with the rights of IAEA Member States to develop their own nuclear fuel cycle services;

WHEREAS the Governments of [...*Supplier State*...] and [...*Recipient State*...] reaffirm the inalienable right of all Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (hereinafter referred to as the “NPT”), as set out in its Article IV, to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of the NPT; and

NOW, THEREFORE, the Government of [...*Supplier State*...], the Government of [...*Recipient State*...] and the IAEA (together hereinafter referred to as the “Parties”) hereby agree as follows:

ARTICLE I

The Government of [...*Supplier State*...] hereby assures the Government of [...*Recipient State*...] that, so far as it is able, taking into account its relevant international obligations and published export licencing standards, it will not prevent, or otherwise impede or interrupt, the supply of enrichment services and the export of LEU provided for under the supply contract between the Government of [...*Recipient State*...] or [...*an undertaking within the jurisdiction of Recipient State*...] and the Government of [...*Supplier State*...] or [...*an undertaking within the jurisdiction of Supplier State*...] signed on [...] (hereinafter referred to as the “Supply Contract”). Upon the entry into force of the Supply Contract and subsequent confirmation by the Director General of the IAEA that [...*Recipient State*...] meets all the conditions referred to in Article II.1, the Government of [...*Supplier State*...] shall promptly issue an export licence, in the form set out in the Annex hereto, for the supply of enrichment services and the export of the LEU to be provided under the Supply Contract (hereinafter referred to as the “Export Licence”).

ARTICLE II

1. For the purpose of Article I of this Agreement, the Director General of the IAEA shall confirm at the request of the Government of [...*Supplier State*...] or the Government of [...*Recipient State*...]:
 - (i) that [...*Recipient State*...] is a Party to the NPT, on the basis of information received from a Depositary Government of the NPT;
 - (ii) that [...*Recipient State*...] has concluded a comprehensive safeguards agreement with the IAEA based on INFCIRC/153 (Corrected) which entered into force on [...] and is published as INFCIRC/[xx] and remains in force; and
 - (iii) that with respect to [...*Recipient State*...] the IAEA has drawn a conclusion on the non-diversion of declared nuclear material in the most recent Safeguards Implementation Report and that no issues relating to safeguards implementation in [...*Recipient State*...] are under consideration by the Board of Governors of the IAEA.
2. The Director General of the IAEA may at any time be requested by the Government of [...*Supplier State*...] or the Government of [...*Recipient State*...] to confirm that [...*Recipient State*...] continues to meet all of the conditions set out in paragraph 1 of this Article.

ARTICLE III

1. For the purpose of this Agreement, the Government of [...*Recipient State*...] undertakes that:
 - (i) the LEU supplied under the Supply Contract shall be used exclusively for fuel fabrication for the generation of electricity at the [...*nuclear power plant*...] and shall remain at that plant unless the Government of [...*Supplier State*...] otherwise agrees;
 - (ii) the LEU supplied under the Supply Contract shall be subject to IAEA safeguards pursuant to the comprehensive safeguards agreement referred to in Article II.1.(ii);
 - (iii) the LEU supplied under the Supply Contract, and any nuclear material, including subsequent generations of special fissionable material, produced, processed or used in or by the use of the supplied LEU, shall not be used for the manufacture of any nuclear weapon or any nuclear explosive device, or for research on or development of any nuclear weapon or any nuclear explosive device, or in such a way as to further any military purpose;

- (iv) the LEU supplied under the Supply Contract, and any nuclear material, including subsequent generations of special fissionable material, produced, processed or used in or by the use of the supplied LEU, shall not be transferred to any other State without the permission of the Government of [...Supplier State...];
 - (v) no further enrichment of the LEU supplied under the Supply Contract, nor reprocessing of spent nuclear fuel produced through the use of that LEU, shall take place, unless otherwise agreed with [...Supplier State...];
 - (vi) if the comprehensive safeguards agreement referred to in Article II.1.(ii) is terminated, prior to such termination, the Recipient State shall bring into force an agreement with the IAEA, based on all the safeguards measures contained in INFCIRC/153 (Corrected) and requiring the application of safeguards to the LEU supplied under the Supply Contract, and any nuclear material, including subsequent generations of special fissionable material, produced, processed or used in or by the use of the supplied LEU;
 - (vii) adequate physical protection measures shall be maintained with respect to the LEU supplied under the Supply Contract, and to any nuclear material, including subsequent generations of special fissionable material, produced, processed or used in or by the use of the supplied LEU, which shall, as a minimum, provide protection comparable to that set forth in IAEA document "The Physical Protection of Nuclear Material and Nuclear Facilities" (INFCIRC/225/Rev.5), as it may be revised from time to time; and
 - (viii) the safety standards and measures for transport, handling, storage, and use set out in IAEA document INFCIRC/18/Rev.1, as it may be revised from time to time, shall be applied to the LEU supplied under the Supply Contract.
2. If the IAEA decides that the application of IAEA safeguards to the LEU supplied under the Supply Contract, and to any nuclear material, including subsequent generations of special fissionable material, produced, processed or used in or by the use of the supplied LEU, is no longer possible, the Government of [...Recipient State ...] undertakes to elaborate appropriate verification measures with the Government of [...Supplier State ...].

ARTICLE IV

1. The Government of [...Supplier State...] shall not revoke or suspend the Export Licence, except where required in accordance with:
- (i) the international obligations of [...Supplier State...] relevant to the export of the LEU, [including those under the Treaty Establishing the European Atomic Energy Community (EURATOM)]⁴; or
 - (ii) the published export licensing standards of [...Supplier State...].
2. However, the Export Licence shall be suspended for such period as the Director General of the IAEA is unable to confirm that [...Recipient State...] meets all of the conditions referred to in Article II.1.

ARTICLE V

The Government of [...Supplier State...] may request the return of the LEU supplied under the Supply Contract, and of any nuclear material, including subsequent generations of special

⁴ The text in brackets would be incorporated, as applicable.

fissionable material, produced, processed or used in or by the use of the supplied LEU, and upon such request the Government of [...*Recipient State*...] shall return such material as soon as reasonably practicable in the event that:

- (i) [...*Recipient State*...] is in breach of any of its undertakings in this Agreement; or
- (ii) The Export Licence is revoked or suspended in accordance with Article IV.

ARTICLE VI

1. Except as specified in this Agreement, the IAEA shall not assume any obligations or responsibilities in connection with the implementation of this Agreement.
2. The Government of [...*Supplier State*...] and the Government of [...*Recipient State*...] shall indemnify, hold and save harmless and defend, at their own expense, the IAEA and its officials from and against all claims arising in connection with this Agreement.

ARTICLE VII

1. This Agreement shall enter into force upon signature by the authorized representatives of the Parties.
2. Subject to paragraph 3 of this Article, this Agreement shall remain in force for a period of up to three years, provided that the Supply Contract remains in force.
3. Articles III, V, VI and VIII of this Agreement shall remain in force regardless of the expiration of this Agreement, unless otherwise agreed by the Parties in writing.

ARTICLE VIII

Any dispute arising out of the interpretation or implementation of this Agreement shall be settled by consultation or negotiation among the Parties, unless the Parties decide to refer the dispute to an alternative dispute settlement procedure.

DONE in triplicate in the English language.

For the **GOVERNMENT OF [...*Supplier State*...]**:

(Signature)

(Name and Title)

(Place and Date)

For the **GOVERNMENT OF [...*Recipient State*...]**:

(Signature)

(Name and Title)

(Place and Date)

For the **INTERNATIONAL ATOMIC
ENERGY AGENCY:**

(Signature)

(Name and Title)

(Place and Date)

ANNEX

EXPORT LICENCE