

**National Interest Analysis [2016] ATNIA 12**

**with attachment on consultation**

**Agreement between the Government of Australia and  
the Government of Ukraine on Cooperation in the Peaceful  
Uses of Nuclear Energy**

(Washington DC, 31 March 2016)

**[2016] ATNIF 30**

# NATIONAL INTEREST ANALYSIS: CATEGORY 1 TREATY

## SUMMARY PAGE

### **Agreement between the Government of Australia and the Government of Ukraine on Cooperation in the Peaceful Uses of Nuclear Energy**

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#### **Nature and timing of proposed treaty action**

1. It is proposed to bring into force the *Agreement between the Government of Australia and the Government of Ukraine on Cooperation in the Peaceful Uses of Nuclear Energy* (the proposed Agreement). The proposed Agreement was signed in Washington DC on 31 March 2016.
2. Pursuant to Article XIX of the proposed Agreement, it will enter into force on the last date upon which the Parties advise each other in writing through diplomatic channels that their respective internal procedures necessary for its entry into force have been completed. It is anticipated that Australia would advise Ukraine of this as soon as practicable following consideration of the proposed Agreement by the Joint Standing Committee on Treaties (JSCOT).

#### **Overview and national interest summary**

3. Bilateral nuclear cooperation agreements such as the proposed Agreement serve Australia's national interest by setting high international standards for the use of uranium through the application of strict conditions. Such agreements also enhance bilateral relationships, as well as Australia's commercial position as a reliable supplier of an important energy resource commodity. All of Australia's bilateral nuclear cooperation agreements, including the proposed Agreement with Ukraine, provide stringent nuclear safeguards and security conditions designed to ensure Australian uranium is used exclusively for peaceful purposes and is secured in accordance with international standards. By virtue of Australia's extensive network of such agreements, these stringent conditions apply to a significant proportion of uranium in peaceful use worldwide, hence contributing to raising overall standards.
4. Consistent with other Australian bilateral nuclear cooperation agreements, the proposed Agreement governs cooperation between the Parties in peaceful uses of nuclear energy and creates reciprocal obligations regarding the application of safeguards to the transfer and use of nuclear material, non-nuclear material, equipment, components and technology supplied by the Parties. It also covers cooperation on research and development.
5. The proposed Agreement would provide Ukraine with access to an additional market from which to purchase uranium ore concentrates under commercial contracts, thereby contributing to increasing diversity of supply of nuclear fuel, for which it is currently heavily reliant on Russia – noting that political tensions currently exist between Ukraine and Russia.

## **Reasons for Australia to take the proposed treaty action**

6. Following discussions in December 2014, the Australian Government agreed to negotiate a bilateral nuclear cooperation agreement on the peaceful uses of nuclear energy to allow for supply of Australian uranium to Ukraine. Under long-standing policy, Australia requires a bilateral nuclear cooperation agreement to supply uranium to any country, which includes stringent nuclear safeguards and security conditions. This policy provides assurances that exported uranium and its derivatives cannot benefit the development of nuclear weapons or be used in other military programs.

7. The Government considers that the proposed Agreement with Ukraine would provide a number of benefits to Australia, namely:

- a. opening an important additional market for Australian uranium producers by enabling the transfer of uranium between Australia and Ukraine for peaceful purposes, subject to appropriate controls consistent with Australia's policies and international obligations to prevent the proliferation of nuclear weapons;
- b. reinforcing Australia's close bilateral relations with Ukraine;
- c. supporting Australia's efforts in nuclear non-proliferation by applying Australia's stringent safeguards and security standards to another uranium market;
- d. consolidating Australia's position as a reliable supplier of energy resources;
- e. providing opportunities to engage with Ukraine on a range of nuclear matters (e.g. nuclear safeguards, scientific and technical matters, nuclear safety, radioisotopes, nuclear medicine and environmental research); and
- f. reinforcing Australia's commitment to nuclear and radiation safety by requiring consistency with international standards of nuclear safety and waste management.

### *Ukraine's nuclear industry*

8. Ukraine is highly reliant on nuclear power with 15 nuclear reactor units (pressurised water reactors) located in four nuclear power plants supplying over half of the country's electricity. Ukraine has an extensive and highly capable civilian nuclear industry. The type of reactors that were involved in the Chernobyl accident (then in the Union of Soviet Socialist Republics, now Ukraine) in 1986 have ceased operation and are being decommissioned. Ukraine is the only country in the world's top 10 generators of nuclear power not already covered by a nuclear cooperation agreement with Australia and represents a significant potential market.

9. Traditionally Ukraine has had a high degree of dependence on Russian nuclear technology, fuel assembly manufacture and supply services and expertise, and this is likely to continue given the long-term contracts in place. Ukraine mines enough uranium to provide for around half its requirements, the rest, until now, being supplied predominantly by Russia, which also processes and fabricates Ukraine's domestically produced uranium into fuel assemblies. Ukraine has recently concluded contracts with non-Russian companies for fuel assemblies (US-based company Westinghouse) and enrichment services (Urenco) as part of efforts to diversify supply arrangements and thus strengthen the country's energy security. Currently, fuel assemblies from Westinghouse's Swedish fuel fabrication facility are being used in three Ukrainian reactor units. In the future Ukraine plans to source a third of its fuel from Westinghouse.

10. In conjunction, Ukraine has stated it is looking to conclude commercial agreements for supply from 2017 for around 300-600 tonnes of uranium ore concentrate per year (valued at approximately AUD23-46 million at August 2016 spot prices), which could include Australian uranium. In the short term, with a nuclear cooperation agreement in place, any Australian uranium transferred to Ukraine will likely be part of Westinghouse fabricated fuel. Ukraine has nuclear cooperation agreements with countries, including the United States and Canada, as well as with the European Atomic Energy Community (Euratom).

11. Australian uranium, and nuclear material derived from its use (such as plutonium), that is subject to obligations under Australia's bilateral nuclear cooperation agreements is termed Australian obligated nuclear material (AONM). In response to the risks posed by the current tensions between Ukraine and Russia, the proposed Agreement includes clauses designed to minimise any security concerns involving AONM transferred to Ukraine. In addition to including standard assurances that internationally approved standards of physical protection will apply (Article VI), the proposed Agreement allows Australia to review physical protection measures (Article VI.3) and for the development of a facilities list, limiting the locations where AONM can be processed, used or stored to those that have been approved by Australia (Article VIII).

#### *Nuclear safeguards*

12. Australia's bilateral nuclear cooperation agreements provide assurance that AONM is used solely for peaceful purposes and is not diverted to nuclear weapons or other military uses. Australia has 24 such agreements in place, providing for the transfer of AONM to up to 42 countries, plus Taiwan.

13. Ukraine acceded to the *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT) [1973] ATS 3 in 1994 as a non-nuclear weapon State (giving up the nuclear weapons it inherited with the breakup of the USSR), and has a comprehensive safeguards agreement with the International Atomic Energy Agency (IAEA) (*Agreement between Ukraine and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons* signed on 21 September 1995) and an additional protocol on strengthened safeguards (*Protocol Additional to the Agreement between Ukraine and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, signed on 15 August 2000).

14. The proposed Agreement includes the essential elements of Australia's policy for the control of nuclear materials. These elements are:

- a. an assurance that AONM supplied to Ukraine, including associated non-nuclear material, equipment, components and technology will be used only for peaceful purposes and will not be diverted to military purposes or to the research, manufacture or development of, explosive devices (military purposes include depleted uranium munitions and tritium production for use in nuclear weapons) (Articles I(f), I(i), II(1) and X of the proposed Agreement);
- b. the provision for 'fallback safeguards' or contingency arrangements which would apply in the event that, for any reason, the IAEA is no longer able to administer safeguards in Ukraine (Article XI(3));
- c. application of IAEA safeguards to nuclear material, non-nuclear material, equipment, components and technology (collectively termed "items") subject to the proposed

Agreement (Article XI);

- d. a requirement for prior Australian consent before any transfer by Ukraine of AONM to a third State (Article VII);
- e. an assurance that effective physical protection measures which satisfy accepted international standards are applied to all AONM within, and sent from, Ukraine's jurisdiction (Article VI);
- f. a requirement for the prior written consent of both Parties for enrichment of 20% or greater in the isotope uranium 235 and reprocessing of nuclear material subject to the proposed Agreement (Article IX);
- g. the provision for cessation of supply by, and the repatriation of supplied items to, Australia in the event of material non-compliance with IAEA safeguards arrangements, or with key provisions in the proposed Agreement (Article XVI);
- h. the provision for administrative arrangements to be established between the appropriate governmental authorities of the Parties to ensure the effective implementation of the proposed Agreement (including a system of accounting for and control of items subject to the proposed Agreement) (Article XIV); and
- i. the provision for consultation between the Parties on the implementation of the proposed Agreement (Article XV).

## **Obligations**

15. The key obligation on both Parties is to ensure that nuclear material transferred between the Parties, including nuclear material derived from its use, as well as non-nuclear material, equipment, components and technology subject to the proposed Agreement, will only be used for peaceful purposes (Article X). This is ensured through the application of IAEA safeguards under Article XI of the proposed Agreement, complemented by accountability controls such as restrictions on enrichment (20% or more in the isotope uranium 235) and reprocessing without prior consent (Article IX) and administrative arrangements on effective implementation of the proposed Agreement (Article XIV).

16. Article II affirms the intent of the Parties to cooperate in the use of nuclear energy for peaceful purposes. Article II also outlines the possible areas and forms of cooperation such as nuclear safety and radiation protection, safeguards, nuclear research and development activities, and regulatory aspects of the peaceful uses of nuclear energy.

17. Article IV outlines the items subject to the proposed Agreement. These include nuclear material transferred between the Parties (whether directly or through a third State) and all forms of nuclear material prepared or derived from the use of such transferred nuclear material. Non-nuclear material, equipment, components or technology transferred between the Parties are also subject to the proposed Agreement. Items subject to this proposed Agreement may be transferred only to the legal entities authorised to receive them, and will continue to be subject to the proposed Agreement until they are no longer usable for any nuclear activity relevant from the point of view of safeguards; they are practicably irrecoverable for processing into a form which is usable for any nuclear activity; they are transferred beyond the territory of the Parties; or the Parties mutually determine in writing.

18. Article V obliges the Parties to take all necessary measures to ensure that nuclear safety and

radioactive waste management practices are consistent, as appropriate, with the main international instruments related to nuclear safety and waste management, namely: the *Convention on Nuclear Safety* [1997] ATS 5; the *Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* [2003] ATS 21; the *Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency* [1987] ATS 15; and the *Convention on Early Notification of a Nuclear Accident* [1987] ATS 14. Article V establishes that any amendments to these existing Conventions, or future additional international agreements or arrangements, will have effect with respect to the proposed Agreement if both Parties inform each other in writing through diplomatic channels that they accept the application of the amendment or additional agreement or arrangement. The Parties are also required to cooperate in the use of mechanisms and undertakings in the international instruments outlined above, and where appropriate to ensure the effective application of the nuclear and radiological safety arrangements in place in their respective jurisdictions.

19. Article VI obliges each Party to ensure adequate physical protection of items subject to the proposed Agreement within its jurisdiction or within territory under its control. This obligation extends to international transport until responsibility is properly transferred to the receiving State. The proposed Agreement requires each Party to meet international obligations under the *Convention on the Physical Protection of Nuclear Material*, including any amendments that are in force for each Party,<sup>1</sup> and apply measures of physical protection which meet levels not less than the recommendations of IAEA document INFCIRC/225/Rev.5 (adopted by the IAEA in 2011). In addition the proposed Agreement enables heightened physical protection measures to be in place when risk levels are assessed as high and allows Australia to consult with Ukraine on the measures being taken.

20. Article VII requires Ukraine to seek Australia's prior written consent before any transfer by Ukraine of items subject to the proposed Agreement to a third State, unless, in respect of nuclear material, that third State is on a list of countries provided by Australia to Ukraine that have a bilateral nuclear cooperation agreement with Australia (Article VII(4)) and to which transfers may be made.

21. Article VIII requires that nuclear material subject to the proposed Agreement only be processed, used or stored at facilities in Ukraine that are included in a mutually determined Ukrainian Nuclear Fuel Cycle List.

22. Article IX requires that consent of the parties is required for enrichment to 20% or greater in the isotope uranium 235, or reprocessing.

23. Article X establishes that items subject to the proposed Agreement will only be used for peaceful purposes and will not be used for the research, development or manufacture of nuclear weapons or other nuclear explosive devices, or to further any other military purpose.

24. Article XI provides that compliance with the military use proscription established in Article X will be ensured by a system of safeguards in accordance with the IAEA Safeguards Agreement of each Party. In the event that the IAEA can no longer ensure the application of safeguards in either Party's jurisdiction, the Parties are required to immediately arrange for the application of alternative ('fallback') safeguards which conform to IAEA principles and procedures to provide reassurance equivalent to that of the IAEA safeguards system.

25. Article XII requires the Parties to ensure the adequate and effective protection of intellectual

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<sup>1</sup> The 2005 Amendment to the Convention came into force for both Australia and Ukraine on 8 May 2016.

property related to technology created or transferred pursuant to cooperation under the proposed Agreement. Such protection of intellectual property will be in accordance with written arrangements between the Parties and with applicable international agreements and arrangements, and the national laws and regulations of the Parties. Article XIII obliges the Parties to take appropriate precautions to preserve the confidentiality of information received as a result of the operation of the proposed Agreement. Further, the Parties are required to use the information transferred exclusively in accordance with the proposed Agreement and not for any other purpose.

26. Article XIV requires the Parties to establish administrative arrangements to ensure the effective implementation of the provisions of the proposed Agreement. It also requires each Party to maintain a system of accounting for and controlling all items subject to the proposed Agreement, and to provide reporting of all transfers and receipts and an annual report on all transactions and inventories.

27. Article XV requires regular consultation between the Parties to the proposed Agreement to ensure its effective implementation or to further cooperation in the peaceful uses of nuclear energy.

28. Article XVI confirms that each Party has the right to suspend or cancel further transfer of items and to require the receiving Party to take corrective steps if the receiving Party is in material non-compliance with IAEA safeguards arrangements or is in material non-compliance with the proposed Agreement. Further, either Party can require the return of items subject to the proposed Agreement in circumstances where such corrective steps are not implemented within a reasonable time period (90 days following the conclusion of consultations or a longer period as otherwise agreed). Article XVI sets out a range of issues for each Party to consider in exercising these rights, including whether the non-compliance of the other Party was caused wilfully and deliberately. Article XVI provides that the detonation of a nuclear explosive device by either Party would constitute non-compliance with the provisions of the proposed Agreement.

29. Article XVII provides that disputes that cannot be settled by negotiation between the Parties will be resolved, at the request of either Party, by a three-member arbitral tribunal, the decisions of which will be binding on the Parties.

## **Implementation**

30. The current legislative framework in relation to nuclear transfers is sufficient to comply with the terms of the proposed Agreement. However, regulations pursuant to the *Nuclear Non-Proliferation (Safeguards) Act 1987* would need to be made to add the proposed Agreement to the list of 'prescribed agreements' under that Act, and similar action would need to be taken under the *Australian Radiation Protection and Nuclear Safety Act 1998*. No changes to the existing roles of the Commonwealth or the States and Territories would arise as a consequence of implementing the proposed Agreement.

## **Costs**

31. The costs associated with implementing the proposed Agreement are the same as for all other nuclear cooperation agreements, and include routine processing and analysis of information exchanged under the proposed Agreement by Australian Safeguards and Non-Proliferation Office (ASNO) officers and travel to Ukraine to facilitate proper operation of the nuclear material accounting system. The Department of Foreign Affairs and Trade expects to be able to manage these costs within the departmental allocation to ASNO.

32. DFAT, in consultation with the Office of Best Practice Regulation, has assessed that there is no regulatory impact as the existing arrangements such as applications and reporting by Australian mines will remain the same.

### **Future treaty action**

33. Article XVIII of the proposed Agreement provides that it may be amended by agreement between the Parties in writing through diplomatic channels. Such amendments would be subject to Australia's domestic treaty-making requirements, including tabling in Parliament and consideration by JSCOT. No future legally binding instruments connected with the proposed Agreement are envisaged at this stage. As noted at paragraph 24 above, the proposed Agreement contains provision for the conclusion of administrative arrangements to deal with the details of implementing the proposed Agreement. This is standard Australian practice.

### **Withdrawal or denunciation**

34. The proposed Agreement would remain in force for an initial period of 30 years. If neither Party notifies the other of termination at least one year before the expiry of this period, then the Agreement will continue in force until one year after notice of termination has been given by one Party to the other Party. Either Party is able to terminate the proposed Agreement by notifying the other Party in writing through diplomatic channels of its intention to terminate. Any decision by Australia to terminate the proposed Agreement would be subject to Australia's domestic treaty-making requirements. Unless otherwise agreed in writing by the Parties, termination, suspension or expiration of the proposed Agreement or of any cooperation under it would not release either Party from obligations established under Articles IV to XVII of the proposed Agreement in respect of nuclear material, non-nuclear material, equipment, components and technology transferred while the proposed Agreement was in force.

### **Contact details**

Bilateral Safeguards Section  
Australian Safeguards and Non-Proliferation Office  
Department of Foreign Affairs and Trade



## **ATTACHMENT ON CONSULTATION**

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### **CONSULTATION**

35. The Australian uranium industry was informed of the proposed agreement by correspondence in late 2015. The proposed Agreement was discussed in face to face meetings with industry stakeholders at various events throughout 2016. Industry stakeholders welcomed the signature of the proposed Agreement.

36. A briefing was provided to the States and Territories through the Commonwealth-State/Territory Standing Committee on Treaties for its meeting on 4 May 2016. No comments with respect to this proposed Agreement were received from the States and Territories.

