

**Submission to the  
Standing Committee on Foreign Affairs, Defence and Trade  
16 November 2016**

**Civil Nuclear Transfers to India Bill 2016**

**John Carlson AM**

Nonresident Fellow, Lowy Institute  
Former Director General,  
Australian Safeguards and Non-Proliferation Office, 1989-2010

*The views in this submission are the author's  
and not necessarily those of the Lowy Institute or his other affiliations.*

**Introduction**

This Bill attempts to make lawful actions that, at the least, are questionable in international law, namely, approval of nuclear supply to India under the Australia-India nuclear cooperation agreement (NCA).

As discussed in my submissions<sup>1</sup> to the JSCOT review of the NCA in 2015<sup>2</sup>, there are serious concerns whether nuclear supply in accordance with the NCA will meet Australia's international legal obligations. The key question for the Committee to consider is whether it is appropriate to legislate as proposed by this Bill, if the substantive international legal concerns remain unresolved.

In this submission I suggest amendments which may help to address some (but not all) of these concerns.

**The issues**

This Bill is relevant to two basic issues:

- (i) whether Australia can supply nuclear material to India consistent with our obligations under the South Pacific Nuclear Free Zone Treaty (Rarotonga Treaty); and
- (ii) whether Australia can supply nuclear material to India consistent with our obligations under the Nuclear Non-Proliferation Treaty (NPT).

These two issues are closely linked, but I will leave it to others to address the Rarotonga Treaty aspects. This submission will address NPT aspects.

---

1. See Submissions numbered 1, 1.1, 1.2, 1.3, 1.4 and 1.5.  
2. See JSCOT Report 151 of September 2015.

2.

The primary issue with regard to the NPT is the basis under which nuclear material and items can be supplied to India, given that India is not a party to the NPT. Other considerations, closely related to this issue, are:

- (i) India does not have a clear separation between its civil and military nuclear programs; and
- (ii) the India-IAEA (International Atomic Energy Agency) safeguards agreement is not fully consistent with NPT safeguards requirements, specifically, the *principle of pursuit* (see following). While NPT requirements do not apply to India, they do apply to NPT parties, like Australia, with regard to nuclear transfers to India.

The safeguards principle of pursuit is fundamental to IAEA safeguards. This principle requires that safeguards must apply not only to the nuclear material initially supplied, but to all subsequent generations of nuclear material produced by or through the use of that material. As will be discussed, the India-IAEA safeguards agreement does not fully meet this principle. Because the NCA depends on the operation of the India-IAEA agreement, deficiencies in the latter agreement impact directly on the NCA.

Each of the issues raised above is directly relevant to the Bill and its intended object:

(a) Nuclear supply to a non-NPT party The traditional interpretation of the NPT is that:

- (i) India does not meet the NPT's definition of a *nuclear-weapon state*<sup>3</sup>, so must be regarded as a *non-nuclear-weapon state*;
- (ii) accordingly, nuclear material and items cannot be supplied to India unless it accepts IAEA safeguards on all its nuclear material.

In practical terms, however, India has nuclear weapons, so it does not fit the NPT definitions. Recognising this reality, the interpretation applied today by nuclear supplier states is that it is permissible to supply nuclear material and items to India provided the material or item, and all nuclear material produced by or through the use of that material or item (i.e. the principle of pursuit), remain under IAEA safeguards.

Accordingly, Australia has a responsibility under the NPT to ensure that nuclear material and items transferred to India are not used for, and do not contribute to, production of nuclear weapons. It must be assumed that unsafeguarded plutonium can be used for nuclear weapons – without safeguards there is no way of establishing how the plutonium is used. If Australian obligated nuclear material (AONM) can be used to produce unsafeguarded plutonium, this is a failure of Australia's NPT responsibilities.

(b) Lack of separation between civil and military nuclear programs India operates three groups of nuclear facilities:

- (i) civil facilities that are under permanent IAEA safeguards (these are listed in an Annex to the 2009 India-IAEA safeguards agreement);
- (ii) military facilities that are totally outside IAEA safeguards; and

---

3. NPT Article IX.3 defines a *nuclear-weapon state* as one that carried out a nuclear explosion prior to 1 January 1967.

3.

- (iii) certain reactors and other facilities that are usually outside safeguards but must be placed under safeguards on a temporary basis if safeguarded material is present.<sup>4</sup>

(c) Issues with the India-IAEA safeguards agreement The current India-IAEA agreement is a modification of the previous India-IAEA agreement, which was based on a 1960s text (i.e. it pre-dated, and therefore does not reflect, the NPT). The previous agreement contained provisions not consistent with NPT safeguards, namely, allowing safeguarded and unsafeguarded nuclear material to be used together in reactors, with the result that safeguarded material can contribute to production of unsafeguarded plutonium.<sup>5</sup>

This outcome is contrary to the principle of pursuit. Regrettably these provisions remain in the current agreement – it is not known whether they were overlooked or were retained at the insistence of India. Either way, they are inappropriate where the NPT applies, e.g. in the case of nuclear supply to India by an NPT party.

While the India-IAEA agreement compromises the principle of pursuit with respect to plutonium production (a highly sensitive stage of the fuel cycle), the NPT allows no such compromise. Faced with an agreement such as the India-IAEA agreement that does not fully reflect NPT requirements, an NPT party must ensure that its NPT obligations are met in full.

Implications for Australia Australia's obligation under the NPT is to ensure that all nuclear material it supplies to India, and all subsequent generations of nuclear material produced by or through the use of such material, remain subject to IAEA safeguards. This principle is written into the Australia-India NCA [Article III.1.(d)], but the effect of the NCA is qualified through its dependence on the terms of the India-IAEA agreement. As I pointed out in my submissions to JSCOT, this is a major weakness in the NCA. The India-IAEA agreement allows India to use safeguarded material, which could include AONM, to produce unsafeguarded plutonium.

JSCOT concluded this problem was due to the existence of unsafeguarded, ostensibly civil, facilities in India, and recommended that uranium sales to India should not commence until India has achieved the full separation of civil and military nuclear facilities (recommendation 3). In its response to JSCOT's report, the Government said it "is satisfied that (this) element of the Committee's recommendation is met".

Considering that India has excluded several major "civilian" facilities from permanent safeguards, including eight power reactors and two fast breeder reactors, and that the India-IAEA agreement allows India to use AONM in these reactors, it is difficult to understand how the Government can be "satisfied" that JSCOT's recommendation is met. The Government's response calls into question the meaning of the term "satisfied", a term on which the current Bill depends (clause 8(3)(c))

---

4. See Kalman Robertson and John Carlson, *The Three Overlapping Streams of India's Nuclear Program*, Belfer Center for Science and International Affairs, Harvard Kennedy School, April 2016, <http://belfercenter.ksg.harvard.edu/files/thethreesoverlappingstreamsofindiasnuclearpowerprograms.pdf>.

5. These circumstances were explained in the Appendix to my JSCOT submission number 1.1. Essentially, where nuclear material subject to safeguards is used in reactor which is not under permanent safeguards, and the safeguarded material comprises less than 30% of the nuclear material in the reactor, most (70%+) of the plutonium produced is exempted from safeguards.

refers). The Committee needs to consider whether a Minister's or official's "satisfaction" – a subjective matter – can be an acceptable standard for this legislation.

As India is not prepared to fully separate its military and civil programs, an alternative approach, that would achieve an outcome similar to JSCOT's recommendation, would be to require that AONM may be used only in a permanently safeguarded facility, i.e. a facility listed in the Annex to the India-IAEA agreement. This would avoid the possibility of AONM being used to produce unsafeguarded plutonium.

### **Deficiencies in the Bill as currently drafted, and suggested amendments**

*(1) The scope of the Bill does not correspond to, and is more limited than, the scope of the Australia-India NCA, and more limited than Australia's NPT obligations.*

The Bill applies only to export from Australia of nuclear material or a nuclear-related item [clause 8(1)]. This is significantly more limited than the scope of material and items subject to the Australia-India NCA, as defined in Article III.1 of the NCA, and more limited than Australia's obligations under the NPT.

The scope of the Bill should at least correspond to the scope of material and items subject to the Australia-India NCA, namely:

- (a) all nuclear material that is produced or processed by the use of any nuclear material or non-nuclear material subject to the NCA [Article III.1(d)]; and
- (b) all nuclear material and non-nuclear that is produced or processed by the use of any equipment, components or technology subject to the NCA [Article III.1(c)].

This legislation should require that a person exercising the relevant power or performing the relevant function must be satisfied not only that the exported nuclear material or item, but all subsequent generations of nuclear material produced or processed by the use of the exported material or item, will be subject to safeguards under the India-IAEA agreement. To achieve this outcome, clause 8(3) could be amended along the following lines (suggested amendment is underlined):

8(3) The conditions are:

- (c) the person exercising the power or performing the function is satisfied that the nuclear material or nuclear-related item, and all nuclear material, material or items produced or processed by the use of such nuclear material or nuclear-related item, will be subject to safeguards under the India-IAEA agreement if supplied to a place in India.

This in itself, however, is not sufficient to address the lack of full separation between India's civil and military programs, and the issues this situation raises in terms of Australia's NPT obligations. This is discussed in the following point.

5.

*(2) The Bill fails to give effect to Australia's NPT obligations in another respect, namely, it fails to address a deficiency in the NCA and its interaction with the India-IAEA agreement which allows AONM to be used in the production of unsafeguarded plutonium.*

This too is a major substantive problem. It is the problem JSCOT sought to address with its recommendation 3, namely that uranium sales to India should not commence until India has achieved the full separation of civil and military nuclear facilities. Such separation would effectively exclude the possibility of AONM being used to produce unsafeguarded plutonium. As discussed, a similar result could be achieved by requiring that AONM be processed, used or held only in a permanently safeguarded facility, i.e. a facility listed in the Annex to the India-IAEA agreement.

This can be addressed by a further amendment to clause 8(3), along these lines (this and the previous suggested amendments are underlined):

8(3) The conditions are:

- (c) the person exercising the power or performing the function is satisfied that the nuclear material or nuclear-related item, and all nuclear material, material or items produced or processed by the use of such nuclear material or nuclear-related item, will be subject to safeguards under the India-IAEA agreement and will be processed, used or held only in facilities listed in the Annex to the India-IAEA safeguards agreement.

*(3) Is "satisfaction" a sufficiently strong condition?*

As discussed above, the condition for a person to be "satisfied", a subjective standard, raises the question whether this is the appropriate standard. It would seem preferable to require the condition to be met on an objective factual basis, by amending the clause along these lines:

8(3) The conditions are:

- (c) ~~the person exercising the power or performing the function is satisfied that~~ the nuclear material or nuclear-related item, and all nuclear material, material or items produced or processed by the use of such nuclear material or nuclear-related item, will be subject to safeguards under the India-IAEA agreement and will be processed, used or held only in facilities listed in the Annex to the India-IAEA safeguards agreement.

## **Conclusions**

The first suggested amendment addresses a major substantive defect in the Bill, that the matters about which a person exercising a power or performing a function needs to be satisfied are more limited than the NCA itself, and more limited than Australia's obligations under the NPT. The Bill should refer not only to exported material but to all subsequent generations of material produced by or through the use of that material.

The second suggested amendment addresses a major substantive issue closely related to the first issue, that the interaction between the NCA and the India-IAEA agreement allows AONM to be used in the production of unsafeguarded plutonium. This possibility represents a failure by Australia to meet its NPT obligations. This problem can be avoided by limiting AONM to permanently safeguarded facilities.

The third suggested amendment replaces the subjective standard of "satisfaction" by an objective standard based on facts.