



## Dissenting Report—Australian Greens

### Agreement between the Government of Australia and the European Atomic Energy Community (Euratom) for Co-Operation in the Peaceful Uses of Nuclear Energy

The Australian Greens welcome the Committee's recognition that, "The full consequences of the Fukushima incident are yet to be ascertained and should further treaty amendments be required as a result of the incident, the Committee expects they will be introduced in due course."

The Greens believe it highly likely that such amendments to this Agreement will be appropriate, particularly given that key European powers like Germany are pulling out of the nuclear fuel chain altogether, which will call into question the membership of Euratom itself.

The Australian Greens do not believe the Agreement between the Government of Australia and the European Atomic Energy Community (Euratom) for Cooperation in the Peaceful Uses of Nuclear Energy should proceed on three grounds.

First, there are fundamental flaws in the nuclear safeguards system upon which this treaty rests.

Second, the proposed treaty – supposedly the first agreement to include specific provisions on nuclear safety – does so by simply mentioning four preexisting operational treaties. Actual nuclear safety, as the events at the Fukushima Daiichi plant illustrate, will require a great deal more than cross-referencing.

Third, claims that nuclear commerce provides clear economic benefits to Australia are highly questionable.

Before each of these substantive issues is addressed, it should be noted that the majority report on this Agreement is inadequate. The Practical Outcomes (para.3.24) are not explained or addressed, the reader only learns the practical impact is “minimal”. Such details should be provided. The quoting of submissions and then merely noting concern is not substantive engagement with stakeholders. Such treatment insults the effort of expert participants who give their time, on the assumption that the parliament offers genuine democratic scrutiny of treaties.

## **Safeguards – an “illusion of protection”**

Article VII of the Australia-Euratom Agreement emphasises conformance with IAEA principles and procedures that provide reassurances equivalent to that of the IAEA safeguards system.

The 1977 Fox Report is the foundation for current policy on uranium mining in Australia. After analysing the safeguards system, the actual control Australia has over uranium that has left our shores, and the highly portable nature of radioactive substances, the Fox Report admitted that safeguards offer only “the illusion of protection.”

Safeguards rely on a state disclosing information. They rely on a state giving access to facilities. Safeguards are directed primarily to declared facilities. Special inspections undertaken to resolve ambiguities usually require the consent of the inspected state.

States have the right to reject particular inspectors designated for their country by the IAEA. Safeguards do not apply to material in mining or ore processing activities. Inspection schedules are normally set for the convenience of the operator. International control of nuclear material destined for non-explosive military purposes is not required for IAEA safeguards adopted for the NPT. A dangerous loophole has thus been created where uranium used for the propulsion of submarines can be enriched to the same grade as that used in nuclear weapons.

Currently the safeguards system comprises of:

- **Record keeping** of nuclear materials entering and leaving nuclear facilities, known as materials accounting exercises or audited paperwork;
- **Inspections** – defined schedule routine inspections, which under the Additional Protocol include inspections with only 2 hours notice;
- **Seals** - when visiting nuclear facilities, inspectors place seals on certain storage bins of waste and other materials to contain the materials.

Inspectors comes back and check that the seals are still in place from time to time;

- **Cameras** can be placed to monitor facilities; and
- **Environmental sampling** takes place, of air and swipes of dust in nuclear facilities, which can detect the presence of bomb grade fuel.

The IAEA safeguards system must be capable of detecting a “significant quantity” of missing plutonium or highly enriched uranium, in order to give a “timely warning”.

A “timely warning” is set at seven days, and a “significant quantity” of plutonium is defined as 8 kilograms, and of highly enriched uranium 15 kilograms, even though it is recognised that the amount estimated to make an effective nuclear explosion today is four kilograms.

We know from decades of experience that commercial-scale bulk handling facilities (like enrichment or reprocessing plants) simply cannot provide “timely warning” of a diversion of a “significant quantity”.

The IAEA guidelines call for a detection probability rate of 90% to 95% and a false-alarm probability rate of less than 5%. These are extremely ambitious targets. Reading the reports of the IAEA reveals that safeguards almost never meet the technical objectives of the IAEA, with the Agency having patchy access to facilities and difficult relationships with some governments, often having to make repeated calls over a period of years, for basic improvements and disclosure of information.

## **Nuclear Safety**

Fukushima has revealed nuclear safety standards as severely wanting and cannot be dismissed by being ‘noted’. While the full scope of the radioactive shadow cast by Fukushima is not understood, the assurance of “more specific language around nuclear safety” is woefully and dangerously inadequate.

The public hearing into this Agreement between Euratom and Australia extracted information the Greens have sought since the triple disaster of earthquake, tsunami and nuclear meltdown began on 11 March 2011. The time it took for this information to appear suggests the need for raised standards in nuclear safety information disclosure. At the Committee’s hearing on 31 October, 7 months after Fukushima was first hit, the parliament finally had confirmation that,

"Australian obligated nuclear material was at the Fukushima Daiichi site and in each of the reactors - maybe five out of six, or it could have been all of them; almost all of them. As a percentage,

we have the details of that amount that came through our reconciliation visit with Japan."

Australian uranium produced the tellurium found in a 100 km radius around Fukushima. Australian uranium showed up 24 hours after the earth quake and tsunami crisis, 12 March 2011. It wasn't until 1 June 2011- months later, 81 days later that the world learned that Japanese authorities had suppressed the detection of tellurium 6km from Fukushima.

Why is tellurium significant? Its presence indicates that the temperature of the fuel rods was over 1000 degrees, fission and a meltdown had started. Meltdown was the word least liked by TEPCO, governments and their Ambassadors, but that is exactly what occurred.

Failing to disclose this information robbed people of the right to protect themselves from radiation. The shambles of nuclear safety standards revealed by this and many subsequent decisions make the mere invocation of 4 treaties an insulting and inadequate antidote to the state of nuclear safety exposed by Fukushima. The enduring intense contamination on the farmland, the loss of livelihoods of this and future generations, the wasteland of abandoned pets and kitchens that can only be entered in space suits, are all evidence of a failure in nuclear safety. The four treaties need to be implemented and resourced, not just listed.

## **Nuclear Commerce**

The National Interest Analysis declares without reservation or qualification that the nuclear commerce implied by this agreement provides clear economic benefits to Australia. That is a questionable assertion.

**Nuclear commerce is unreliable due to technology and weather events:** While the patched and leaking reactor at Lucas Heights at ANSTO may generate some lucrative contracts for nuclear medicine, the reactor is very often out of action and revenue is lost. The operators of the Ranger Uranium mine in Kakadu are in financial dire straits after a very severe wet season compromised the structural integrity of tailings dams shutting down the entire operation for over 6 months.

**Potential jobs and revenue are exaggerated:** Uranium accounts for just one-third of 1% of Australia's export revenue and an even smaller contribution to employment in Australia - much less than 0.1%. Australia's cheese exports are equivalent our uranium exports. Unlike dairy farming, uranium mining jobs carry an enormous public health and environmental burden that is of abiding concern and unacceptable to many Australians.

**Subsidies, insurance and theft:** The nuclear industry has enjoyed colossal government largess, loan guarantees, direct subsidies, immunity from insurance liability and enormous research and development funding. In Australia the Commonwealth provides insurance for the nuclear facilities at ANSTO and provides subsidies and incentives for the mining industry.

An example that illustrates this point is the massive Commonwealth subsidy to the world's largest mining company through the diesel fuel rebate for BHP Billiton which will receive for the Olympic Dam development an annual rebate of up to \$85 million at an average diesel use of 480 million litres a year at full production levels, for a total subsidy to BHP Billiton of over \$3.2 billion for the proposed use of approximately 17 900 million litres of diesel from the start of open pit construction throughout Olympic Dam mining operations up to 2050. Not only is this a long term perverse disincentive to adopt other cleaner options, it is an unacceptable cost to the public purse.

After 10 years of drought many question the enormous quantities of water used by uranium mines, depleting the water table, including the Great Artesian Basin. BHP, the biggest mining company in the world pays nothing for up to 42 million litres per day from the Great Artesian Basin which is deemed theft by the local Aboriginal Traditional Owners.

**What price contamination?** While tourist dollars may be easy to count, it's much hard to calculate the value of Kakadu National Park or to assess the risk posed by uranium mining to this ancient, proud and beautiful internationally renowned tourist destination. In 2009 a government-appointed scientist confirmed the Ranger uranium mine in Kakadu National Park was leaking 100,000 litres of contaminated water into the ground beneath the park on a daily basis," he said. "There have been more than 150 leaks, spills, and license breaches at the mine since it opened in 1981. That poses an unacceptable environmental cost with potential health consequences for the Aboriginal people living in the area and downstream.

Now is not the time to consolidate and extend nuclear cooperation agreements. Now is the time to pause and reflect on the merits and risks of nuclear power and consider more sustainable options.

**Senator Scott Ludlam**

