



Nuclear engineering research group  
School of Electrical Engineering  
Faculty of Engineering  
UNSW Sydney  
NSW, 2052

Committee Secretary  
Joint Standing Committee on Treaties  
PO Box 6021  
Parliament House  
Canberra ACT 2600

24 January 2018

Dear senators,

The University of New South Wales's Nuclear Engineering research group is in support of the Agreement Concerning the Reprocessing in France of Australian Irradiated Nuclear Fuel Elements. The key advantages of such agreements summarised as follows:

1. Reprocessing of used nuclear fuel from OPAL will guarantee the ongoing operation of the OPAL reactor for its intended lifetime. If the fuel is not reprocessed, the storage ponds for used fuel may reach their limit and the reactor will be forced to shut down prematurely due to licensing restrictions.
2. The OPAL reactor provides critical services to the Australian and the global population in delivering of nuclear medicine products. It also is a key global provider of (a) transmutation doping high-end silicon-based power electronic devices, (b) neutron scattering for science and technology research and (c) irradiation of engineering materials.
3. Australia is currently a world leader in all the fields above, and retaining this leading global position provides greater leverage in international fora on nuclear topics.
4. The silicide-based chemistry of the OPAL reactor fuel, which is distinctly different from that of commercial power reactors, makes it less suitable for indefinite storage. Thus, there is no clear alternative to reprocessing the used fuel.
5. We believe that reprocessing is the most efficient, cost effective and safest option for OPAL's used nuclear fuel. It is sensible to partner with Areva NC, which has extensive knowledge of this type of fuel, and with which there is an established relationship.
6. The agreement will extend the ongoing relationship with Areva NC and the French government, providing opportunities for research collaborations, training of suitably qualified and trained people (SQEP) in the nuclear space and development of IP and

know-how. The benefit of this relationship will extend beyond ANSTO and the Australian government, directly impacting Australian university, research institutions and companies with interest in nuclear technologies.

For these reasons, we believe that it is in Australia's best interest bring into force the Agreement under consideration.

Yours faithfully,

On behalf of the Nuclear Engineering research group at the University of New South Wales.



Professor John Fletcher

**John Fletcher | Professor**

**Faculty of Engineering | Electrical Engineering and Telecommunications**

THE UNIVERSITY OF NEW SOUTH WALES UNSW SYDNEY NSW 2052 AUSTRALIA

T +61(2) 9385 6007 F +61 (2) 9385 5993 ABN 57 195 873 179 CRICOS Prov der Code 00098G

**SYDNEY | CANBERRA | AUSTRALIA**