

Economics Legislation Committee
ANSWERS TO QUESTIONS ON NOTICE
Industry, Innovation and Science Portfolio
2015-16 Supplementary Budget Estimates Hearing
22 October 2015

AGENCY: ANSTO

TOPIC: Stawell Underground Physics Laboratory

REFERENCE: Question on Notice (Hansard, 22 October 2015, pages 41-42)

QUESTION No.: SI-6

Dr Paterson: ANSTO on behalf of government maintains the relationship with CERN in Geneva, and this has a second order link to the type of work that CERN does, because some of the neutrino experiments that take place in that facility in Italy use neutrinos that come from CERN. We also have relationships with Japanese partners, for instance the J-PARC facility in Japan, where they have some neutrino experiments. I was recently there and met an Australian researcher, who is associated with the team that looking at that very interesting dark matter experiment. I think that keeping a capacity as a nation to be involved at the cutting edge of particle physics is a useful thing. It is something that ANSTO can support as a national organisation that is involved in nuclear science and technology. It does make sense for us to add some convening power to these types of arrangements over time.

Senator KIM CARR: What are the time lines for all these? This is the first stage of the project. When do you expect that to be completed?

Dr Paterson: I think really we are at the stage where we are securing a quantum of funding to allow the facility to be constructed and go into its commissioning phase. That is really where we are. I think the thinking is there, the early design works are being completed with the current tranche of funding, and there is the qualification of the facility and the development of the stakeholder relationships. These are things for which ANSTO is not directly responsible, but I am briefed on them from time to time.

Senator KIM CARR: Who is going to manage this project?

Dr Paterson: It is going to be managed probably from the consortium that is assembled around the University of Melbourne. It is well within the reach of a modern university to operate a facility of this scale. That would be one logical landing place for the facility in its early period. It will probably be ring-fenced in some way, so that everybody can see their contributions clearly, but that as a model would work.

Senator KIM CARR: When do you anticipate the project will be up and running?

Dr Paterson: It is dependent on the funding.

Senator KIM CARR: How much money is required there?

Dr Paterson: I do not know the full budget envelope. As indicated, we are a partner giving in-kind contributions to support it, but we are not the lead agency.

Senator KIM CARR: Are you able to advise us further on that matter?

Dr Paterson: I am happy to take it on notice and provide more information. It is certainly an exciting project. People get excited about neutrinos. I hope everybody is a bit more excited about the fact that they are experiencing neutrinos and dark matter particles all the time with no effect.

ANSWER

Stawell Underground Physics Laboratory Budget

Funding obtained to Date:

The Commonwealth and Victorian State Governments jointly granted \$3.5 million to the Grampians Shire Council in early 2015 to build the Stawell Underground Physics Laboratory.

The project was awarded an ARC Linkage Grant in 2015, comprising \$1.188 million from the ARC and \$385,000 from the partner organisations, plus \$2.8 million in in-kind contributions from those partner organisations. The University of Melbourne is the administering organisation.

An additional ARC Linkage, Infrastructure Equipment and Facilities (LIEF) grant of \$325,000 was awarded in October 2015 to construct a dark matter detector vessel and data acquisition system.

Funding required to commission and operate the facility:

Two critical elements of the facility are currently unfunded:

- Ultra-high purity sodium iodide (NaI) detector crystals, which form the heart of the dark matter detector and will cost approximately \$1 million; and
- A data acquisition system, which is expected to cost approximately \$300,000.

ANSTO expects that the University of Melbourne will seek further funding through the ARC LIEF scheme for these items.

Under current circumstances, operation of the facility is expected to cost approximately \$0.5 million per year.