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MEDIA RELEASE

19 April 2010

Academies call for better understanding of public attitudes to new technologies

Australia currently lacks a mechanism to gather evidence on the formation of public attitudes to the introduction of new technologies, particularly the formation of attitudes to nuclear energy technology.

This is a limiting factor in achieving informed debate in the development of a national energy policy.

These are key findings in a research project recently completed by the National Academies Forum. Its report, *Understanding the Formation of Attitudes to Nuclear Power in Australia*, will be released today at a CEDA function in Perth.

Noting that a distinction needs to be made between 'opinions' and 'attitudes', the report highlights the crucial importance of a rigorously established base of community attitudes for any future policy and program development and highlights the absence in Australia of such a process for gathering of this kind of evidence.

The report **recommends** that (with the support of the Australian Research Council) a national, high-quality, longitudinal program of research be established – similar, for example, to the Eurobarometer – to enable data collection on attitudes towards the many, disparate components relevant to energy and climate change policy.

Eurobarometer is a series of surveys conducted regularly on behalf of the European Commission which produces

reports on public opinion about issues relating to the European Union. The Eurobarometer program, running since 1973, was conceived to track and analyse public opinion and to improve the information and communication policy of European decision-makers.

Proposing the name 'Ozbarometer', the report recommends that the program be established as a shared facility among key universities.

The report also notes that the issue of nuclear energy – and energy technology security in general – is not front of mind with the Australian public and this current lack of salience is a barrier to the development of future energy policies.

It **recommends** that a program of community-based science education (along the lines of the program established by the former Centre for Low Emissions Technologies) be urgently established to support a broad and mature national dialogue.

It also notes that there is a lack of ongoing, rigorous and robust multidisciplinary dialogue and studies of the place of energy policy and energy technologies within the current debate on national climate change and associated adaption and mitigation programs.

The report also **recommends** that:

- such a debate should be conducted in Australia, facilitated by the National Academies Forum;
- such studies should be integrated into current developments including, for example, Questacon and science communication; and
- interdisciplinary studies should be used to create awareness within science education at the primary and secondary levels as well as within the broader community.

This study, undertaken by Professor Daniela Stehlik, sought to understand the development of Australian attitudes towards the use of nuclear energy for the large-scale generation of electricity.

In answer to the broad question – *How are Australian*

attitudes to nuclear power formed? – The study identified six pathways to attitude formation:

- ***Historical***

Key events were identified as having come to symbolise the points in history that have contributed to the development of people's current attitudes to nuclear power in Australia.

- ***Cultural***

Symbolic forms (images, films, texts) drawn from popular culture continue to be used by individuals in explaining their support or opposition to nuclear power in Australia.

- ***Political***

Nuclear power in Australia can best be understood as a political rather than a technological, economic or resource issue.

- ***Media***

As a mediator of cultural values and as a medium for the expression of views, attitudes and opinions, the news media act to present, interpret and re-frame events to a mass audience.

- ***International influences***

The global climate change context has raised the issue of future contributions of nuclear power programs in countries with existing nuclear power stations. These debates are often referred to and compared with the Australian context.

- ***Educational***

Education is critical at two levels – the skills development associated with science, engineering and technology and the place of energy in society; and the history and impact of both civilian and military nuclear power.

The report notes the topic has become more relevant as Australians are now well aware of the risks attributed to a continued dependence on fossil fuels for the nation's energy demands.

‘Recently there has been a growth in public investment in the new technologies associated with low emission generation and in developing public education strategies for more efficient use of existing energy supplies. An investment in new technologies means that public acceptance of such technologies will be at the forefront of their development and long term utilisation.

‘The role of science, technology and society, and what has been termed the ‘social constitution of nuclear power’, is reviewed in this study, as are the ways in which decision-making is affected by the perceived risks associated with the adoption of new technologies.

‘This study does not include a large scale survey of current attitudes to new energy technologies or to nuclear power. It has been designed to undertake critical ground-clearing work about the debate thus far, and has been produced to enable a foundation for further, mature discussion,’ the report says.

‘By incorporating some very recent CSIRO Energy Transformed Flagship research and findings from community consultations, the study highlights a continued interest within the Australian community for a low emission energy future, as well as the potential possible, within deliberative democratic processes, in facilitating the transfer of knowledge about very complex technologies.

‘Finally, in regard to any future informed debate, this study has now brought together a wide range of information sources on the topic, including many multi-media sites, interviews, documentaries and articles, as well as the scholarly literature.

‘Key opinion leaders have been interviewed for their views and an e-survey has been conducted of social networks, focussing on energy technologies and nuclear power.

‘For anyone interested in learning more about the current state of the debate, this study now provides a base-line source of information,’ the report adds.

Key study conclusions include:

- Any measurement of attitudes remains essentially problematic, as it involves the measurement of language as well as requiring contemplation and reflection, thus relying on memory.
- An attitude (behaviour) is different from an opinion (verbal expression), and it is only from any subsequent behaviour change that accurate measures of attitude can be concluded.
- Attitude formation is a long and complex process which has both gender and intergenerational differences. It draws on individual belief systems and the moral and political domains within which individuals operate, both individually and within groups. This explains why nuclear power continues to provide an example of essentially polarised attitudes.
- The diffusion of new technologies such as nuclear power becomes integrated, adopted or rejected within a social change (political) agenda. The role played by societal groups, their networks and their relationships within institutional infrastructures, is crucial to any technological change being adopted.
- Risk perceptions remain immediate, dynamic and historically influenced, and in the debate on nuclear power this often becomes a choice between different equally risky alternatives, which are then spatially and temporally dependent.
- Attitudes to nuclear power offer an example of an essential contradiction of views (e.g. the 'no nuclear now, but we expect it to be important in the future' response), which links to an ambivalent public relationship with science institutions and a continued apprehension about new technologies when uncertainty about risk remains.
- An understanding of how public opinion is shaped through information processes and expectations that people hold about science and science communication is critical. International research has found that simply giving people more information does not necessarily lead to a greater understanding of the issues or to an acceptance of new technologies.

An Expert Reference Group comprising Fellows from each of the four NAF academies was established to oversee the project. It was funded by the Australian

Research Council (ARC) under the Linkage Learned Academies Special Projects. The project was managed for NAF by the Australian Academy of Technological Sciences and Engineering (ATSE), which engaged Professor Daniela Stehlik, then from Curtin University of Technology, Perth, as the study leader and author.

CEDA (the Committee for Economic Development of Australia) Function

**Assessing the Prospects
of Nuclear Power in
Australia**

**Time: 11:30am to
2:00pm (WST)**

**Date: Monday 19
April 2010**

**Venue: Perth
Convention
Exhibition
Centre**

The Project Manager and ATSE Executive Director – Technical, Dr Vaughan Beck FTSE, and the author of the report, Professor Daniela Stehlik, will both present at the function.

Issued by Australian Academy of Technological Sciences and Engineering
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