All Party Parliamentary Group On Nuclear Energy

Meeting 23 February 2005, 10:30 am
Committee Room 5, House of Commons

Attendees:

Lord Jenkin (in the Chair)
Andrew Miller MP
Russell Brown MP
Syd Rapson MP
Richard Page MP
Helen Liddell MP
Laurence Robertson MP
Lord Lea
Lord Oxburgh
Michael Connarty MP
Andrew Robathan MP
John Robertson MP
David Drew MP
Ala Alizadeh, AECL
Ian Love, AECL
Paul Flemming, BNFL
Rory O'Neil, BNFL
Jenny Kisalu, BNFL
Simon Smith, Canadian High Commission
Dr Caroline Martin, Canadian High Commission
Keith Parker, NIA
Simon James, NIA
Scott Colvin, Fleishman Hillard
Linda Smith, British Energy
Peter Ingles, British Energy
Miranda Kirschel, All Party Group

1. **Welcome and apologies**
   Lord Jenkin gave Bill Tynan's apologies and took the Chair. He also gave Baroness Miller of Hendon's apologies. He introduced Ala Alizadeh, Regional Vice President of AECL

2. **Nuclear power: an improving prospect**
   Mr Alizadeh said that with growing demand for electricity around the world and with concerns about climate change there is a likelihood of a nuclear renaissance. New plants are being built around the world, mainly in Asia but also now in Europe, in Finland and France. Lifetime extension programmes are active in USA and Canada. Ontario plans to close all of its coal stations by 2007 and this presents opportunities for nuclear as the replacement. There is a cost sharing system being developed in the US for new build. However, China is the place to watch with its to build 2 reactors per year for the next 15 years on both new and existing sites. Moreover, public support for nuclear is rising as shown by polls in, for example, the USA where over 50% are in favour, and the UK where more people are in favour than against.

   In Canada AECL is developing the 1000MW Advanced Candu Reactor (ACR). It started the Canadian licensing process in 2003 and expects confirmation in 2007. The design should reduce the capital cost and construction times. Capital costs are estimated to be lower than coal fired plant but still considerably higher than for combined cycle gas plant. However, fuel and running costs are lower than both making nuclear competitive. AECL have recently constructed several reactors in the Far East to time (or even early) and within budget, and achieved load factors of around 90%.

Canada's procedure for waste management is to store the waste for 6-7 years underwater, then for up to 100 years in concrete dry stores at the power station sites. The eventual plan is to deposit the waste in the Canadian Shield but they do not yet have public acceptance for this route, although they are convinced of the technical feasibility.

The financing arrangements for nuclear stations are changing: whereas in the past the owner carried all the risk, owners are now looking to share risk with the vendors who increasingly offer fixed price, turnkey contracts. AECL had undertaken a study with British Energy in 2002 which showed that at the current electricity prices investment in new nuclear could be attractive. However, several measures would be required to inspire investor confidence: nuclear's carbon free status must be recognized in the market; the regulator should be in a position to licence a design, and therefore needs to begin the process of pre-licensing studies; and the industry should be investigating appropriate financing arrangements that distributed the risk. The government's desire to "Keep the nuclear option open" would not of itself enable any investment to take place in the UK. Concrete, positive government policy supporting new build is needed for investors to take an interest.

In discussion, the following points were raised:

- The principal advantage of opting for nuclear power in the UK was diversity of supply, especially with coal generation going off the system and increased reliance on imported gas supplies. There will come a time when the UK (in common with Ontario) could be 85% gas dependent.

- Arguing that coal generation should be shut down to make way for new nuclear generation would not work in the UK, because coal also contributed to diversity and security. Mr Alizadeh agreed that each country must make its own decisions on how to ensure security of supply and meet its Kyoto targets, just as Ontario has. However the provincial government has not said that nuclear will replace coal, but it has a chance.

- While nuclear is a low carbon source, the industry should avoid claiming 'zero emissions' as there is a carbon cost in the concrete and mining etc.

- Safety concerns had shifted towards the risk from terrorism rather than plant failure. Mr Alizadeh said that operators and vendors around the world were taking appropriate measures to secure plant from the risks of terrorist attack, including aircraft crash. It could be demonstrated that a crash by a fully laden jet would not result in a radioactive release (even if the event caused a total economic loss).

- Pre-licensing of available reactor designs was an important measure that government could instigate to reduce the lead times associated with an application. It is unrealistic to expect the industry to pay for this with no

guarantee of an order being forthcoming. The NII would need to have a team in place to become familiar with the technology.

- A central objection to nuclear energy was that no one knew the true costs of decommissioning, and the public were not convinced on the economics. Mr Alizadeh agreed that the industry has done a poor job in convincing the public on costs and should show their accounting methods in an open way. However, in Canada decommissioning funds had been set aside over 30 years which was the assumed lifetime of reactors, but now lifetime extensions to 60 years had improved the economics as the funds for decommissioning were already available.

- The UK already has a big legacy waste which has to be disposed of. Environmentalists have switched their position on how to do this but however it is resolved, as it must be, the act of taking that decision will help the industry.

- Waste management in the US has become a legal issue as the government had promised to take responsibility for disposal which they had not delivered, and the industry was now seeking compensation.

- The existing Canadian waste facilities have passed environmental and safety approval but the industry has not received approval for final disposal yet. Utilities are paying into a decommissioning fund which will pay for the final waste disposal. A full-scale waste laboratory exists in Manitoba. Low level waste will be disposed of underground at the Bruce site and that is accepted by the local population, although there is always a vocal minority opposed. Decisions to move forward should be based on the majority opinion.

- The way Finland has examined the electricity generation alternatives, and their financing model whereby large energy users invest in the reactor in return for guaranteed long-term stably priced electricity should be of interest to the UK.

- Producing hydrogen from nuclear reactors as a transport fuel would require much more efficient generation IV reactors to make it economically viable. China had announced an intention to use pebble bed reactors to co-generate hydrogen.

Lord Jenkin thanked the AECL representatives for their presentation and pointed out that public opinion is changing in favour of nuclear power. He believed that the Government will not act on the issue before the General Election but will make announcements after it, irrespective of which party wins.

3. **Date and time of next meeting.**
The next meeting of the Group will take place on Wednesday, 6 April at 10.30 in Committee Room 5. Mr John Ramsay of the Cogent Sector Skills Council will address the group on the future skills base of the industry.