



APPG on Small Modular Reactors

Minute of the SMR APPG Meeting with Penultimate Power

External Attendees:

- Candida Whitmill, Penultimate Power UK

APPG Members and other parliamentarians included:

- Virginia Crosbie;
- Baroness Hayman;
- Josh Male (on behalf of Trudy Harrison MP);
- Jill Mortimer MP;
- Baroness Bloomfield; and,
- Lord Whitty.

Apologies: Liz Saville Roberts, Viscount Trenchard

VC outlined how nuclear had been raised at PMQs and that the PM was very strong on promoting nuclear energy.

CW: set out how 80% of the UK's energy demand was heat. Heat for transport and industrial processes as well as the number of jobs which depended on heat and the value provided to the economy. Penultimate Power UK was set up to focus on the range of industry and heat used. Although initially technology agnostic, the focus was for an indisputably safe source capable of being placed in high density areas which was cost competitive with renewables.

Penultimate Power UK's strategy was not to start from scratch. So chose an existing, proven and licenced technology which has safely operated for ten years at the Japan Atomic Energy Agency (JAEA). The EH HTGR was inherently safe, it had a lower capital cost and produced less waste. The ultimate goal was to use an iodine sulphur process designed to split water thermochemically. But the first hydrogen generation process would be via electrolysis.

Penultimate Power UK wanted to build the factory in Teesside. By the mid-2030s the plan was to produce 20 units per year. The technology was a very exportable product. There were many countries which could not afford gigawatt reactors. For example, when Africa went straight to mobile rather than fixed line broadband avoiding the need for a centralised grid. Teesside home to the top 5 CO₂ emitters in the UK. It also had a Freeport as well as an elected Mayor Ben Houchen. Penultimate Power UK were keen to highlight the walk-away safety aspects of the reactor. The selected size was market driven.

JM: Who are Penultimate Power UK in terms of powers and projects handled in the past?

CW: The firm had the former director of Barclays Bank and URENCO included as members of the board. Penultimate had been working closely with Japan since .2018

JM: Who finances Penultimate Power UK at the moment?

CW: Penultimate Power UK was privately financed at the moment and had further private investors standing by. Penultimate Power UK was asking for conditional funding for the government as the private sector investors would not get involved unless there was government involvement. Government action on nuclear was needed to drive confidence.

APPG Secretariat: Barndoor Strategy

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VC: Who were Penultimate UK's private investors?

CW: Outlined that they were under NDA at the moment so could not talk about their private investors in an open forum.

VC: The nuclear industry financing bill was going through the Lords in record time. Would this bill support the sector?

CW: This was not something which would impact on Penultimate's projects as its reactors did not need long construction timescales and therefore did not need the same long-term funding. Penultimate Power UK was supportive of the RAB model and the benefits of building multiple plants.

VC: Where were Penultimate's best relationships?

CW: BEIS were number one, JAEA in Japan and the UK supply chain and potential end users. The Business Plan had been submitted to BEIS but they were seeking engagement between the UK Government and the Japanese Government.

VC: Where would you like these factories? And also, what's your relationship with Hitachi and Japan?

CW: Stated that Penultimate was looking at a range of sites across the UK, existing and otherwise. But were not looking at Wylfa as it was a gigawatt sized site. To really benefit from this technology, it's got to be embedded close to areas of high demand for carbon free industrial heat as well as power

Meeting closed.

The Secretariat outlined the APPG's future plans to meet Terrestrial Energy and Assystem.