



Supporters of Nuclear Energy

Newsletter

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WE TOLD YOU SO

Around the time of last year's annual meeting, some four months ago, a SONE committee member, Gerald Clark, made what was regarded by some (but not me) as an outrageous suggestion. He argued that the UK Government should consider investing directly in the nuclear energy industry. This month we learned that the Government is now thinking of doing just that, even though some of the more hidebound Treasury analysts don't like the idea.

Gerald's case for State investment, reported at some length in the November Newsletter, flew in the face of the received wisdom that it was for the privatised electricity utilities to make the investments needed if the nuclear renaissance was to happen and for the Government to keep out of it. Until comparatively recently we appeared to have surplus generating capacity so it was felt that there was no real pressure on the Government to invest on power stations which would take a long time to build. That is not the case today.

A tentative move towards more State involvement came in the early days of the Government led by Prime Minister Theresa May. Like many others she did not like the Contract for Difference, or strike price, agreed for the Hinkley Point C project. It was certainly set at a very high figure and was one of the reasons why the Prime Minister delayed approving the Hinkley scheme. The security offered by the strike price guarantee did help attract investors, however.

In the event Mrs. May decided to endorse the Hinkley contract, but with a couple of interesting conditions, as Gerald Clark pointed out. EDF Energy, which leads the consortium of investors put together for Hinkley, was told that henceforth it would not be allowed to offload its obligations without the consent of the Government. Moreover, in any future nuclear contracts of this kind, the Government would take a "golden share," giving it control - and, of course, responsibilities.

If the circumstances required it, Gerald said, it was implicit that the Government would have to pay up, a significant departure from the neutral position taken by the Brown Government in 2008.

THE TREASURY'S DILEMMA

Now to today. The Financial Times reported this month that Philip Hammond, the Chancellor of the Exchequer, and Greg Clark, responsible for the clumsily named Department for Business, Energy and Industrial Strategy, had taken part in talks over plans for new nuclear plants at Wylfa Newydd in Anglesey, and Moorside in West Cumbria.

It is the situation at Moorside, which is of most concern, concentrating Government minds wonderfully, like the prospect of a hanging on the morrow as Samuel Johnson famously put it. Toshiba, the main shareholder in the NuGen consortium, which is behind Moorside, is in the throes of a severe financial crisis and has put its overseas reactor business on hold while it sorts out the mess.

Strictly speaking Toshiba's problems have little to do with nuclear energy new build costs and investment as such, although construction delays and budget increases at the two new generation nuclear reactors being built in Georgia and South Carolina in the United States have not helped the balance sheet and have done nothing for Toshiba's world-wide reputation either.

The central problem lies with an investment made by Westinghouse Electric, Toshiba's US nuclear subsidiary. Westinghouse bought the Stone and Webster nuclear construction and services business from Chicago Bridge & Iron two years ago. It now transpires that the assets it took on then are likely to be worth less now than initially thought. There is also a dispute about payments that are due and the labour force is said to have "inefficiencies." The bottom line is that Toshiba has had to write down some £5 billion on its US business.

This led to the announcement that caused such consternation within NuGen and the UK Government, the somewhat bald statement by Toshiba that it was to review all of its nuclear reactor construction business outside Japan. Since then there has been a flurry of consultations and further explanatory statements.

The most important, from a UK point of view, was that made by Toshiba a fortnight after it dropped its bombshell. It said that it remained committed to Moorside and that worried me. What does "committed" really mean?

UNWAVERING SUPPORT?

My concern was that this might turn out to be rather like the statement made by the Leicester City football club's owner that the club's manager, Claudio Ranieri, had his "unwavering support" three weeks before he sacked him. Nevertheless, Toshiba's problems do mean that new investment routes have to be explored and not only the potential involvement of the UK Government.

NuGen hopes that investment in Moorside by Korea Electric Power (Kepeco), which is owned by the South Korea government and has been talked about for some time, actually happens and sooner rather than later. The optimists say that a deal for Kepeco to buy some or Toshiba's entire stake is on the cards.

Toshiba has a 60% shareholding in the NuGen consortium, which planned to build a 3.8 GWe nuclear power plant at Moorside, alongside France's Energi, which has a 40% stake. The plan is to use the AP1000 nuclear reactor made by Westinghouse, basically the same reactors that are running late and over budget in the US. It is having more success with the four AP1000 reactors under construction in China, however, and this has tempered concerns somewhat.

Potential new investors might nevertheless balk at the prospect of backing a development depending on a Westinghouse reactor and this must go for the UK Government, too. Toshiba itself is now saying that it would "consider participating in the Moorside project without taking any risk from carrying out actual construction work." That doesn't sound like resounding or unwavering support for the project to me.

AN ELECTORAL WINNER

The Moorside situation figured strongly in the month's Copeland by-election, with both of the main political parties going to great lengths to emphasise their support for the Moorside project and for the nearby Sellafield plant.

It seems to me that the politicians as much as those trying to deal with Toshiba's difficulties are coming up against something of a conundrum. One definition of a conundrum is "a complex and perplexing problem that generally has no clear solution. For example a failing company can find itself in a conundrum as it tries to figure out a solution to generate profits again"

It might also be said that the UK Government faces the conundrum of wanting to press on with the nuclear new build programme, which it supports, but hesitates to put too much weight behind a less than satisfactory project again, following the problems it had with Hinkley Point C.

Support for the Moorside project among local people is overwhelming. That much was made very clear during the Copeland by-election campaign. The candidates representing the four main political parties - Conservative, Labour, Liberal Democratic and UKIP all went out of their way to stress their support and only the Green Party opposed the scheme. As a result the Green vote, never very strong in West Cumbria, slumped badly.

During the campaign Jeremy Corbyn, the Labour leader, was constantly reminded that he hasn't always been a supporter of civil nuclear energy either

and this must have worked against the Labour candidate, Gillian Troughton. Try as she might to make the ending of maternity services at the local West Cumbria hospital and the state of the National Health Service the main issues that didn't really happen. Nuclear energy was the thing.

The Copeland by-election was triggered by the resignation in December of the Labour Party's Jamie Reed as a Member of Parliament, one of a very long line of Labour MPs for the constituency, who had resigned in order to become head of development and community relations at Sellafield.

OF HISTORIC SIGNIFICANCE

Copeland, created in 1983, and its predecessor constituency Whitehaven, have returned Labour MPs since 1935 and to lose the seat was humiliating for Labour, whatever the gloss put on the result. What happened this month was also the UK's first by-election gain by a governing party since 1982. In all this victory by the Conservatives was of historic significance.

It was not so much a question of who supported nuclear power but who was most likely to have most influence in the future and safeguard that future.

Mrs. Troughton could not have been more supportive, insisting that the Labour Party was fully committed to nuclear power. "No ifs, no buts, Labour was and is the party of nuclear," she said. "That is party policy. It always will be party policy," The problem she had was that not enough voters believed that the party's Leader, Jeremy Corbyn really is fully committed, given his previous anti-nuclear stance.

I suppose that also applies to the Liberal Democrats. The party's leader, Tim Farron, did his best, urging the Government to intervene to secure investment for Moorside. His difficulty was that like Mr. Corby, his Party has been a long-standing opponent of nuclear energy, only turning itself into a lukewarm supporter at its conference in September 2013 and then narrowly and reluctantly, speaking of it only being used "in limited circumstances."

All that Labour (with the help of the GMB trade union) and the Liberal Democrats could do was to criticise the Prime Minister for not coming straight out with a promise of Government investment support for the Moorside project. Mrs. May only went as far as saying: "We recognise - and Trudy Harrison, our candidate in Copeland has made very clear to me - the importance of Moorside and the importance of the nuclear industry."

The fact that the Prime Minister declined to be drawn on the issue of State ownership didn't in the end make much if any difference. This may be because voters recognised that until Toshiba ends its search for investment partners,

one way or the other, or sells off some of its other interests to raise capital for the investment it would be rather silly for the Government to show its hand.

The Prime Minister was questioned about Moorside during a visit to the Copeland area and her response was carried on national television. “The consortium involved at Moorside has been absolutely clear,” she said. “They have reconfirmed their commitment to Moorside.” Voters appear to have been satisfied with this reply. In the end Mrs. Harrison, who worked as a technical clerk for Sellafield Ltd for five years until 1998 and whose husband Keith is a welder working in the nuclear industry, won fairly easily.

She won with 13,748 votes to 11,601 for Mrs. Troughton and the size of the majority came as something of a shock.

WHAT ABOUT EURATOM?

Nevertheless, the issue of whether the State will intervene to save the project if that becomes necessary is not the only nuclear issue where the Government is being asked to come to a definite view and take action, almost certainly involving more State investment.

According to the Institution of Mechanical Engineers the Government’s plans to leave the European Union and consequently Euratom could also threaten plans to build new nuclear reactors and possibly jeopardise energy security. In a report published this month the Institution says that the Government must “urgently develop a suitable transitional framework” before leaving the European Union. There is a need, it says, for the UK to create new nuclear co-operation agreements (NCAs) to enable new nuclear trade deals with both EU and non-EU countries.

“The UK’s departure from Euratom must not be seen as an after thought to leaving the EU,” the lead author of the report, Jenifer Baxter, head of energy and environment at the Institution, said. “Without suitable transitional arrangements, the UK runs the risk of not being able to access the markets and skills that enable the construction of new nuclear power plants and existing power stations may also potentially be unable to access fuel.

“With the Article 50 process taking just two years, the UK Government must act quickly to start the process to develop NCAs to enable international trade, for goods such as nuclear fuels and research. The Government must also make sure that the UK will be able to access sector specific skills not currently available in the UK, such as centrifuge technology expertise. There needs to be a thorough framework in place to provide assurances on nuclear safety, nuclear proliferation and environmental issues. Making these transitional arrangements will be difficult, particularly given the short time-scale.

“But if done correctly it could present the UK with opportunities to speed up the process of developing new nuclear power plants and reprocessing facilities, boost UK nuclear skills as well as open up the UK to more international trade deals.”

For its part the UK Atomic Energy Authority (UKAEA) pointed out that membership of Euratom was a condition for Britain hosting what is currently the largest nuclear fusion experiment in the world. Based at Culham Centre for Nuclear Fusion Energy in Oxfordshire the Joint European Torus (JET) project involves some 350 scientists exploring the potential of fusion power, backed by funding from almost 40 countries in the EUROfusion consortium.

The UKAEA has said that leaving Euratom “has obvious implications,” especially the continued operation of JET after 2018 and the UK’s continued participation in the Iter project in France. The Iter fusion reactor will be JET’s successor on the route to developing commercial fusion power.

Jo Johnson, the minister of state for universities, science, research and innovation, moved quickly to respond to the UKAEA’s concerns. “The research done at the Culham Centre for Fusion Energy is rightly recognised as world class and it has driven UK leadership in fusion research and development for many years. The Government has no intention of compromising this decision following the decision to withdraw from the European Treaty,” he said.

“Leaving Euratom is a result of the decision to leave the EU as they are uniquely legally joined. The UK supports Euratom and we value international collaboration in nuclear research and the UK’s key role in these efforts. Maintaining and building on our world-leading fusion experience and securing alternative routes into the international fusion R&D projects such as the JET project at Culham and the Iter project in France will be a priority.”

Government spending on civil nuclear R&D was also criticised by its own Nuclear Innovation and Advisory Board (NIRAB). Total funding in this area in the UK was around £217 million in 2015-16 but funding for research into advanced nuclear fission technologies was significantly lower than other major nuclear natures in the Organisation for Economic Co-operation and Development, NIRAB said.

Government expenditure for fission in 2015-16 was £95.7 million and for fusion £24.6 million. Total Government expenditure for nuclear R&D fell from £140 million in 2010-11 to £122 million in 2015-16. As already noted, in the fusion sector most funding is currently from the European Union and the remainder from the UK research councils.

The NIRAB review says there has been an increase of around 19% in the number of researchers engaged in civil nuclear research in the UK compared to the 2013 review and a 5% increase in the number of researchers in the UK's national laboratories. But in both the fusion and fission laboratories there has been a significant loss of more experienced staff - individuals with greater than 15 years experience.

AND NUCLEAR R&D IN GENERAL

The Government should also take an interest in the condition of the country's National Nuclear Laboratory (NNL), which cannot fulfil the role its name implies according to three expert witnesses who gave evidence at the House of Lords Science and Technology Committee's inquiry into priorities for nuclear research and technologies.

The three witnesses were Michael Bluck, director of the Centre for Nuclear Engineering at Imperial College London, Mike Tynan, chief executive officer of the Nuclear Advanced Manufacturing Research Centre (AMRC) at the University of Sheffield and Grace Burke, director of Materials Performance Centre at Manchester University. They all came to the conclusion that NNL's role needed urgent attention.

NNL has been providing independent advice to the UK Government and working with other national laboratories around the world since 2008. It has also been providing research and development to support the nuclear fuel cycle and its major customers include the Nuclear Decommissioning Authority (NDA), Sellafield, Springfields, the Ministry of Defence, EDF Energy and the United Kingdom Atomic Energy Authority.

In his evidence to the committee Mr. Bluck pointed out that the contract work NNL does is principally for Sellafield Ltd. "If it is doing a good job in waste and decommissioning then maybe there's no particular reason to interfere because it may be a good system," he said. "But if this releases a paltry amount of cash based on that profit which it is only recently allowed to recirculate into research then plainly it's not fit for purpose as a national nuclear laboratory."

Mr. Tynan pointed out that Sellafield Ltd is funded by the NDA, which is funded by Government. "While NNL competes for work, there is certain work that only it can do," he said. "That adds some complexity to the situation and you could argue that Government is already funding a substantial part of it anyway." He also suggested to the committee's members that they should not forget the role played by the UKAEA, which did "fantastic work."

Grace Burke told the committee that in she felt that ideally NNL should be solely Government funded and not diverted with commercial work. "As it is, it's incredibly difficult," she said "to have NNL participants in research programmes in which I know specific staff are uniquely qualified in the UK and in the world. It is exceptionally difficult, if not impossible, to have them formally involved with programmes. So, if it is a national nuclear laboratory and you intend to get the best and really world class research and development out of it then in an idea world it would be solely State funded and not have to rely on soliciting commercial contracts."

A NEW SECRETARY IS NEEDED

During the course of this month I informed the Chairman, Sir William McAlpine, and members of this Committee that I intended to retire from the position of Secretary at or before the annual meeting in October.

This will provide SONE with up to eight months to find a successor and the hunt is well and truly on.

If anyone has an interest in the post (which is, of course, an honorary one) or knows someone who might be persuaded to pick up the baton please let me know. I will personally brief interested parties on what the role entails and I am sure Sir William will take a keen interest in the appointment, too.

By October I will have filled the Secretary role for three years, having succeeded the estimable Sir Bernard Ingham - a hard act to follow. I will have written no fewer than 108,000 words for the monthly newsletters, which I hope you have enjoyed. I will also be 80 years old and am beginning to feel it, physically and mentally.

SONE needs a new voice. It could be yours!

Harold Bolter
SONE Secretary

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