



Supporters of Nuclear Energy

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TURBULENT TIMES AHEAD

The considerable political and economic uncertainties caused by the European Brexit referendum result mean that the UK nuclear energy industry is in for a turbulent time, no matter how hard those responsible for the country's new build reactor programme try to play down the significance of Britain leaving the European Union.

As I write (and my musings could be overtaken by events before you get to read them) both of the main political parties are in crisis. The Prime Minister, David Cameron, is definitely on his way out and Jeremy Corbyn's position as Labour Leader is under threat after a mass exodus by shadow cabinet members. In both cases potential successors are jockeying for position.

PLAY IT AGAIN SAM

There are even calls for a sort of "play it again Sam" re-run of the referendum vote, with some politicians, trade union leaders and industrialists arguing that it was only advisory and could be ignored by Parliament, which should have the final say.

With so much instability the case for a General Election in the autumn is a strong one. This could lead to another coalition government - complexion and make-up unknown - which could in turn have an impact on the immediate future of nuclear energy.

Our relationships will inevitably change with the European Union countries, particularly France, and with the European Commission. Countries such as China and Japan, which have a stake in nuclear energy development in the UK but are also anxious to get into the wider European market, will want time to review their positions.

With so much uncertainty some of our MPs, across the political spectrum, are worried about their own futures. We should not expect much in the way of concern from them about what might happen to the nuclear industry.

That being so SONE needs to stay alert and keep a watchful eye on the developing political and economic situation and do what we can to ensure that our voices are heard. Vigilance is essential and the need for SONE has once again been underlined by events.

NO IMMEDIATE THREAT

There seems to be no immediate threat to the three major new build projects under way in the UK. EDF Energy, NuGeneration and Horizon Nuclear Power have all emphasised their continuing commitment to the programme.

Nevertheless, there are other players who take a different view of what should happen next or are keeping suspiciously quiet. Some of the siren voices are known to be looking for any opportunity to force the three companies to delay or jettison their plans.

The most obvious project at risk is EDF Energy's Hinkley Point C scheme. As if the uncertainty created by the UK's decision to get out of Europe is not enough the influential French trade unions, still being consulted by the company's top management, have cited Brexit as another argument for the plug to be pulled on EDF's involvement in the much-delayed Hinkley scheme.

At the time of writing EDF's partner, China General Nuclear Power Corporation, with a 33.5% stake in EDF's £18 billion Hinkley project, has not said anything, but it must be concerned about the situation.

It wants to get into the European - not simply the UK - market. It has also said that it has no intention of going it alone on the Hinkley project if EDF drops out, for whatever reason, and has no plans to use the Hinkley site to accommodate Small Modular Reactors. (SMRs) if things go wrong.

EDF STILL SOUNDS OPTIMISTIC

Despite all this EDF's Chief Executive Officer, Jean-Bernard Levy, insisted that the Brexit vote had no impact on the strategy of EDF and its UK subsidiary. EDF's business strategy was not linked to Britain's political affiliation with the EU and therefore EDF had no reason to change it, he said. Let us hope he is right.

Mr. Levy pointed out that Angela Leadsom, the UK's energy minister (who, incidentally made a very supportive speech at last year's SONE agm), was a leading "Vote Leave" campaigner and had come out firmly in favour of maintaining the UK's decarbonisation policy, the nuclear option and the Hinkley project during the campaign.

I am not aware that the Secretary of State for Energy and Climate Change, Amber Rudd, a prominent "Remain" campaigner, raised the issue, but there is

every reason to think that she remains a nuclear expansion supporter as does the Government as a whole. The need to get the nuclear renaissance under way is well understood.

A cabinet and ministerial reshuffle is certain, however, and that may affect the speed with which decisions relating to Hinkley are taken. We will just have to see who is appointed to the energy and climate change roles and how enthusiastic they are for the nuclear cause.

As for the Labour Party it will have to work its way through its existential nightmare before we know where it stands on most issues, with responsibility for energy policy way down the list of things to be sorted out.

Wisely, EDF did not join in the debate about what it thought was best for Britain during the referendum campaign, which is more than one can say for other UK and foreign owned companies. Their intervention, it seems to me, was generally counter-productive.

“We operate in the markets like any other large company,” Mr. Levy said. “and we made sure that we did not take a position one way or the other. That means that we are in a neutral position vis-a-vis the movements that could occur in the markets.

“Market analysts believe that the pound will drop (it did), but if the currency falls, the economy becomes more competitive. I think we need to adapt to economic conditions and to exchange rates”

Others are less sanguine than EDF about the chances of Hinkley C being built. Fiona Reilly, Price Waterhouse Cooper’s head of nuclear capital project and infrastructure, said the UK’s decision to leave the EU “could have a significant impact on the UK’s nuclear programme.”

POSSIBLE INVESTMENT DECISION DELAY

Ongoing uncertainty in the market, at least in the short term could affect access to capital and investor confidence in what is already a limited trading area, she said.

While the UK Government would need to work out political, trading and legal issues it would also potentially need to renegotiate Britain’s involvement in the Euratom Treaty and agreements it had with the United States.

A final decision on the Hinkley Point C project had been expected to be taken by EDF in September but there must now be a very real possibility that it will be deferred once again as a result of all that is going on inside and outside the company

Shortly before the “Leave” referendum decision was announced senior managers at EDF wrote to the UK parliament’s energy and climate change select committee voicing overwhelming opposition to the Hinkley project. They will believe their case for delay has been strengthened by the referendum result.

A CHALLENGE FROM EDF MANAGERS

The Federation Nationale des Cadreurs Supérieurs de l’Energie union (FNCS), representing EDF managers, wrote to the select committee setting out a series of arguments for a further postponement of the Hinkley investment decision, which has gone back and back over the last several years.

Among the outstanding problems highlighted by the senior managers at EDF were these:

- * Areva NP, the designer of the European pressurised reactor (EPR) planned for Hinkley “is currently facing a difficult situation.”
- * The French nuclear safety authority (ASN) may not give the green light to the EPR being constructed at Flamanville in North West France.
- * There may be “identical flaws” in an Areva EPR being built at Taishan 1 in China.
- * The scandal over the falsification of parts from Areva’s Le Creusot company that potentially put safety checks at risk.
- * Multibillion euro litigation between Areva and the Finnish energy group TVO over delays to an EPR scheme at Olkiluoto remains unsettled.
- * An EDF offer to purchase Areva expired on 31st March, leaving “governance uncertainties about the implementation of the Hinkley Point C project.

It is not only its own managers and parts of its workforce who want the project stopped either. There are external forces at work.

In the May Newsletter I discussed the Austrian government’s attempt to use European law to halt the scheme. A year ago Austria filed a legal challenge at the European court of justice opposing state subsidies for Hinkley Point C which have been approved by the European Union.

That manoeuvre by Austria, which has no nuclear power stations, has been dismissed by Angela Leadsom as having no merit.

However, because of the the changed situation created by the UK deciding to get out of the EU the Austrian government may feel that it now has a better chance of success and that it will continue its action with renewed vigour during the two years or so during which the UK will still be in the EU.

ANOTHER LEGAL THREAT

The Austrian government's legal challenge is not the only one to be aware of either. Greenpeace and its many associate anti-nuclear organisations are working on a move to try to get Hinkley stopped. Shortly before the referendum Greenpeace released a legal opinion criticising the French Government's proposed package of support for EDF, arguing that this could be illegal under European Union legislation, unless and until it was approved by the Commission.

One might think that Britain's decision to leave the EU would make the Commission's views irrelevant. Not so. If a week is a long time in politics 24 months will seem like an eternity. The Commission and EU members such as Germany which have decided to abandon nuclear energy might try to use any hiatus to try to force the French to go through the legal minefield which is European law. There are some in France who will not mind that happening either.

EDF is owned by the French Government and it is funding from that source which will eventually determine whether Hinkley Point C goes ahead and it is this which is being challenged by Greenpeace.

It says that the financial support most frequently reported to be in the proposal is that, as an 85% shareholder of EDF, the French government would accept dividends in the form of shares rather than cash. Such a move, as well as giving a capital injection to the struggling company, would constitute state aid, the lawyers say.

The legal opinion obtained by Greenpeace argues that a private investor with an equivalent shareholding, looking to make a normal return, would not agree to this. If the French government was to underpin EDF in this way, "in an attempt to shore up the French nuclear industry," this would destroy a level playing field for European energy companies.

Moreover, the French government's repeated declarations that it "will do whatever is needed" to ensure Hinkley goes ahead could in itself amount to state aid, given that EDF's competitors have not received a similar guarantee.

As usual, it is uncertainties over the likely course of EDF's Hinkley Point C project which have attracted most attention in the media this month.

It is important that we remember, however, that there are two other schemes to take into account. Like EDF Energy, NuGeneration (NuGen) and Horizon Nuclear Power have stressed their continuing commitment to the UK's nuclear new build programme.

NuGen, the UK joint venture between Japan's Toshiba and France's Engie, said that its Moorside project remains unaffected by the outcome of the EU referendum. NuGen plans to build a nuclear power plant of up to 3.8 GWe gross capacity at the West Cumbria site, close to Sellafield, using AP1000 nuclear reactor technology provided by Westinghouse Electric, a Toshiba company.

NuGen said that its shareholders remained committed to building Moorside, Europe's biggest new nuclear power station, to produce and sell power to the UK grid. "We firmly believe the case for new nuclear power stations is compelling and unchanged as a result of the referendum," the company said.

"New nuclear power stations are vital for the UK's future prosperity, delivering low-carbon, secure and stably-priced electricity for generations to come, while securing our future indigenous energy supplies on UK soil.

"NuGen will be in a position to provide power to the UK grid in the mid-2020s. In order to deliver the plant on time and on budget we must secure clarity on policy and ensure the Government does everything it can to deliver investment stability for vital UK infrastructure projects."

The reference to NuGen delivering the Moorside power station on time is courageous, given that it is only a few weeks since it announced that the first power from the plant is now not expected to be available until the end of 2025, a year later than planned.

This is the second time that the timescale of the plant has slipped. It was originally expected to produce first power in 2023. I suppose the reference to completion "in the mid-2020s" covers most eventualities.

The company has said that there are elements of the Moorside plant which are outside its control, such as securing financial support from the Government and then state aid clearance from the European Commission.

Horizon Nuclear Power said it will continue to develop its plans to deploy the UK Advanced Boiling Water at two sites - Wylfa Newydd, on the Isle of Anglesey, and Oldbury on Severn, in South Gloucestershire. Established in 2009 and acquired by Hitachi in November 2012, Horizon intends to provide at least 5.4 GWe of new capacity, expecting the first unit at Wylfa Newydd to be operating "in the first half of the 2020s.

So we now have a situation where all three projects are expected to start providing badly needed generating capacity for the UK around the same time. We had expected them to come on line in sequence - Hinkley Point C, followed by Moorside, followed by Wylfa Newydd and then Oldbury. We will have to wait to see what actually transpires.

CLIMATE CHANGE IMPLICATIONS

There are also concerns about the effect which the referendum result and the general turmoil will have on efforts to deal with climate change issues.

Jonathan Grant, director, Price Waterhouse Cooper sustainability and climate change, has said that the outcome of the referendum was a major setback for the type of collaboration needed to tackle environmental issues.

“The UK Government has been a champion of climate action at home, within the EU and in the Paris climate talks,” he said. “However, this leadership is at risk, with many supporters of Brexit also opposed to climate policies such as carbon taxes and efficiency standards. The immediate priority will be to provide reassurance to investors to avoid undermining the low carbon sector.”

EC BACKED RESEARCH IN QUESTION

Similar concern has been expressed about the implications Brexit might have on funding research programmes. Professor Steve Cowley, chief executive officer of the UK Atomic Energy Authority, said that researchers were afraid that £55 million in annual European Commission funding would now be withdrawn, costing up to a thousand jobs.

Particular concern was expressed by Professor Cowley about the future of the Joint European Torus (JET) project, which is based at the Culham Science Centre, where the potential of fusion power “as a safe, clean and virtually limitless source for future generations” is being investigated.

The largest tokamak in the world, it is the only operational fusion experiment capable of producing fusion energy. As a joint venture, JET is used by more than 40 European laboratories and Professor Cowley is concerned that the UK could lose the expertise of the staff there.

“If we should lose our European funding, the lab would have to shrink to a tiny size and the jobs would go and the expertise would move to other countries. We would have lost our edge in a future technology that’s very, very important,” he told the BBC.

Other parts of Europe - indeed other parts of the world - are not having to cope with political uncertainty on the scale which the UK is having to meet, of course. It is still possible to be optimistic about the future of nuclear energy, given the self-apparent need for it and the investment which is going into it.

Towards the end of this month the World Nuclear Association published its World Nuclear Performance Report for 2016. A cursory study has convinced me that I should spend more time reading it and I expect to do so in time for next month's Newsletter. It contains considerable detail about nuclear plant

performance world-wide and recent developments in the global nuclear industry.

To give you a flavour of what this lengthy and authoritative report contains the Association has pointed up its key findings.

- * More nuclear reactors are under construction and more reactors came on line last year than at any time in the last 25 years.
- * Nuclear reactor performance has improved steadily over the last 35 years. Importantly, reactor performance is not fundamentally affected by reactor age; older plants operate as well as younger plants.
- * Construction times for new reactors have improved over the last 15 years, with reactors coming on line in 2015 having an average construction time of six years.

At the launch of the report the Association said that despite challenging market conditions existing nuclear plant performance is strong and the pace of new build is accelerating.

Recent years, it suggested, have been some of the most challenging for the global nuclear power plant fleet but major new build programmes, new technology developments, reactor restarts in Japan and strengthening public support mean prospects for the years ahead are brighter.

The Association considers that there should be 1000GWe of new nuclear build by 2050, with nuclear generation supplying 25% of global electricity demand.

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