



## Supporters of Nuclear Energy

# Newsletter

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### ALL QUIET ON THE WESTMINSTER FRONT

The nation's politicians had lots to say about lots of things, including each other, as the General Election campaigns got under way this month but there was hardly a word about nuclear energy. The need for a nuclear new build programme and how it was to be financed - one of the most important economic, industrial and social issues facing us - was actually ignored by the Conservatives, who have previously been the most supportive of the main political parties.

Not surprisingly, the anti-nuclear campaigners - those that remain that is - have had a field day. One of the more strident journals, the Ecologist, went as far as to say that the Conservative Party manifesto "signals the end of new nuclear energy" and claimed that the nuclear industry was "in a death spiral."

Greenpeace's take on the Tory manifesto was more measured and contained less in the way of hyperbole. Nevertheless, although some of its more prominent members have moved on and now support nuclear power, the organisation remarked on the near total absence of it from the Tory policy document. This, it says, is "a telling sign that the Party is starting to recognise the enormous financial and technical risks of the industry."

### MAKE YOUR MINDS UP TIME

If anyone still thinks that there is no need for SONE, that the need for nuclear is now generally recognised and that the long-awaited nuclear renaissance is safely under way, they should think again.

It's not only the Tory Manifesto which is worrying. Even before it was published two UK parliamentary committee published reports calling on the Government to take action to ensure the future competitiveness of the UK's nuclear industry.

According to the House of Lords Science and Technology Committee "we have reached a critical moment for the future of the United Kingdom as a serious nuclear nation. The undoubted potential of the civil nuclear sector has been blighted by the indecision of successive governments."

In its report the Committee sets out a series of recommendations for the new Government, whatever its complexion, to consider after the General Election. The Government must make the “overarching” decision about the UK being “a serious player in developing nuclear generation technology, whether as a designer, manufacturer, or operator or to restrict its interest to being an operator of equipment supplied by others from overseas,” the Committee said. Once it has made the decision, the Committee’s report states, “other strategic decision will flow” to define clear objectives and timescales for the country’s nuclear industry.

## **WHAT HAPPENED TO THE SMR COMPETITION?**

The Government’s failure to make a decision on its strategy for small modular reactors (SMRs) “is a prime example of its inaction in the civil nuclear arena,” the report says.

“Not keeping to the stated timetable for the SMR competition has had a negative effect on the nuclear sector in the UK and if the Government does not act soon the necessary high level of industrial interest will not be maintained.”

The House of Lords committee also expressed concerns over the UK’s anticipated departure from the European Atomic Energy Community (Euratom). “The UK risks losing its lead in fusion research as well as losing access to the markets and skills it needs to construct new nuclear power plants and existing power plants could be unable to acquire fuel.” the committee said.

Meanwhile, the Commons Business, Energy and Industrial Strategy Committee took a similar line, pointing out that legal opinion is divided on the necessity for the UK to leave Euratom.

“Withdrawal from Euratom is an unfortunate, and perhaps unforeseen, consequence of the Prime Minister’s objective of ending the jurisdiction of the European Court of Justice in the UK,” the Committee said. “Ministers must end the uncertainty and resolve the matter by securing alternative arrangements as urgently as possible.”

Legal opinion on the need to leave Euratom may be divided but the Prime Minister Theresa May and David Davis, the Secretary of State for Exiting the European Union are adamant that the departure must happen. Both of them insist that by invoking Article 50 of the Lisbon Treaty to leave the EU the UK will also be leaving Euratom.

Their argument is that although Euratom was established in a treaty separate to the EU agreements and treaties it uses the same institutions as the EU, including the European Court of Justice.

As a very distant ancestor of mine, William Shakespeare, put it in Hamlet: “There’s the rub.” The Conservatives want to sever all ties with the European justice system.

## **WHAT DOES LEAVING EURATOM MEAN?**

So what does leaving Euratom mean to the UK nuclear industry? At its simplest, membership gives the European Commission, headed by the heartily disliked President Jean-Claude Juncker, three important roles. The Commission itself describes these as:

- \* nuclear safety, concerned with the safe operation of nuclear installations, complemented by radiation protection and radioactive waste management;
- \* nuclear safeguards, that is measures to ensure that nuclear materials are only used for the purpose declared by the users;
- \* nuclear security, i.e. the physical protection of nuclear materials and installations “against intentional malicious acts.”

That obviously includes cyber attacks and that is an issue which is dealt with at length in the Conservative manifesto, even if Euratom is not.

Harking back to the previous Government’s security concerns over Chinese involvement in EDF Energy’s Hinkley Point C project the manifesto had this to say: “We will ensure that foreign ownership of companies controlling important infrastructure does not undermine British security of essential services.

“We have already strengthened ministerial scrutiny and control in respect of civil nuclear power and will take a similarly robust approach across a limited range of other sectors, such as telecoms, defence and energy.

“We will create a national infrastructure police force, bringing together the Civil Nuclear Constabulary, the Ministry of Defence Police and the British Transport Police to improve the protection of critical infrastructure such as nuclear sites, railways and the strategic road network.”

That is all well and good, although I do have concerns about the formation of the sort of monolithic organisation this new national infrastructure police force might become. Powerful monoliths are often synonymous with bodies which are bureaucratic and slow to react and, if necessary, to change.

I also worry that a wide range of other potential terrorist targets, such as the transport of toxic chemicals up and down the country by road and rail, are not mentioned, giving the impression that nuclear materials pose a unique risk, which they do not.

The Conservatives approach to policy formula also cause me concern.

## **BACK TO FRONT POLICY DEVELOPMENT**

“After we have left the European Union,” the manifesto says, “we will form our energy policy based not on the way energy is generated but on the ends we desire - reliable and affordable energy, seizing the industrial opportunity that new technology presents and meeting our global commitments to climate change.

“That is why we will continue to take a lead in global action against climate change, as the Government demonstrated by ratifying the Paris Agreement.

“We were the first country to introduce a Climate Change Act, which Conservatives helped to frame, and we are half way towards meeting our 2050 goal of reducing emissions by 80% from 1990 levels.”

That suggests that the Conservatives already know how they will meet our energy needs - by actually implementing the existing strategy. That would involve support for a new build nuclear programme and belated encouragement for the development of small modular reactors as well as fracking for shale gas, however unpopular that has been made to seem by environmental activists.

I find the Tories cart before the horse approach towards the formulation of an energy policy and their failure to even mention nuclear energy in it quite extraordinary. By contrast, there are references to nuclear energy in both the Labour Party and Liberal Democratic manifestoes.

## **LABOUR AND LIB DEMS SURPRISINGLY POSITIVE**

The Labour Party says that it would prioritise maintaining access to the internal energy market during Brexit negotiations and would also retain access to Euratom “to allow continued trade of fissile material, with access and collaboration over nuclear research.

I am not sure how it would retain access to Euratom but at least it mentioned the subject in its manifesto. Labour’s manifesto also acknowledges that “the UK has the world’s oldest nuclear industry and nuclear will continue to be part of the energy supply.

It states that the Labour Party “will support further nuclear projects and protect nuclear workers’ jobs and pensions“ and that “there are considerable opportunities for nuclear power and decommissioning both internationally and domestically.”

The Liberal Democrats go one step further in relation to Euratom . They say in their manifesto that they will maintain membership of it, “ensuring continued nuclear cooperation , research funding and access to nuclear fuels,” not merely

retain access to it as Labour promises. To do that the UK would have to stay in the EU of course, which is not going to happen. No matter.

More importantly, perhaps, the Liberal Democrats say they “accept that new nuclear power stations can play a role in electricity supply, provided concerns about safety, disposal of waste and cost are adequately addressed. new technology is incorporated and there is no public subsidy for new build.”

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A great deal of work is needed to ensure that replacement arrangements for the work currently carried out within Euratom are developed and instituted. This must involve the UK nuclear industry as well as the Government and may well involve co-operation with countries other (or in addition to) those within the EU.

## **STILL WARY OF FOREIGN OWNERSHIP**

Despite the Tory manifesto’s reference to the Party’s determination to ensure that foreign ownership of companies controlling important infrastructure “does not undermine British security or essential services” it has so far had nothing to say about the possibility of replacing overseas investment with State financial support for new nuclear projects, despite conjecture that it is prepared to consider the possibility.

Where the UK now stands on progressing its planned new nuclear energy projects is difficult to fathom. Three developers have plans to build new plants. EDF Energy plans to build two EPR reactors at Hinkley Point in Somerset, with China General Nuclear (CGN) owning a 33.5% stake in the project. The two companies also have tentative plans to build new plants at Sizewell in Suffolk and Bradwell, the latter using Chinese reactor technology.

Unlike State-owned EDF Energy and CGN the other new nuclear developers - Horizon Nuclear Power and NuGeneration - are private investor vehicles. Horizon, which is owned by Japan’s Hitachi, plans to deploy the UK

Advanced Boiling Water Reactor at two sites - Wylfa Newydd and Oldbury on Severn.

## **INVESTMENT AT THE CORE**

However, they are still sorting out the investment package required. That includes negotiations with the UK Government on the possibility of a measure of State funding, a possibility which is a recurring theme in discussions on all of the new build projects.

It is not simply the need for funds per se but the confidence private investors would have if the Government put our money (as taxpayers) where its mouth is, to show that our politicians mean what they say about the prospects for a nuclear renaissance rather than simply talk about it (but not in the manifesto).

NuGeneration, once a joint venture with the French company Engie but out on its own now, is still planning to build a nuclear plant of up to 3.8 GWe gross capacity at Moorside in West Cumbria, using AP1000 nuclear reactor technology provided by Westinghouse Electric Company, a group company of the beleaguered Toshiba.

There is speculation that the bankrupt Westinghouse nuclear group may be prevented from providing any emergency funds to underpin overseas interests which were provided before it declared itself bankrupt. This, it is suggested, throws the future of the Moorside project into doubt.

Prospective new investors, particularly those in the US, are said to want to see any fresh funds channeled into Westinghouse and its main subsidiaries and not foreign joint venture projects such as Moorside. These potential new investors are also said to be calling for partners involved in Toshiba's overseas interests to step in and provide support.

The financial problems facing Toshiba/Westinghouse threaten to engulf the Moorside new build project in Cumbria and the uncertainties surrounding French nuclear policy since the election of Emmanuel Macron as the President of France could have an impact on EDF's Hinkley Point C project. The French President has appointed an avowed opponent of nuclear energy, Nicolas Hulot, as his new energy minister.

## **REVISITING THE INVESTMENT FUNDAMENTALS**

NuGen's Chief Executive officer, Tom Samson, did his best to reassure West Cumbrian stakeholders - elected representatives and technical and special interest groups - when he met them at a series of meetings this month.

He acknowledged that NuGen had faced a tough start to 2017 when the extent of the financial issues affecting Toshiba and Westinghouse became apparent.

These issues, not connected to Moorside, had then prompted ENGIE to exit the project.

“At the end of March it became clear we at NuGen had to step back due to these circumstances and revisit some fundamental elements on which we had been building the programme to deliver Moorside,” Mr. Samson said.

“As has been reported we took the decision to \*hit the panic button\* in order to explore our options to move forward to our objective, which is to deliver the next generation of low carbon baseload electricity by the mid-2020s, for the benefit of the UK’s future prosperity.”

Mr. Samson said there were “a universe of options“ but that NuGen could not exercise these options unilaterally and had authorised a Strategic Review, sanctioned by the NuGen Board and in consultation with the UK Government . This would explore a range of options, which could include new investors, technology and financing solutions to ensure Moorside was delivered.

### **PROTESTING TOO MUCH?**

“We have achieved a great deal so far and the Moorside project has created significant international interest. Westinghouse has achieved design acceptance for the AP1000 reactor from the UK nuclear regulators and this is of major benefit to the UK,” Mr. Samson said.

“So this, with other considerations, including options for new partners, will form part of our review. We have 100% backing from Toshiba as we move forward through our transition.”

In a resounding ending to his series of talks Mr. Samson expressed his total confidence that the Moorside scheme will succeed, despite current concerns. “I am 110% sure this phenomenal project, which will be transformational for Cumbria and the North of England, will go ahead.”

I hope it does, but am not convinced by Mr. Samson’s hyperbole - “a universe of options” indeed and “110% certainty” that the Moorside scheme will go ahead. Another quote from Hamlet is called for perhaps: “Thou doth protest too much methinks.” Mr. Samson.

It would appear that the UK National Grid has similar concerns about the prospects for Moorside. Even as Mr. Samson tried to rally the troops in West Cumbria, the National Grid announced that it had “paused“ plans for grid infrastructure work needed for the project. Only last October National Grid unveiled proposals for a £2.8 billion project to connect the planned plant to the country’s electricity network.

“Following NuGen’s announcement of a strategic review of their project we will work with them to understand the implications for the timescales of their project In line with NuGen’s review we are pausing work on our connection,” National Grid said. “This will ensure we can align our plans both for the application for consent and the development of the infrastructure if self.”

## **UNDER GROUND AND UNDER SEA**

The National Grid is right to be cautious. What it faces is a massive and costly undertaking.

When it unveiled its proposal for the Moorside project it said it planned to put lines underground and under Morecambe Bay to protect the Lake District National Park and that more than a quarter of the connection could be underground.

According to the proposal some 14.5 miles of new line is to be laid underground through the entire western section of the national park. This could see the existing lines there being removed completely, leaving this part of the park free of pylons for the first time in 50 years.

This would be in addition to putting cables through a tunnel which would be more than 13 miles long under Morecambe Bay to avoid the south part of the national park at a cost of £1.2 billion.

In addition many of the pylons owned by Electricity North West would be removed and replaced with fewer, taller pylons operating at a greater voltage and the low voltage line in the area around Hadrian’s Wall, a UNESCO World Heritage Site, would be replaced by underground cables.

Harold Bolter CBE  
SONE Secretary

*Published by:* Supporters of Nuclear Energy, c/o 9 Drayton Grove, Timperley,  
Altrincham, Cheshire WA15 7PZ *Tel:* 0161 980 0861  
*Web site:* [www.sone.org.uk](http://www.sone.org.uk) *E-mail:* [sec@sone.org.uk](mailto:sec@sone.org.uk)