



## Supporters of Nuclear Energy

# Newsletter

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### SELLING THE CROWN JEWELS

Selling the crown jewels is a term used to describe the action of companies selling off key assets to friendly third parties or spinning them off into separate entities as a defence against unwelcome takeover bids. The aim is to make their companies less attractive to predators trying to get valuable assets on the cheap. There can be other objectives, of course, some of them surprising.

This month France started to sell off the crown jewels represented by State holdings in a wide range of non-nuclear industries in an attempt to raise funds to protect and assist two nuclear groups, Electricite de France (EDF) and Areva, and the much delayed Hinkley Point C project, potentially the crown jewels of the future.

How times change. For decades we have seen successive UK governments, in particular, off-loading their nuclear assets at knock down prices simply to get out of nuclear power and rid the State of the industry's decommissioning and waste management and disposal liabilities. As Andrea Leadsom, the Energy and Climate Change Minister, said this month: "We face a 20-year lack of investment in energy infrastructure that this Government is trying to put right."

The UK disposal of the country's nuclear assets during that period included the sale of Westinghouse to Toshiba by British Nuclear Fuels (BNFL) in 2005, just as it showed signs of making a serious amount of money, and EDF's purchase of British Energy for £12.5bn in 2008, when it was thought that this would pave the way for a new generation of nuclear reactors. We are still waiting.

The selling spree now under way in France is intended to raise money to cover the €3bn aid package promised by the Government to help EDF build Hinkley Point C and prolong the lives of France's existing nuclear reactors. It will also be used to facilitate EDF's investment in Areva and, it hopes, go some way towards repairing the French nuclear industry's tarnished reputation.

The French government is considering the sale of shares in Renault, the automobile group, and Safran, the aerospace, defence and security business. It has already announced that the airports in Nice and Lyon will be sold, yielding

between €1.5bn and €1.8bn. In all, the government has shares in 77 companies and owns more than €60bn worth of assets, with investments in 14 listed French groups, including Engie, Orange, Peugeot, Thales and Airbus.

The EDF group's balance sheet shows a net debt of €37bn, an uncomfortably high figure, and needs additional finance to pay for a range of costly investments, not just the £18bn Hinkley Point C nuclear project costs. It is estimated that it faces a €55bn bill in the coming decade to increase the operating life times of the country's 58 nuclear power stations from 40 years to 50 years.

EDF has also agreed to take a majority stake in Areva, another State-controlled nuclear group which is having difficulties. and the French government has promised to participate in a €5bn capital raising scheme to ensure that change in Areva's shareholders takes place.

As far as I am aware there is no intention to sell off any of France's actual crown jewels. Surprisingly, perhaps, the Republic does still have some. While much of the royal jewellery collection was either sold off in 1885 by the Third French Republic, or stolen, some of it remains in safe custody and is on display in the Louvre.

## **A TARNISHED REPUTATION**

The financial problems experienced by EDF have led to Moody's Investors Service downgrading to A2 from A1 the issuer and senior unsecured ratings of the group. Its decision has been taken because it feels that EDF has a negative outlook about it, "partly because of the incremental risks associated with the Hinkley Point C scheme, should it go ahead."

Moody's provides international financial research on bonds issued by commercial and government entities and is one of the Big Three credit rating agencies, alongside Standard & Poor's and Fitch Group.

The rating action taken by Moody's reflects its view that the action plan announced by the EDF Group last month "will not be sufficient to fully offset the pressures resulting from, a low power price environment, combined with a significant investment programme." EDF is very reliant on this action plan working.

At the meeting of the Energy and Climate Change Select Committee where Mrs. Leadsom spoke of past political failings, Vincent de Rivas, EDF Energy's Chief Executive, said that the three dimensions of this action plan - asset disposals, improved operating efficiencies and the strengthening of the company's balance sheet - had been secured. Moody's is clearly not convinced that this will be enough.

Mr. de Rivas had been requested to make a second appearance before the Select Committee after giving evidence there on 23 March, when there was an expectation that EDF would have taken a final investment decision by early May. That did not happen and EDF Energy's chief executive officer sought to explain the delay again, with a slightly different approach this time round.

EDF was operating in a market where the dramatic fall in wholesale energy prices had created difficult conditions for all energy companies, he said. The action plan, agreed by the French Government and the EDF group board, would address the overall situation at EDF and not just Hinkley Point C.

Expanding on the financial implications of the plan, Mr. de Rivas said that EDF would launch an asset disposal programme to raise €10bn by 2020 to reduce its debts. It also intended to reduce operating expenditure by €1bn through efficiency savings and to increase its capital base by €4bn (including the €3bn to be provided by the French government.)

"In summary, EDF has secured its overall financing. We are consulting with the trade unions and the teams are still working hard on the project," Mr. de Rivas said. "Hinkley Point C is a strategic project for France and for China. It is as essential for EDF as it is for the UK. We are ready to deliver it on time and to budget." China General Nuclear is, of course EDF's partner on the Hinkley project.

Even if the EDF action plan is "a condition precedent for Hinkley Point C to go ahead," as Mr. de Rivas described it, the long-awaited investment decision is still some way off. Try as hard as the members of the Select Committee did to get a firm date for this out of him he would not be drawn.

### **AN UNUSUAL CONSULTATION EXERCISE**

There is still an important obstacle to overcome - the opposition of some of the trade unions represented within EDF on the Works Council, some of whom want to postpone the Hinkley project for two or three years.

This was acknowledged by Mr. de Rivas, although he seemed to be saying that there was no way the unions were going to have their way, whatever they came up with. The consultation with the unions began on 2 May and is expected to last at least 60 days.

According to Mr. de Rivas all the information needed by the unions in order for them to form an opinion on the Hinkley scheme has already been provided to them."The consultation is about seeking an advisory opinion. It is for the board of EDF to make its decision," he said. "As to the Work Council's concerns I think we have a pretty good idea of their concerns and their views.

“Their first concern regarding Hinkley was the overall financial situation of the group. In simple words, can the EDF group afford it? I think the chairman of the group was in a position to address that concern through a very efficient dialogue with the French State, its main shareholder, and with a plan which secured for the group, in the next few years, its overall financial trajectory. This plan is in place. It has been approved by the French government. So this concern has been addressed.

“The second concern is the perception that some of the unions have that we may benefit from delaying the decision in sanctioning the project and reducing some of the risks associated with any large construction project. We have a different view.

### **THE BOARD KNOWS BEST**

“We think that this project is ready, that never in the history of EDF has a project been as ready as Hinkley Point C is. So there is their opinion and there is our opinion. We think it is ready and there is no benefit at all - on the contrary - in spending more time to be ready. That is our view.”

The implication of what Mr. de Rivas said was that the EDF board had made up its mind and was not to be swayed. That being so I am not sure what the latest delay in announcing an investment decision is meant to achieve.

I had responsibility for Human Resources (or Personnel as I prefer to call the function) while I was a Board member of BNFL. I do not believe that telling the trade unions that my colleagues on the Board would listen to them but take no notice of what they had to say would help secure their support for the proposition we were trying to sell.

Apart from the importance of the Hinkley development for EDF’s own future Mr. de Rivas said that the EDF board should not delay the Hinkley development because the group needed to deliver the project for its clients - the British Government, British customers and the British energy market - when it was needed.

It is needed as soon as possible, as the Energy Minister made clear when she faced the Select Committee’s members. Nevertheless, Mrs. Leadsom was adamant that the UK would be able to cope if there was further delay or, perish the thought, a commercial decision by EDF not to go ahead with the Hinkley project, for whatever reason.

### **THE FLAMANVILLE EXPERIENCE**

One such danger has been seen by some, particularly opponents of the Hinkley project, as the impact a poor safety report on the pressure vessel problems encountered by EDF and Areva on the reactor being built at Flamanville in

France, might have. Flamanville's EPR reactor is similar in many ways to that planned for Hinkley. We should not be worried, according to both EDF and the Energy Minister.

EDF says that the checks being carried out at Hinkley are independent of what is happening at Flamanville, in terms of the quality assessment of all the components used in the project.

Mrs Leadsom, meanwhile, argued that the UK's own Office for Nuclear Regulation (ONR) is the best in the world in terms of its regulatory regime for new nuclear. (Some would say it is too demanding, forcing up costs unnecessarily).

"The ONR has looked very carefully at the project as proposed for the UK," the Minister said. "They have made their own analysis, which is very robust, of what the potential project might involve and they consider that the project for Hinkley Point C is entirely robust."

### **AUSTRIA'S COMPLAINT "WITHOUT MERIT"**

If trade union objections and the knock-on effect of bad news from Flamanville are not going to stop the Hinkley scheme what about the Austrian government's attempt to use the law to get it halted or a change of Government in France later this year to one less supportive of nuclear energy? Marine le Pen, the President of the French National Front has described Hinkley as a money pit and Segolene Royal, the French energy minister, has said she was not certain the scheme would go ahead as colossal sums were involved.

Neither the threat from the Austrian government nor turbulence within the French political system are regarded as real threats by Mr. de Rivas and Mrs. Leadsom. Not surprisingly, neither of them would comment on the French political situation but they were not so reticent about expressing their views on Austria's hostile manoeuvres. Nearly 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.

Not much has happened since then but that is not to say that Austria will not pursue the matter further, even if it does look like a lost cause. Mrs. Leadsom went as far as to say that "we do not believe that the Austrian state aid challenge has any merit and we are very comfortable that the Hinkley Point project will go ahead."

Austria has no nuclear power stations - surprise, surprise - and the EU Commission insists that the choice of energy source, no matter how controversial, is strictly up to member states.

The Minister's confidence that Austria will be unsuccessful stems from the EU Commission's approval of the agreements reached between the EDF group and

the UK Government. These provide for a long-term contract for the electricity generated at the Hinkley C plant and a guarantee for the project's debt.

## **CERTAINTY AND STABILITY**

Briefly, the agreements provide for a generator which is party to a Contract for Difference (CfD) such as EDF with Hinkley, to be paid the difference between the "strike price," a price for electricity reflecting the cost of investing in a particular low carbon technology (in this case nuclear energy) and the "reference price," a measure of the average market price for electricity in the UK market.

It gives greater certainty and stability of revenues to electricity generators by reducing their exposure to volatile wholesale prices, whilst protecting consumers from paying far higher support costs when electricity prices are higher. I am sure that the Austrians would be perfectly content to see other low carbon technologies (solar, wind power and the other so-called renewables) benefit from the CfD mechanism. But this mechanism is not open-ended, a point which was emphasised at the Select Committee hearing.

From a start-up in 2025, which EDF still hopes to achieve, up to 2029 the company would benefit from a 35-year CfD. After that the CfD is shortened one year for every delay up until 2033 - and then it would be cancelled. EDF would then be able to get revenues but would not be able to get the top-up revenues from the CfD.

In the ultimate, if there was a very significant delay of eight years or more, the UK could cancel the CfD contract. In other words, if Hinkley Point C is not up and running by 2033 the CfD would be cancelled. EDF could still get revenues from the market, but at some cost.

An eight year delay in bringing Hinkley on stream has serious implications for the UK's electricity supply, of course, but the Minister insisted that the Government would be able to secure it.

"We have new gas, new offshore wind, new storage, new demand side response, the technologies that we don't yet know about, Small Modular Reactors (SMRs), new nuclear - those are all part of our absolute assurance that the lights will not go out," the Minister told the Select Committee.

## **ENERGY COST FIGURES**

Later, the Minister produced some interesting energy cost figures when she was asked why new nuclear remained in pole position to assist the UK to meet its decarbonisation targets compared, for example, with hydro, bioelectricity, storage alongside renewables and other alternatives sometimes promoted.

There are different reasons for each technology, Mrs. Leadsom said. A number of the technologies mentioned would be very much more expensive, in Contracts for Difference terms, than new nuclear.

“At £92.50 on the CfD by 2025 Hinkley Point C is considerably lower than the current offshore wind projects, at £140 and £120. That range is coming down but we want to see it coming down much faster,” she said. “Biomass is in the region of £100 to £105 and tidal is still in the order of £350.”

## **NEAR INFINITE VARIABLES**

The Minister made it very clear that despite the current price disparities she has no intention of ruling anything out, although a combination of gas and nuclear are clearly front runners for major roles in electricity generation in the foreseeable future.

“I have a meeting with investors - bank lenders - in the near future to say to them that we want to see this transition to gas, away from coal, to that clear energy future,” she said. “We absolutely want to see more combined cycle gas turbine projects coming forward. There is absolutely no doubt about that. That plays its part - so, too, does new nuclear.”

At the moment the UK obtained 30 percent of the country’s electricity from coal-fired power stations and 16 percent from nuclear, Mrs. Leadsom said. So a combination of new gas plus new nuclear might make up the replacement required for the nuclear coming off stream by the late 2020s, plus the coal-fired power which the Government would like to bring off by the mid-2020s.

“That would be the sort of mix but, equally, there is off-shore wind. Huge investment is going into that in this Parliament,” the Minister said. “With storage, we just don’t know. You cannot pinpoint exactly what the energy future looks like but we do try to do different scenarios.

“We do a ‘going green’ scenario, in which we are on only low carbon. We do a sort of interim scenario. We are looking at scenarios the whole time, but it is just not possible to give you what the Committee is looking for, which is absolute blow by blow - if this one doesn’t happen what are you going to do then. It just doesn’t work like that.”

The need to bring investors into the UK’s nuclear programme is as important - if not more important - than interesting them in combined cycle gas turbine projects. This was emphasised at a conference entitled “Nuclear energy’s role in the 21st century - addressing the challenge of financing” organised by the OECD Nuclear Energy Agency and the International Framework for Nuclear Energy Co-operation” in Paris this month.



In the margins of the conference NuGeneration's chief executive officer, Tom Sansom, pointed out that his company's project to build a nuclear power plant of up to 3.8 GWe gross capacity at Moorside in West Cumbria would be the first opportunity for lenders to enter the UK's nuclear power programme.

"Market uncertainty and market dysfunction will continue to be a barrier for new nuclear deployment," he said. "Overcoming that, like the UK has done with the CfD, is step one. Solving the funding challenge that is not entirely dependent on a Government funded solution is the next challenge. Here we have to explore ways to access export credit agencies and other sources of debt to make the funding a realistic target."

Nuclear economics have to factor in the cost of dealing with the storage and disposal of nuclear wastes, which is considerable. I was therefore intrigued by a report from South Australia's Royal Commission into the nuclear fuel cycle which came out this month. It recommended that the South Australian Government should "pursue the establishment of storage and disposal facilities for multi-national nuclear fuel and intermediate level waste."

The 344 page report is the culmination of a process launched in March 2015 and reaches some important conclusions.

It draws particular attention to waste management and says that South Australia "has the necessary attributes and capabilities to develop a world class disposal facility - and to do so safely." Based on a "cautious and conservative approach," from assessments of used fuel inventories and potential global interest, expenditure, the Commission believes that such a facility could generate more than 100bn Australian dollars in income in excess of expenditure, including a reserve to cover the cost of closing the facility and monitoring it afterwards, over the 120-year life of the project.

The World Nuclear Association said that the report had fundamentally changed the nature of the global nuclear waste discourse." If constructed, the WNA said, a multi-national waste facility based in South Australia would provide a welcome option for countries operating nuclear facilities today.

*SONE has received a bequest of £5,000 in the will of David Erskine, a dedicated nuclear power engineer and stalwart SONE member who died last year at the age of 90. We are grateful to him and his family.*

HAROLD BOLTER  
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)*