

Hinkley Point C

2016 / 2017



‘Power House’ of the future

The decision to build Britain’s first Nuclear Power Plant (NPP) in a generation will be an important milestone for the country, and a potential tipping point for the European industry. Located in Somerset in south-west England, ‘Hinkley Point C’ (HPC) is an enormous project that has the potential to boost earnings and valuation multiples for equipment and service providers all the way down the supply chain.

Although EDF currently faces a series of challenges, we expect a final investment decision and ‘green light’ for HPC in the third quarter of 2016 - most likely in September.

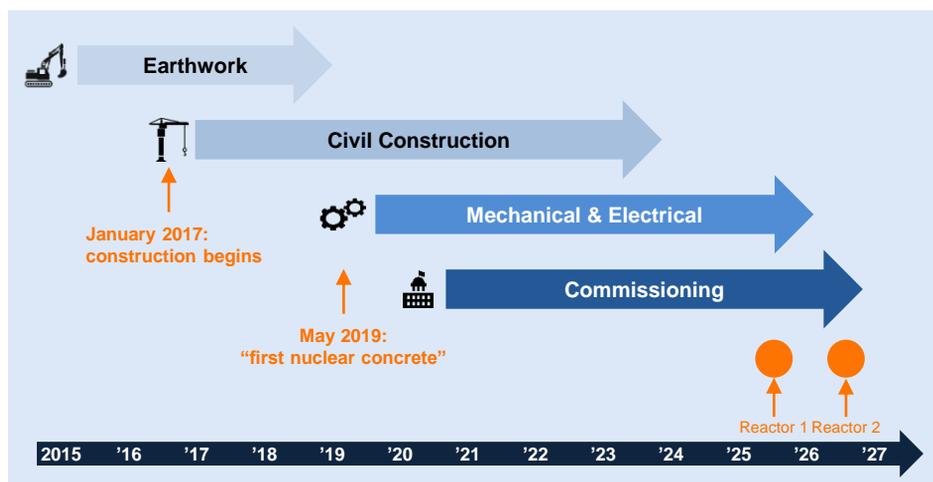
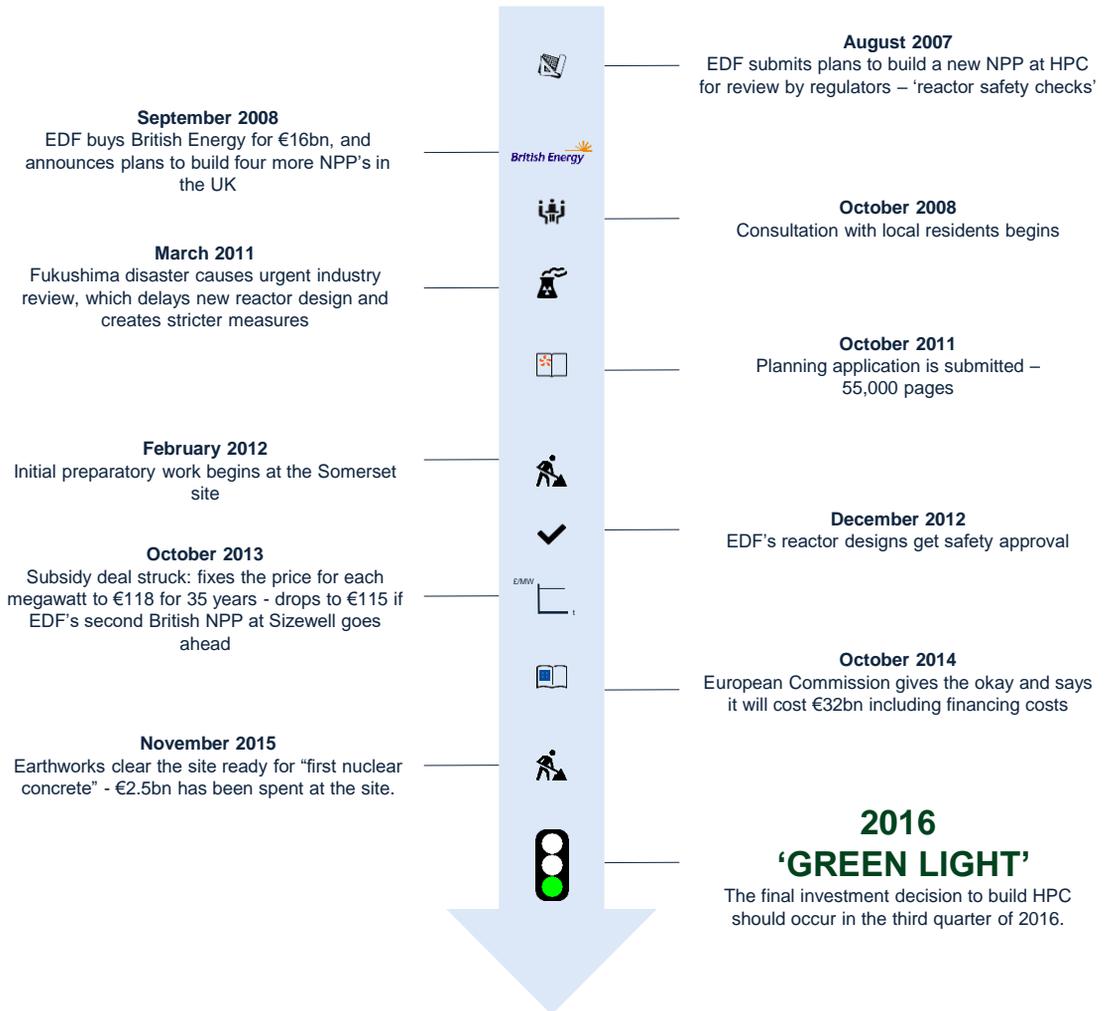
- HPC will be ‘a first’ in many respects: it will be the first NPP to be built in the western hemisphere since the Fukushima disaster in 2008; the first to be built in the UK by a listed company; and the first in which EDF is the lead client outside of France.
- It will also be the most expensive NPP ever built – currently forecast to cost between €23bn (EDF’s estimate) and €32bn (European Commission’s estimate, including financing costs).
- The British project will be delivered by EDF (67%) and the Chinese government-backed joint-venture partners China General Nuclear and China National Nuclear Corporation (33%).
- The project is expected to restart nuclear construction in the UK - an additional seven new-build sites have so far been approved.
- HPC will utilize two European Pressurized Reactors (EPR’s) – a ‘third-generation’ reactor that produces far more energy and is significantly safer and more secure against attack. It will provide capacity to supply 7% of Britain’s energy needs.
- Construction will take at least 10 years, and employ some 25,000 people during the construction phase. Around 90 ‘Tier 1’ suppliers will be used, and hundreds more will be sub-contracted below those. In some cases the value of individual ‘Tier 1’ contracts will run into the hundreds of millions of euros.



“Hinkley is an important turning point for the industry, which suffered after Fukushima in 2008, and the subsequent decision by Germany to go nuclear-free. In France we have a large number of nuclear suppliers that are uniquely placed to benefit; we expect consolidation to be a powerful force going forward.”

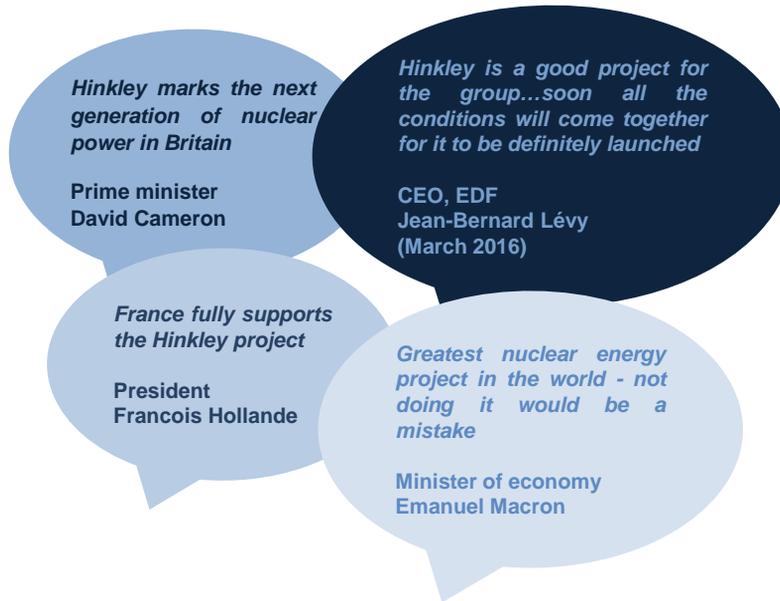
Michel Degryck
Managing Partner - Capitalmind

It's been a long road to Hinkley Point C in the UK.



Indicative schedule only: implies a completion date that is 12 months later than the one currently forecast - sourced from Capitalmind's research and interviews with sources close to the project.

A large amount of political capital is invested in HPC



EDF has so far invested €2.5bn in HPC - on clearing the site and making it ready for “first nuclear concrete”. The final investment decision is expected “soon”, but the French giant is facing a number of challenges.

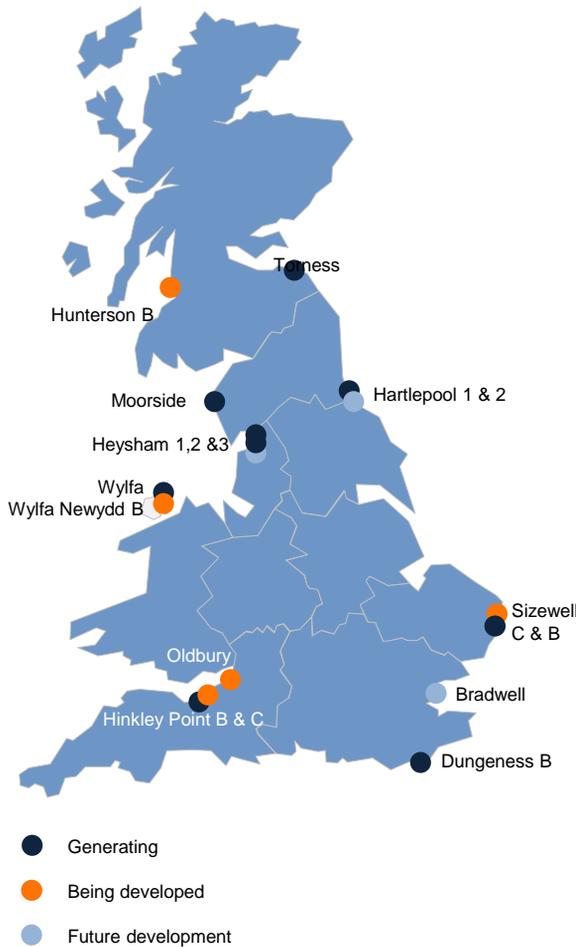
EDF faces challenges

- HPC is a massive investment for EDF in the current market climate. It will cost the French utility €20bn-plus, which is close to its current market cap – the stock has lost two-thirds of its value in two years. It also needs to provide a €2.5bn bailout for AREVA (the French developer of the EPR technology), and to fund a life-extension programme for its large nuclear fleet, which is forecast to cost at least €50bn over the next decade.
- Dissent is rising. In March, EDF’s CFO ‘stepped down’ in a very public manner, citing concerns that HPC could jeopardize EDF’s financial situation. He added that he feared a decision on HPC could be made as early as April. His departure is a victory for majority boardroom support, after six union representative who sit on the board announced their opposition. A group of EDF engineers also recently voiced concerns about the construction timeline.
- Meanwhile, there have been issues with the EPR technology, as reactors currently under construction in Europe - Flamanville in France and Olkiluoto in Finland - are both over budget and heavily delayed. The latest caused by technical anomalies in the reactor vessel at the Flamanville site: higher carbon concentrations, leading to “lower than expected mechanical toughness values”. It’s also worth noting that Flamanville was developed as a ‘test-case’ for EPR.
- And yet EDF’s CEO Jean-Bernard Lévy keeps declaring that the final investment decision will be “soon”. We do not expect HPC to fall at the final hurdle either. On top of the €2.5bn already spent at the site, a large amount of political capital has been invested by the French and British governments and their leaders. French state financial inducements are also on the table to ensure the project goes ahead. Hinkley is ‘too big to fail’.

**Nuclear
in the UK**

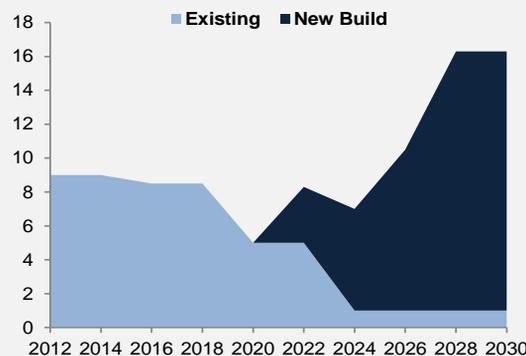
The nuclear program is ready to ramp up

Britain urgently requires new investment in new energy infrastructure to replace old fossil-fuel generation capacity and retiring NPPs.



- The Department of Energy and Climate Change estimates the country needs to invest at least €128bn in low carbon energy by 2020.
- Since 2010, 26 power stations have closed - 20% of the UK's electricity generation capacity. By 2030 a further 35% of capacity will close, including all but one of the current NPPs.
- Britain's carbon reduction objectives and increasing reliance on Russia for its power needs prompted a radical rethink of its energy policy.
- HPC is an important crossroads for nuclear power in the UK, as well as Europe: France is about to embark on an even more ambitious nuclear revival program as the country's nuclear fleet reaches its 'use-by' date - 'Le Grand Carenage' will provide upgrades and life extensions to the country's 58 reactors.

Chart 1: UK Nuclear Generating Capacity Forecast (GW)



The HPC supply chain is dominated by French and British companies, and includes many joint ventures. This table shows the ‘primary’ Tier 1’s that have been named by EDF.

The HPC supply chain

Table 1: ‘Primary Tier 1’ suppliers for HPC

Company	Country	Activity	Sales (€m)
Areva NP	FR	Nuclear steam supply	2,790
Alstom	FR	Turbines	6,163
Bylor			
Bouygues TP	FR	Main civil works	11,832
Laing O'Rourke	UK	Main civil works	3,991
BAM Kier			
BAM Nuttal	UK	Earthworks	995
Kier Infrastructure	UK	Earthworks	623
Balfour Beatty Bailey			
Balfour Beatty	UK	Electrical cabling / equipment	9,353
NG Bailey	UK	Electrical cabling / equipment	50
Cavendish Boccard			
Cavendish Nuclear	UK	Pipework / equipment	248
Boccard	FR	Pipework / equipment	190
ACTAN			
Doosan Babcock	UK	Heating / ventilation / A/C	619
Axima Concept	FR	Heating / ventilation / A/C	972
Tunzini Nucleaire	FR	Heating / ventilation / A/C	20
Laing O'Rourke	UK	Workers' campus	3,991
ABB	SWE	Power transmission	32,905
Premier Interlink (WACO)	ZAF	Temporary buildings	n.a.
Weir	UK	Pumps for cooling water	3,117
SPX ClydeUnion			
SPX	USA	Feed-water pumps / cooling	3,900
ClydeUnion Pumps	UK	Feed-water pumps / cooling	98
G4S	UK	Security	9,714
Aggregate Industries UK	UK	Public roads / access	1,497
KBR	USA	Project management: equipment	5,259
Jacobs	USA	Project management: civil work	10,747
Gleeds	UK	Contract management services	5
Faithful + Gould	UK	Contract management services	195
Turner and Townsend	UK	Project management controls	391
Mace	UK	Contract management services	1,914
Rolls-Royce Nuvia			
Rolls-Royce	UK	Heat ex. / reactor coolant	17,686
Nuvia	UK	Reactor coolant waste	142
Ovivo	CAN	Water filtration system	234

The makeup of the primary suppliers emphasizes the importance of politics, scale, and the large amount of French expertise and know-how in the nuclear power industry.

Politics, scale, expertise

- HPC is expected to use 90 Tier 1 suppliers who together will sign 200 Tier 1 contracts. Those listed above can be considered ‘primary’, and include mostly big-caps. The rest of the Tier 1 suppliers have not yet been announced, but will include many SMEs from France and the UK. In late January, the supply chain was told by EDF to restart “unconstrained spending”, which is yet another sign a decision is imminent. In October, the CEO Jean-Bernard Lévy announced that the EDF board would decide on HPC “soon”. He repeated this intention publically a few weeks ago.
- The British suppliers have been encouraged to form joint ventures with French suppliers whenever possible “in order to bring together experience and knowledge”, according to EDF. The large number of French suppliers in the supply chain highlights the importance of French expertise and know-how. It is reported that almost half of the total value of contracts will be awarded to French companies. Additional benefits of joint ventures are scale and wider public support in the UK. Also, projects such as HPC would not get the ‘green light’ without strong political support.

Inside View

We talk ‘Hinkley’ and the nuclear supply chain with Olivier Strebelle - deputy CEO of Groupe Gorgé, whose subsidiary Baumert is the leading supplier of doors in the nuclear power industry.



How would you sum up the door-maker Baumert?

Baumert produces ‘high-spec’ doors for the nuclear power industry - a critical component obviously. The business was originally family-owned, and supplied 80% of the 58 reactors in EDF’s French nuclear fleet. We’re a niche player with very few competitors, and we’ve got a global presence. We like where we are.

Will Baumert be a supplier for Hinkley Point C? How important is that contract?

It’s a big contract for us, worth about €100m, but it’s not won yet - we are consulting through it. Baumert is the leader in specialist doors for nuclear power plants, so we are well placed. Hinkley’s been delay after delay.

Is it an advantage to be a larger player when competing for tenders?

It certainly creates some comfort for EDF to know that we will be with them for the duration of the contract. In our field you don’t have many global players - there is only one other European player, and they are smaller.

EDF is a key customer in Europe: is the company managing its supply chain differently, encouraging Tier 1’s to get larger given the ramp up in demand from Hinkley, as well as ‘Le Grand Carénage’?

We’re seeing a slight change in their language since Lévy became the head of the company in 2014. They are more interested in establishing longer-term partnerships and closer ties with certain key suppliers. In our case, to secure high quality doors that are fit-for-purpose while also having an optimum cost-profile during the entire life-cycle. The ‘entire life-cycle’ is key because this quality metric is not always followed, especially when competing for tenders at the Tier 2 level, when Tier 1’s are placing downward pressure on prices.

Sounds like a promising development for Group Gorge then?

At this stage it’s more an aspiration, a new type of dialogue from EDF – it hasn’t yet turned into hard facts. Their leading executives say they want a robust supply chain, to coordinate stronger bids, and to have larger Tier 1’ suppliers. We certainly fit that brief, I think.

When do you see this radical change happening?

EDF is not a typical private player, it’s a state-owned company, so it will take time for them to adjust to this new paradigm. The supply chain is consolidating with stronger Tier 1 suppliers: stronger, larger, bigger. EDF also has a lot on its plate - any ramp-up in demand will need to be shared around. Hinkley can be the catalyst, and this is definitely the way things are going, but it won’t be a case of 2 or 3 years. This is a 10-year story.

Capitalmind is a leading adviser in the Energy sector, having advised several large groups and many midcaps - nuclear, oil & gas, electrical power plants, T&D, renewables. The Nuclear Energy team is led by Michel Degryck, specializing in the most dynamic segment for M&A – the equipment and service providers.

If you would like to discuss this report in more detail or opportunities for your business, please get in touch



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Nuclear

acquired

Safety consultancy

sold

to Nawi Group

Pressure vessels

Sold minority stake in

MBO supported by

Engineering

completed a fund raising underwritten by

Protection doors

Oil & Gas

raises €121M debts

Logistics in Africa

sold

to

Oil inspection

acquired

from

Protection equip.

series A fundraising

Oil waste recycling

Renewables / Electrical Power Plants

acquired

Maintenance

sold

MBO backed by

Heating valves

acquired PN ROTOR from

Offshore wind

Biomass advisory



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