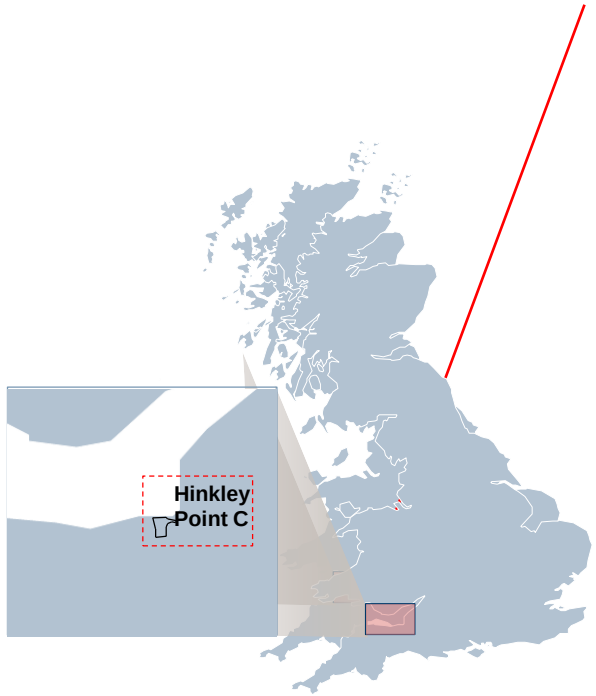
HINKLEY POINT C, a project of the EDF Group for the future

27 June 2016

Vincent de RIVAZ, Group Executive Director,
CEO of EDF Energy

General information on the HPC project

Location	Bridgwater, Somerset
Technology	Two EPR reactors
Capacity	3,276MWe (2 x 1,638MWe)
Operating life	60 years+
Responsible Designer	EDF
Principal contractors	Areva, GE/Alstom, Bouygues Laing O'Rourke, KierBam
Investment amount	£18bn(1)
Contract for Difference	CfD strike price: £$_{2012}$92.50/MWh or £$_{2012}$89.50/MWh (indexed to CPI) if a positive FID is taken for Sizewell C
Investors' participation	EDF Energy: 66.5%; CGN: 33.5%
Economic benefits	25,000 jobs on site during construction, with 5,600 people on site at peak construction – 4,500 jobs in France



(1) In today's money. Equal to approximately €23bn at GBP / € 1.30.

EDF has already taken numerous steps since 2011 and has the full confidence of the British authorities and its partners

2008-2010

2008

- Climate Change Act: **80% cut in GHGEs** vs 1990 by 2050
- White Paper on Nuclear Power affirms **support for new nuclear**

2009

- Draft Nuclear National Policy Statement (NPS) identifies sites suitable for new nuclear

2010

- Coalition Agreement recognises role of new nuclear
- Consultations on **Carbon Price Support** (CPS) and wider **Electricity Market Reform** (EMR)

2011-2013

2011

- Planning permission granted for HPC preliminary site preparation works

2012

- Section 106 Agreement with local authorities on measures to address the negative impacts of the HPC development
- Nuclear Site Licence (NSL) granted
- Generic Design Assessment (GDA) approvals for the EPR reactor design granted by the ONR and Environment Agency

2013

- Environmental permits granted
- Planning consent granted
- Marine licence granted

Announcements from October 2013 and October 2014

- **Contract for Difference (CfD):** strike price of £92.50£/MWh (or £89.50/MWh if Sizewell C goes ahead) fixed for 35 years from the commissioning of the plant
- **Infrastructure and Projects Authority (IPA, formerly IUK) guarantee:** Public confirmation of the eligibility of the project for the guarantee. Target of financing 65% of construction costs by bond debt guaranteed by the UK government
- **Investors:** EDF (45-50%), letters of intent with CGN and CNNC (30-40%)
- **State aid approval granted by the European Commission in relation to the CfD and the IPA guarantee on 8 October 2014** after a thorough investigation lasting over a year

Announcements from September to October 2015

- The Chancellor of the Exchequer, George Osborne, announced on 21 September 2015 the **availability of a first tranche of £2bn of IPA guarantee**
- State aid approval granted by the European Commission in relation to the **Waste Transfer Contract (WTC)** on 9 October 2015
- The contracts with the **UK government** are finalised and in their final form: the CfD, the Secretary of State Investor Agreement (SoSIA) and the Funded Decommissioning Programme (FDP)
- The contracts with **main suppliers** are also finalised and in their final form
- Signature with CGN of the non-binding Strategic Investment Agreement (SIA) for a partnership covering HPC (EDF 66.5%, CGN 33.5%), Sizewell C and Bradwell B

Recent project developments

H1 2016

- The Board of Directors of CGN approved the transaction on 12 January
- The Chinese government (the National Development and Reform Commission – NDRC – and the Ministry of Commerce – MOFCOM) approved CGN's outward investment in the UK on 9 March
- The European and Chinese competition authorities approved the transaction with CGN (on 10 March and 6 April respectively)
- Finalisation of the complete suite of documents with our Chinese partners
- Finalisation of the EDF Group's financing plan (Board of Directors met on 22 April 2016)

HPC: a key strategic project for Great Britain and for EDF

Largest electricity generator by TWh produced

EDF Energy produces approximately 20% of the country's electricity

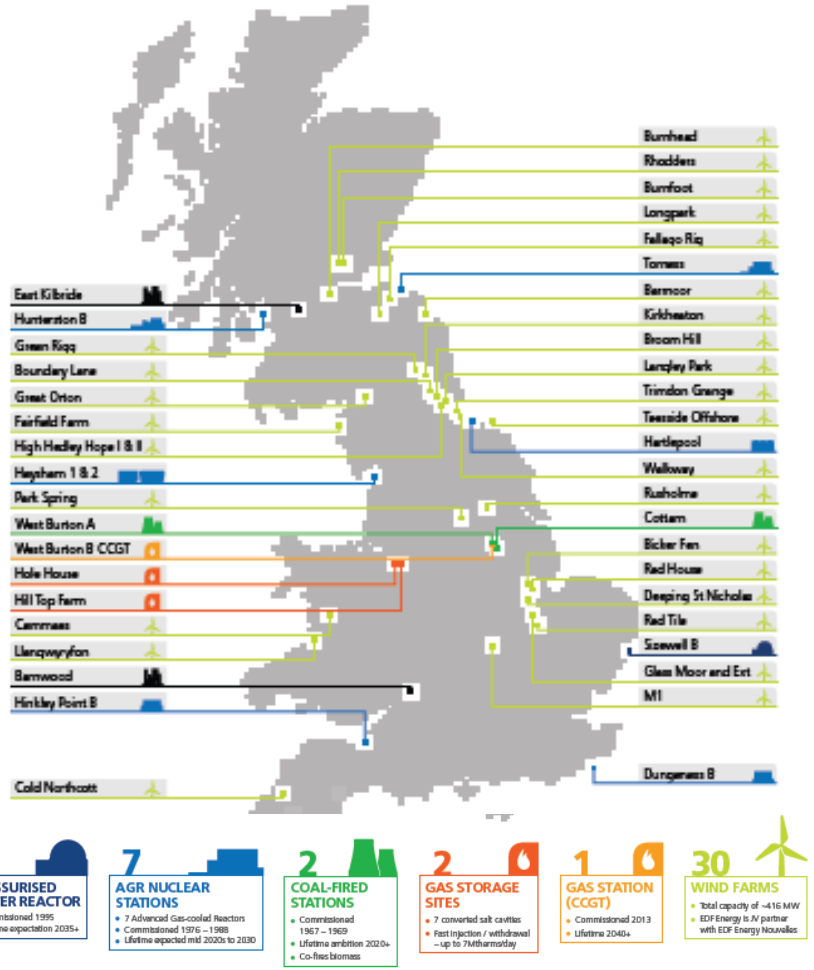
Low CO_2 emission electricity generated by 15 nuclear reactors

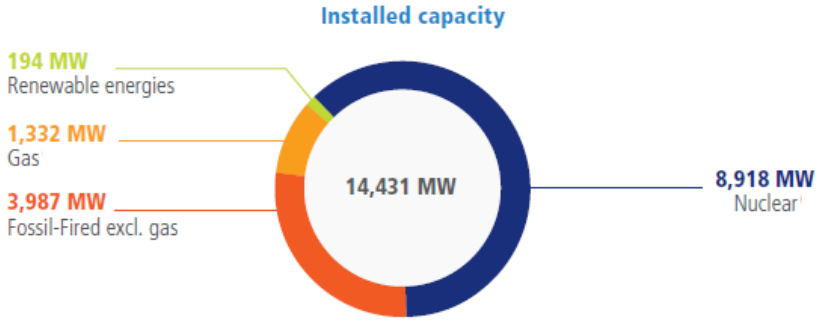
EDF Energy, the largest EDF Group subsidiary outside France

14,000 employees across Britain

Largest electricity supplier in Great Britain by volume

EDF Energy supplies gas and electricity to 5.6 million business and residential customers

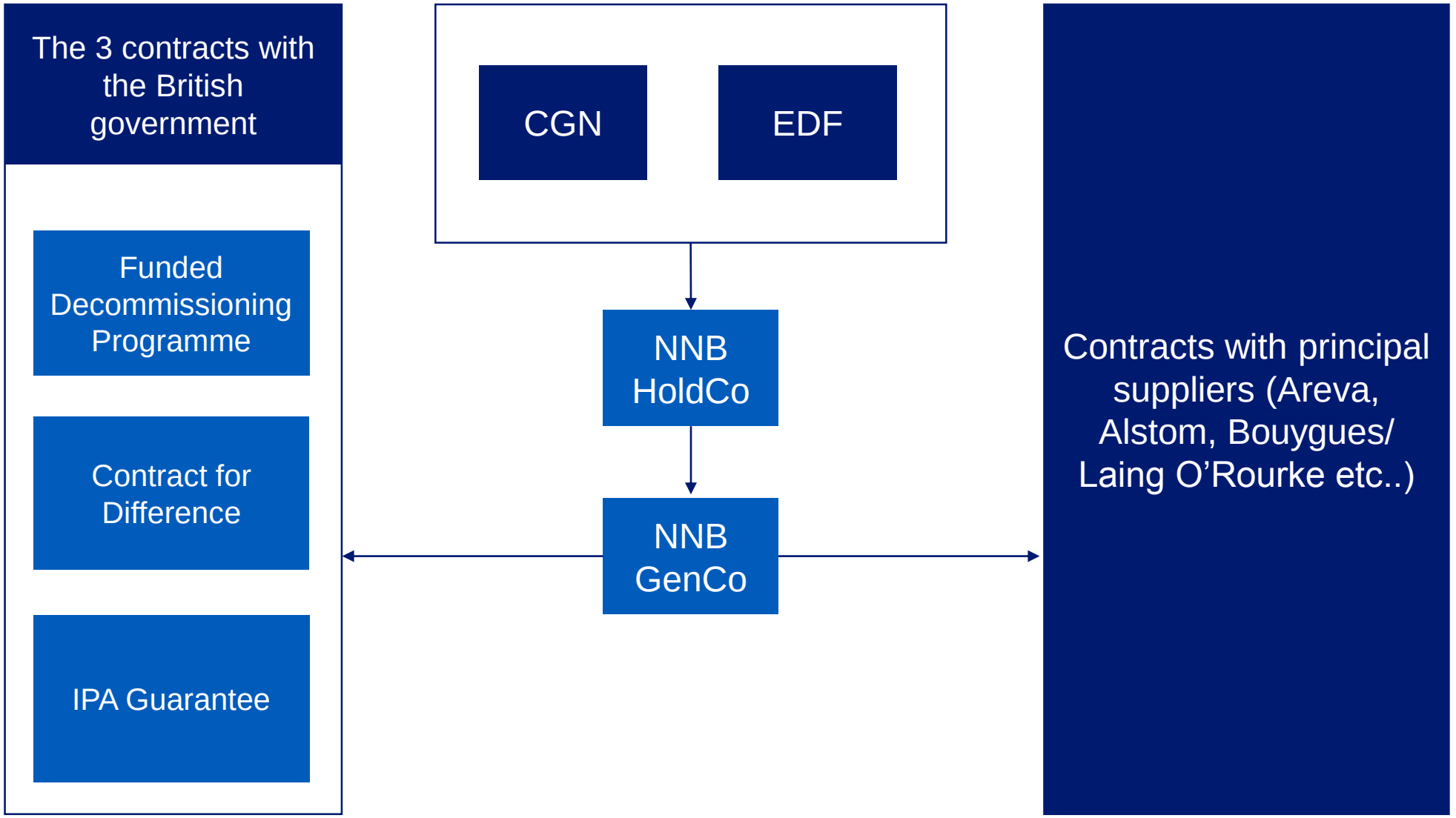




HPC is a key political project for Great Britain in terms of energy security and the fight against global warming. **Britain is to replace all of its coal plants (12.4GW) by 2025 and reduce its CO_2 emissions by 80% by 2050**

Pierre TODOROV, Group Executive Director,
Group General Secretary

HPC GLOBAL CONTRACTUAL STRUCTURE



The 3 key contracts negotiated with the British government

- **The Contract for Difference (CfD)**

✓ A private law, legally binding contract which the British government cannot modify unilaterally

✓ An innovative instrument which ensures a balanced sharing of risk between investors and consumers

✓ Guarantees stable revenues for 35 years when HPC is operational

✓ Offers a suite of protections, notably against certain political and regulatory risks

- **The Funded Decommissioning Programme (FDP)**

✓ A legal obligation for nuclear operators in Great Britain

✓ Provides financial security for the costs of decommissioning and waste management and storage

✓ Gives visibility over long-term nuclear costs

- **IPA (formerly IUK) Guarantee**

✓ The British government:

  ✓ has confirmed the eligibity of the project for the Infrastructure and Projects Authority guarantee scheme with an initial tranche of £2bn being available

  ✓ does not lend directly but protects lenders against the risk of default on project debt

The commercial contracts to be signed by EDF and CGN: a balanced partnership with shared risk

- **BENEFITS FOR EDF:**
  - ✓ The EDF Group's financial exposure on the HPC project is shared
  - ✓ EDF retains a prominent role on HPC as majority shareholder, developer of the project and main contractor
  - ✓ Control of EPR technology is maintained as well as the intellectual property relating thereto
  - ✓ The deal with CGN provides that the EDF Group will assist with the certification process for Chinese nuclear technology adapted for use in Great Britain, the UK Hualong. The EDF Group will be granted the right to build UK Hualong reactors alone in France and with CGN in the UK and other countries (except China).

Signature de l'accord en présence de Jean-Bernard Lévy, David Cameron et le président chinois Xi Jinping.

- **IN CONSIDERATION OF THE PRICE PAID AND ITS EQUITY COMMITMENTS:**
  - ✓CGN will benefit from protections in line with market practice for important and complex transactions should the assumptions on which the acquisition is based prove to be incorrect

Xavier GIRRE, Group Executive Director,
Group Finance

Financing of the project

- Since the signature of the Strategic Investment Agreement between EDF and CGN in 2015, discussions have led to the contractual documentation reaching final form
- Financing needs up to commissioning are estimated at £18bn nominal, of which £2.5bn are development costs already spent to date
- The investment will be financed by equity contributions from each of the partners, at least during the first phase, with the EDF Group's share being £12bn and CGN's being £6bn
- The partners' equity commitments include a contingency margin and could therefore reach a total of £13.8bn for the EDF Group and £6.9bn for CGN
- CGN's participation in the project requires payment of an acquisition premium in addition to their share of costs already incurred

The rate of return is estimated at approximately 9% over the duration of the project.
The sensitivity of this rate of return is approximately 20 basis points for six months' delay

Secure financial trajectory for the Group

- During its meeting on **22 April 2016** EDF's Board of Directors reviewed the Group's long-term financial trajectory
- This trajectory will allow the Group to meet its investment needs whilst strengthening its financial structure

- **The action plan presented to the Board of Directors includes:**
  - ✓Optimisation of net investments (excluding Linky and new developments) which should reach €10.5bn in 2018
  - ✓A reduction in operational expenditure of at least €1bn in 2019 compared to 2015
  - ✓An asset disposal plan of approximately €10bn by the 2020 horizon

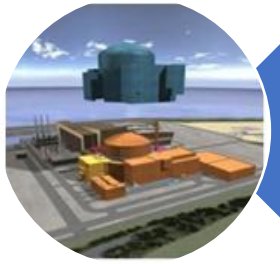
- The plan is accompanied by **capital strengthening**, EDF has announced a market recapitalisation: approximately €4bn by the closure of the 2016 accounts, subject to market conditions, with the French state having indicated its intention to subscribe for up to €3bn of shares

- HPC would result in increased debt for the Group of an amount equal to the impact of HPC on its cashflow during the construction period. From an accounting perspective, NNB would be consolidated and the entirety of its debt would be integrated with that of the Group. There are no plans, at this stage, to debt finance this structure

The projected investment in HPC, as well as other development investments – notably in renewable energy – have been taken into account in the CAP 2030 strategy

Xavier URSAT, Group Executive Director,
New Nuclear Projects and Engineering

The EPR, a safe and powerful reactor



PROTECTION AGAINST HAZARDS

Earthquakes, floods…

Aircraft shells

4 INDEPENDENT BACKUP SYSTEMS

Likelihood of core meltdown reduced tenfold

CORE CATCHER

Containment of radioactive material in the event of an accident

➡ Most powerful reactor in the world
1,650MW

➡ Optimised fuel efficiency
-17% consumption*

➡ Improved environmental performance
-30% radioactive releases and waste*

* Compared to a 1,300MW reactor

HPC will benefit from lessons learnt on EPR projects in France and China (1/2)

Project management

- The HPC project's organisational structure benefits from lessons learnt on Flamanville 3: strong planning function, management of key milestones and deliverables, sensitive issues, costs and contracts

- Management of interfaces is one of the lessons learnt from Taishan that has been taken into account in the project management of HPC

Organisation

- Reinforcement of the teams mobilised on HPC, in France and the UK, through the **participation of engineers with experience from Flamanville 3**

- **Early involvement of key suppliers** to enhance the success of the project: the 4 principal suppliers are directly involved in structuring and project management, operating like an extension of the business

- Integrated teams have been established in France and the UK, and gathered geographically in multi-disciplinary groups

HPC will benefit from lessons learnt on EPR projects in France and China (2/2)

Technical and engineering

- Based on the design of Flamanville 3 and the experience gained on a project where over 70% of modifications have already been made, the HPC project takes full advantage of the learnings from the First of a Kind, Flamanville
- The design of HPC integrates into its Reference Configuration all of the modifications implemented on Flamanville 3; technical changes to the HPC contracts are based on the Flamanville specifications and lessons learnt during construction
- Modifications made to Flamanville 3 following accident and risk studies are integrated into the initial HPC design
- Elements of the civil engineering works are being pre-fabricated (eg. the inner containment lining, reinforcement cages)
- 3D modelling of steel reinforcements forming part of the civil engineering works has been carried out
- Safety enhancements have been taken into account in the design and construction rates have been optimised

HPC: numerous economic benefits for the French nuclear industry and for the maintenance of the Group's skills

- The project will award large contracts to the major French industry players and SMEs in the nuclear sector.
- **French businesses won, during the procurement process, 35% by value of the contracts for Hinkley Point. Their share of equipment supply is nearly 55%**.
- **Several hundred French SMEs** will work directly for, or as subcontractors on, the project, representing several thousand jobs in France.
- In the field of construction and installation, the main French and English players have formed joint ventures to benefit from the experience of French companies in the nuclear sector and that of English companies from major infrastructure projects.
- The HPC project is also an essential step in the Group's strategy to maintain its skills since it would be built inbetween the Flamanville 3 project and work on the renewal of the French nuclear fleet.

HPC marks the revival of nuclear power in Europe

- **8 of the world's most powerful countries are calling for nuclear** to form part of their energy mix (the USA, Russia, China, India, the UK, France, South Africa, Japan)

- **The two EPR reactors at Hinkley Point C will be the 5th and 6th EPRs built in the world** and the first ordered by an industrialised country since the catastrophe at Fukushima. With two EPRs also planned for Sizewell C, this is the most important project in the renewal program for the ageing British nuclear fleet

- **Hinkley Point** will revitalise the EDF Group's engineering skills via the success of this new project, which will become a **new point of reference for the EDF Group in the international market place** and help to transform the engineering capabilities of the EDF Group and Areva NP

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