KPMG

UK New Nuclear: Hinkley Point C Case Study

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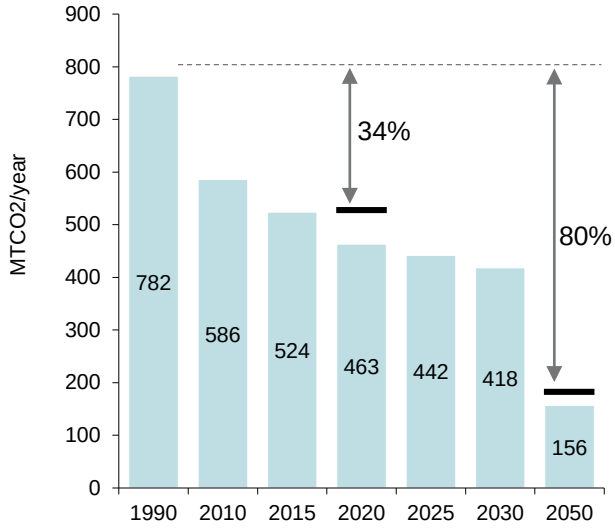
Agenda

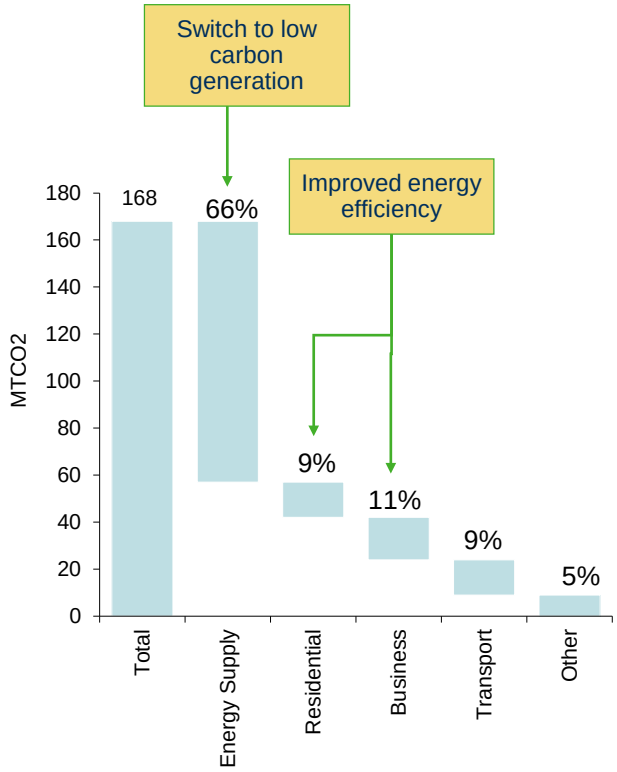
- The drivers of the UK nuclear programme
- The Electricity Market Reform (EMR) Program
- The UK solution for Hinkley Point C

Reasoning behind the implementation of support mechanisms for low carbon generation in Great Britain

Carbon emission targets(1) 1990-2050



Source of carbon emission savings for target reductions from 2010 to 2030(1)(a)(b)



The UK has signed up to legally binding carbon targets to reduce carbon emissions by 2050

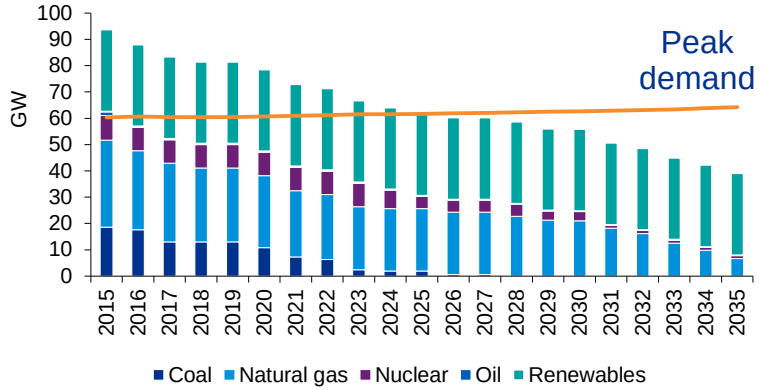
- UK policy commitment to reduce emissions by least 34% by 2020
- EU commitment require the UK to reduce emissions by 80% to 2050
- Climate Change Act 2008 set out a long-term framework to meet binding targets
- 55% of carbon savings expected from switching to low-carbon generation (renewables and nuclear).

Note: (a) Excludes carbon trading;
(b) Other includes public, agriculture and waste management.
Source: (1) Updated Energy and Emission Projections, Department of Energy and Climate Change October 2011
Legend: Forecasts under carbon budgets Climate Change Act 2008 legally binding targets

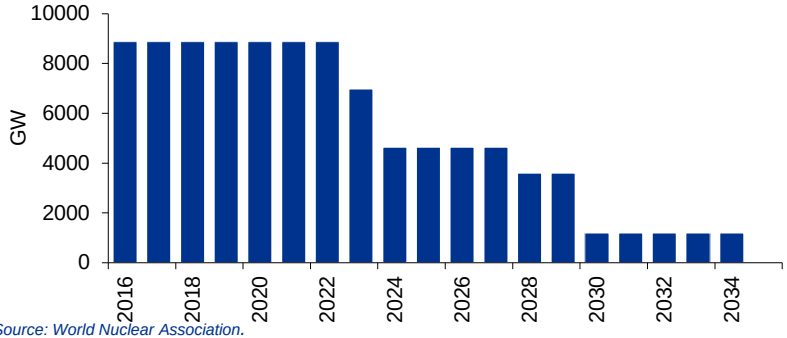
The UK needs to replace nuclear with nuclear

There is an overarching need for investment in UK new nuclear, driven by security of supply concerns, decarbonisation and capacity closures

UK capacity closures, 2015 to 2035



UK Existing Nuclear Capacity – Forecast Closures

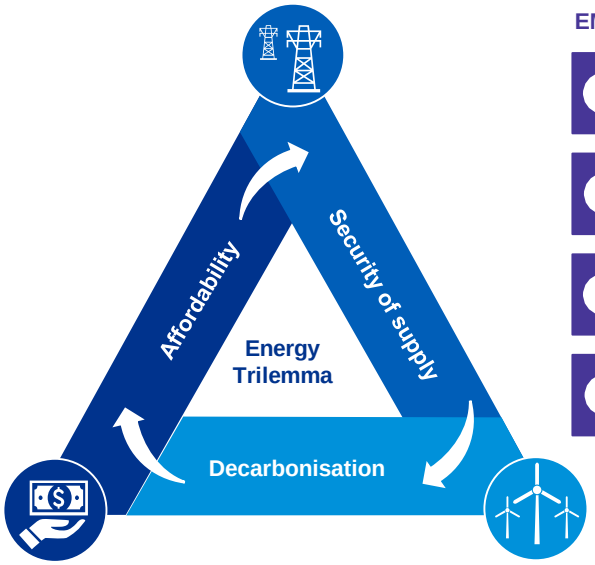


Source: World Nuclear Association.

- The decarbonisation agenda has led to significant deployment of renewable technologies – impacting the market prices for conventional and nuclear generation and the balance sheet strength of the utilities that were originally envisaged as the sponsors for new nuclear projects.
- Moreover, significant capacity closures are forecast in the UK, with 53GW of coal, nuclear, gas and oil generation expected to close by 2035.
- Rapid closures of AGRs create a ‘cliff edge’ problem with only Sizewell B (PWR) remaining.
- Life extensions are possible if commercially viable, but most AGRs are running at constrained load factors.

The electricity market reform program

The Department for Business, Energy and Industrial Strategy (BEIS) is leading the HMG policy response on the 'Energy Trilemma' via the Electricity Market Reform program which constitutes four main policies as set out below:



EMR – Four policies	EMR – Objectives
1 Carbon Price Floor	Minimum carbon pricing
2 Contract for Difference (CfD)	Support Renewables and Nuclear
3 Capacity mechanism	Support conventional generation
4 Emissions Performance Standard	Prevent 'dirty' new plant

Hinkley Point C (HPC) Project Snapshot

1. WHAT IS HPC?

— New nuclear power station in Somerset, England

— The first UK nuclear power station in over 20 years

— Project cost will be approximately £18 billion (noting recent press reports on increases)

2. WHAT IS THE TECHNOLOGY?

— Two UK European Pressurised Reactor (EPR) units of 1.6GW each

— Total generating capacity of 3.2GW

— The EPR design is able to use fuel that partly recycles/consumes constituents of spent fuel produced by other reactors.

3. PROJECT STRUCTURE?

— EDF with a 66.5% stake in HPC, China General Nuclear Corporation at 33.5%

— The Contract for Difference (CfD) will provide an initial strike price of £92.50/MWh (2012 prices) – if Sizewell C goes ahead it will be reduced to £89.50/MWh (2012 prices)

4. WHY HPC?

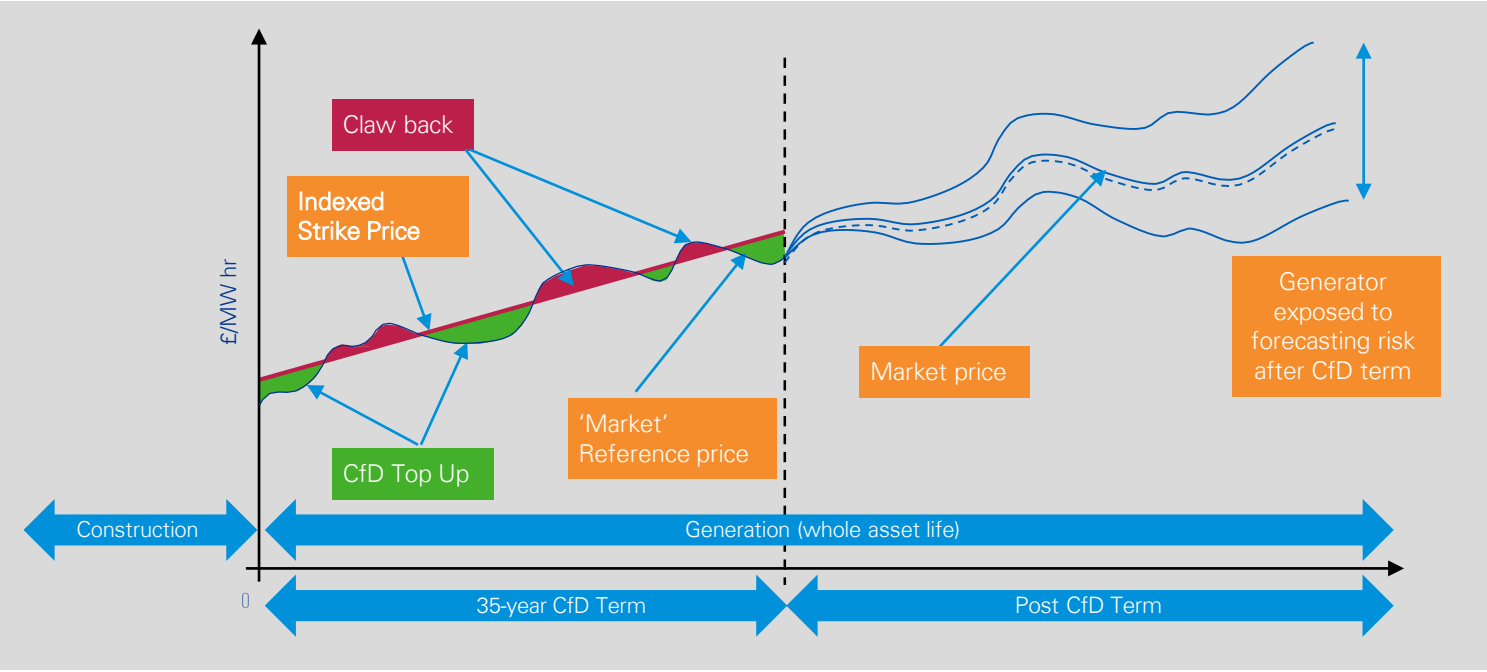
— Capable of generating low-carbon electricity for approximately 5-6 million homes for around 60 years

— 10 million tonnes of CO2 emissions will be avoided each year

— 25,000 new employment opportunities will be created over the construction period, with up to 1,000 apprentices

— UK business will benefit from billions of pounds worth of supply chain contracts

The CfD Instrument supporting HPC



LOW CARBON CONTRACTS COMPANY

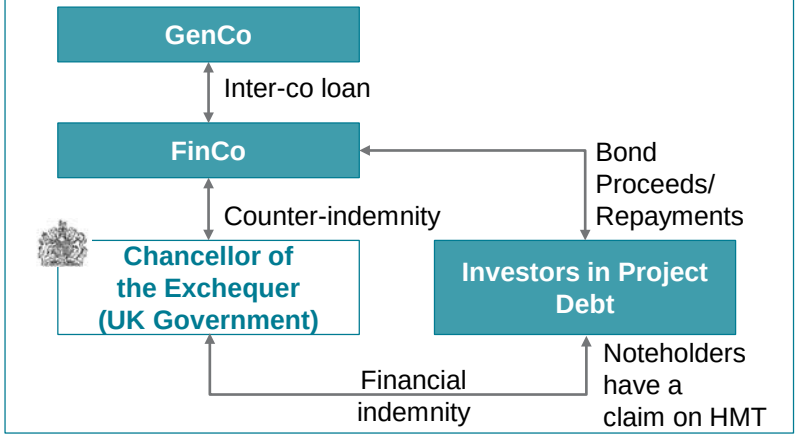
IPA - UK Guarantee Scheme (UKGS)

IUKGS Overview

— The UK Guarantee Scheme (UKGS) was introduced in 2010, with a budget of £40 billion in guarantees (approximately 50% utilised), to be invested across a range of UK infrastructure classes, including energy, transportation, and social infrastructure, with projects assessed on a case-by-case basis

— UKGS provides credit substitution through the provision of a debt guarantee, akin to a monoline credit provider. Hence, Infrastructure UK (IUK) as the manager of the UKGS scheme, retains the project risk and the underlying financing is provided to the market under UK Sovereign risk. This allows the most liquid bond markets to be accessed

Illustrative structure



Advantages of UKGS

— Offers liquidity to the extent it is providing significant capital for a high risk investment. That is, in the absence of significant construction support package, the risk of greenfield new nuclear during construction is likely to be sub-investment grade and liquidity at that level of risk is limited

— No precedent for pure nuclear greenfield bank-led project financing in the UK

— Long construction period conflicts with commercial lenders' desire to move to shorter tenorsd

Disadvantages of UKGS

— Importantly, under State Aid conditions, IUK has to operate as a normal commercial lender and the UKGS financing must be priced at a commercial rate, and hence the UKGS does not offer a price benefit

— The project will have to concede a degree of control to the senior creditors which will manifest itself in terms of reporting and monitoring requirements over the course of the project

— Strong competition from other greenfield nuclear and infrastructure projects

In Summary

Clear need for nuclear in the UK

Hinkley Point C as the first in a series of new nuclear projects

EMR program with the CfD instrument as the key support mechanism

IPA Guarantee (previously IUK G'tee) to support debt