EDF has concluded negotiations with government on the strike price for electricity generated by Hinkley Point C. The financing system will be put to the European Commission this week, said government.

The team in place to build and operate two new EPR units at Hinkley Point C in Britain's county of Somerset will be led by EDF Group with a 45-50% stake. It has letters of intent with China National Nuclear Corporation (CNNC) and China General Nuclear Corporation (CGN) to take 30-40% between them, while reactor designer Areva will take 10% and EDF continues talks with other "interested parties" regarding a potential stake of 15%.

This consortium became possible after EDF and the UK government concluded negotiations on the contract for difference scheme that will be used to give a fixed income from the power supplied by the new power station. A price of £92.50 per MWh was agreed as the strike price for the project, meaning the government will top up EDF's income to this level if wholesale prices are lower. EDF will have to pay back to government if market prices are higher. The figure would be changed to £89.50 per MWh if EDF goes ahead with its second nuclear project, two further EPRs at Sizewell C.

The arrangement is slated to run for 35 years from 2023, or the start of operation of each reactor, whichever comes sooner. It includes protection for the investors against political risks in the form of potential "nuclear taxes, uranium and generation taxes" politically motivated shutdowns or the revision of the CfD scheme. Overall, EDF said the strike price should give about a 10% return on investment.
A press conference in London today saw energy secretary Ed Davey explain that construction risk lies with EDF and its partners. They will not receive any money through the CfD until they produce some electricity, and if this comes later than 2023 the impact will hit the project investors instead of electricity consumers. Conversely, the deal was said to include clauses that recoup money for UK consumers if EDF is able to construct the units faster than expected.

Approval hurdle

Site preparations are well advanced at Hinkley, while the EPR design has approval from the Office of Nuclear Regulation and planning permission was granted in March. However, EDF and its partners will not make a final investment decision until the CfD deal with government is approved by the European Commission (EC) under state aid rules. Davey said that the UK was already in talks with the EC and would formally submit its plans this week.

"We are confident we can argue our case," said Davey, "because we have had this in the back of our minds all the time." He noted that state aid rules apply to the general topic of state intervention, rather than just issues of subsidy. The CfD, he said, is consistent with the policy of offering no advantage to new nuclear that is not also offered to other low-carbon forms of generation. By creating what he called a unique market for low carbon power, Davey said the UK was giving investors "longer visibility on low-carbon than any other country in the world."

Team EPR

The Hinkley Point C consortium brings together global experience in building Areva EPRs, including the designer itself. Areva has led construction of the first unit, Olkiluoto 3, while EDF has been building Flamanville 3. In China, EDF and CGN have worked together in a joint venture to construct Taishan 1 and 2 and achieved faster progress than the European units.

EDF will act as architect-engineer for Hinkley Point C. Contractors include Areva for the reactor system, its fuel and control and instrumentation; Bouygues and Laing O'Rourke, for civil engineering; and Costain for cooling water intake tunnels, which are seven metres in diameter and have a total length of 11 kilometres. Alstom will provide two steam turbines of gross capacity of about 1700 MWe and Rolls-Royce will provide some manufacturing of nuclear components. Government said UK companies could take up to 57% of the construction work.
The total number of workers on the project could reach as high as 25,000, with 900 permanent jobs when the units are operational, said EDF.

Hinkley Point C's supposed start-up date of 2023 appears to include about one year for EC approval and then construction time of eight years.