

Future funding for nuclear plants

What is a Regulated Asset Base (RAB) model?

The Nuclear Energy (Financing) Bill will introduce a Regulated Asset Base (RAB) model as an option to fund future nuclear projects.

A RAB model is a tried and tested method, typically used in the UK, to finance large scale infrastructure assets such as water, gas and electricity networks.

Under this model a company receives a licence from an economic regulator to charge a regulated price to consumers in exchange for providing the infrastructure in question.

The model enables investors to share some of the project's construction and operating risks with consumers, significantly lowering the cost of capital which is the main driver of a nuclear project's cost to consumers.

This charge is set by the independent regulator, who will ensure that any money spent is done in the interest of users. For a nuclear RAB, suppliers will be charged as the users of the electricity system toward the cost of the construction of the nuclear project, and the economic regulator will be Ofgem.

What does this mean for consumers and their bills?

The RAB model will require consumers to pay a small amount on their bills during the construction of a nuclear project. These payments will avoid the build-up of interest on loans that would ultimately lead to higher costs to consumers once the plant is in operation.

For example, a project starting construction in 2023 will at most add a few pounds to typical consumer bills during this Parliament and on average less than £1 per month during the full construction phase of the project.

However, overall, the lower cost of financing the project is expected to lead to savings for consumers of at least £30 billion on each project.

How does this differ from other schemes to fund nuclear projects?

The RAB model differs from the Contract for Difference (CfD) approach that was used to finance Hinkley Point C. With the Hinkley CfD, the developer agreed to pay the entire cost of constructing the plant, in return for an agreed fixed price (often referred to as the 'strike price') for electricity output once the plant is online. This is ultimately funded by consumers, who will pay the difference between the wholesale electricity price and the final strike price, but consumers will not start paying until the power station is

up and running.

In contrast, the RAB model shares the cost with consumers from the start, reducing the amount of interest owed on loans. This ensures the burden on consumers is much lower over the life of the plant whilst helping to attract private sector investment into nuclear projects.

Unlike a CfD where construction risk sits with the developer, a RAB model will enable some level of risk-sharing between investors and consumers, while also maintaining the incentive on the private sector to minimise the risk of cost and schedule overruns. This will help to lower the cost of capital – a key driver of overall project costs.

In their report following the conclusion of the Hinkley Point C negotiations, the National Audit Office noted that an approach where consumers take on more of the project risk could achieve better value for money.

What's wrong with the existing Contract for Difference mechanism?

The deal on Hinkley Point C in 2016 was the right deal for the right time. It was the first nuclear project to be built in the UK for a generation, using a reactor technology being built in the UK for the first time, by a developer which could finance the project on its balance sheet. When Hinkley Point C was being negotiated there were also no projects using the new technology operational anywhere in the world. The deal ensured that consumers won't pay a penny for any construction overruns and until the station generates electricity. However, the CfD places the entire construction risk on developers, and ultimately led to the cancellation of recent potential projects, such as Hitachi's project at Wylfa Newydd in Wales and Toshiba's at Moorside in Cumbria.

Since then, the RAB has been proven a credible model to construct large, single asset projects – as proven at Thames Tideway Tunnel. It is an attractive alternative to CfDs as it reduces our reliance on individual, overseas developers. For nuclear new build projects, the risk sharing in construction between consumers and investors in a RAB could significantly drive down the cost of capital and result in a cheaper project.

Is the RAB model value for money?

Ultimately, having nuclear power will deliver an electricity system that is lower cost for consumers than if we relied on intermittent power sources alone. The RAB model will also make new nuclear projects cheaper.

Our analysis has shown that using the RAB model should produce a cost saving for consumers of between £30 billion and £80 billion compared to funding it through a Hinkley Point C style CfD scheme.

This translates to a saving of more than £10 per year for an average domestic dual fuel bill throughout the life of the nuclear power station, which can

operate for 60 years, compared to a CfD.

Nuclear power has a key role to play in Britain's future electricity mix. In the longer term, we are working to protect consumers and businesses by reducing our reliance on fossil fuels and exposure to volatile global gas prices. The only way to strengthen our energy security is to generate clean power in this country, for this country.

Has RAB been used before?

Yes. A RAB model allows a company to charge consumers to construct and operate new infrastructure. Most recently, it was used to successfully finance the construction and operation of the Thames Tideway Tunnel in the water industry and Heathrow's Terminal 5.