

Capacity Market

The Capacity Market ensures there is investment into an adequate amount of existing and new power generation, demand side response and electricity storage.

Why a Capacity Market is needed

As the electricity system is changing, new challenges for the UK's security of supply have presented themselves. Several large coal-fired power stations have closed due to environmental requirements over the past few years and the Government is now consulting on closing all other coal-fired power stations by 2025. This has resulted in a significant amount of new build generation being needed with the margin between supply and demand also tightening significantly. At the same time, most of the new electricity generation now being built is wind and solar. These provide renewable electricity that will help achieve our decarbonisation ambitions; however they do not run all of the time. This means conventional generation runs less often but is still needed to meet demand, for example when there is little output from wind and solar generation.

Generators that run less still have to pay all of the fixed costs for being available such as business rates, paying employees, connecting to the National Grid or Distribution Networks. At the moment, some of these power stations are not economic to run and face closure. The same problems are also faced by new power stations, and the UK market requires significant investment in gas-fired power generation as we move to a lower carbon system. The Government decided to reintroduce a Capacity Mechanism to solve this problem. Capacity payments existed in the UK under the Pool Arrangements from April 1990 until the New Electricity Trading Arrangements were put into place in March 2001. Capacity Mechanisms have also been implemented in a number of countries around the world to solve similar problems to those faced in this country.

How the Capacity Market addresses the problem

The Capacity Market provides a steady payment over time enabling generators to cover fixed costs, and also rewarding those willing to turn down demand temporarily or provide electricity from storage. In return they deliver electricity to the system whenever required and if not, they face penalties. The Government, with advice from National Grid, identifies what the total capacity requirements will be four years in advance. An auction is then run to find who can provide capacity at the cheapest cost.

Who is involved

All capacity providers are eligible to participate in the Capacity Market provided they are not already in receipt of other forms of support payments. It is not designed to bring forward any single particular technology. It seeks to deliver generation as cost-effectively as possible by promoting a level playing field approach across technologies and existing and new plant.

How it is paid for

The cost of the payments to the capacity provider is met by electricity suppliers who in turn charge their customers. The charge for any given year will vary depending on the outcome of the auction. The Department of Business, Energy and Industrial Strategy (BEIS) has estimated that the costs of the early 2018 will add between £28-38 on an average customer bill. Once the savings of avoiding potentially large price spikes and disconnections are factored in, this cost is estimated to be between £10-21 - depending on the clearing price - to the average annual household electricity bill. This is an insurance premium for security of electricity supply.

The Capacity Auction

National Grid will hold an auction to find the capacity needed to meet demand at the lowest cost to consumers. Generators and other capacity providers bid into the auction at the lowest price they are willing to provide their capacity for. The Auction descends in price by round until there is enough capacity left to meet the target capacity figure set by Government. The Capacity Auction will take place every twelve months. Once again this will be conducted by National Grid. Each annual auction is to guarantee capacity for four years in advance i.e. the 2016 Auction is for capacity delivered in the year 2020/21.