

First signs that payments to old coal will undermine climate goals

Early evidence shows that DECC's clumsy Capacity Market will actively subsidise 45-year old coal power stations to stay open that would otherwise have shut, and will consequently crowd out opportunities for new gas power stations to be built and discourage new demand-side response. Keeping additional coal open towards 2030 will put the UK's legally-binding climate goals under threat. In addition, the auction's perverse design could result in a windfall to the French nuclear company EDF of up to £2.6 billion.

On Friday evening, National Grid released information on which units had qualified to apply to the 2018/19 Capacity Mechanism later this year. Units had the choice to apply for a 1-year contract, a 3-year contract for partial refurbishment of an existing power station, or a 15-year contract for a new power station.

About Sandbag

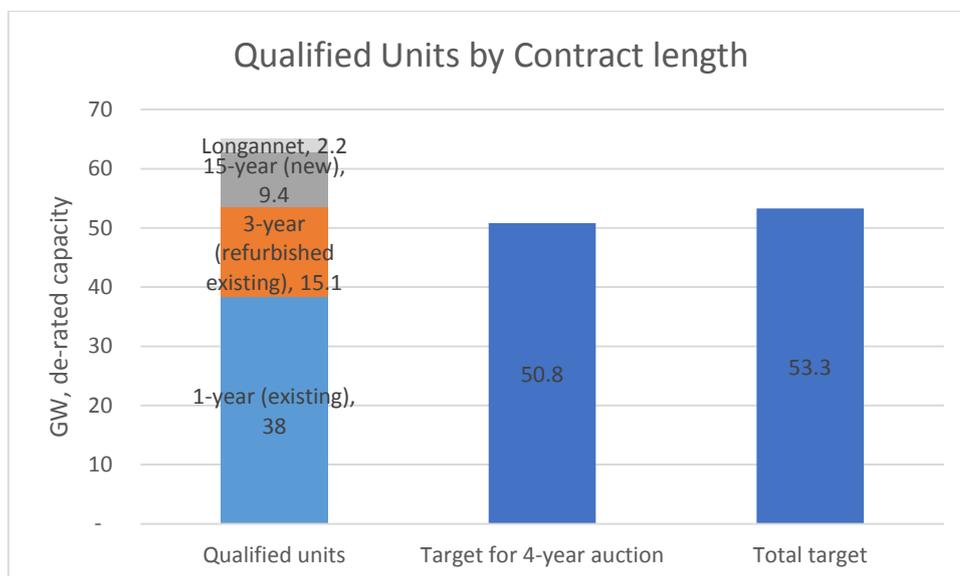
Sandbag is a UK based not-for-profit organisation campaigning for environmentally effective carbon markets and focusing on the EU Emissions Trading System (ETS).

Our campaigns are supported by in-house research that monitors the environmental robustness of the caps, the distribution of allowances, and how key sectors, installations and companies in the scheme are affected.

The International Centre for Climate Governance [ranks Sandbag in the top twenty climate think tanks in the world.](#)

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There is substantially more than enough capacity on offer than is needed.



National Grid want to procure 50.8GW of de-rated capacity for Winter-2014 in the 4-year auction (a further 2.5GW is expected to be procured one year in advance).

The total amount of de-rated capacity available for the December 2014 action is 69.4GW – a stunning 37% over the National Grid target of 50.8GW.

- 53.9GW of existing power stations have qualified to compete. 72% of these existing power stations are owned by the big-6. This is split:
 - o 7.9GW of nuclear qualify for 3-year contracts
 - o 7.3GW of coal qualify for 3-year contracts

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- 6.3GW of coal qualify for 1-year contracts (We've included Aberthaw in this, which although got rejected, RWE have confirmed they expect their 1-year contract to get accepted on appeal)
- 32.6GW of gas qualify for 1-year contracts
 - 0.8GW of new gas power station, which although qualified, was being built in any case
 - 6.7GW of other new large gas power stations that qualified on 15-year contract
 - 1.6GW of new small power generators qualified on 15-year contracts (mostly gas generators). Worryingly, 1GW of this is under 20MW, which means they will not sit in the EU ETS and will not therefore be subject to a carbon price.
 - 0.7GW of mostly unproven demand-side response (all applying for only 1-year contracts)
 - 3.5GW of other applications that were rejected, but some of which may qualify after appeal.
 - 2.2GW coal power station which has initially decided not to participate.

This means National Grid could easily meet its target with existing power stations alone, mostly through the big-6, with little need for new gas power stations, and no need for demand-side response.

Breathing new life in to Old Coal

In addition, four old, inefficient coal power stations are applying to get contracts to comply with European air quality legislation to stay open for longer, potentially crowding out newer more efficient gas power stations. This includes three power stations that had yet to commit to invest – Eggborough, and EDF's Cottam and West Burton. EON's Ratcliffe, which has already invested to stay open, also qualified for a 3-year contract, despite bizarrely being based on retrospective investment, although EON did decline an opportunity to apply for 15-year contract for which it was entitled.

These 3-year contracts which subsidise refurbishments could add 10-20 years to the lifespan of these three power stations, which are all already more than 45 years old. **Ironically, without DECC's capacity market, it is likely that the 3 old coal power stations – equal to 6GW – would close in the early 2020's and that new gas power stations and demand-side response would have replaced them.** Keeping these 3 coal power stations in the UK electricity mix post-2030 will undermine UK's legal-binding climate goal, which envisage virtually no coal generation by 2030.

The decision of UK's coal fleet is still not yet clear as RWE's Aberthaw application into the capacity market got rejected, and Scottish Power [refused](#) to enter Longannet into the capacity mechanism instead reaching out to National Grid and the Scottish Executive for additional funds. In addition, Ferrybridge, Fiddlers and Rugeley are applying for 1-year contracts, but it is possible they may still plan to meet air quality legislation and stay open even without applying for a 3-year capacity contract in this round of auctions.

EDF doing nicely

In addition, EDF have submitted all their nuclear power stations in for 3-year contracts, in addition to all their coal generation. In total they will be bidding for 3-year contracts on 11.399GW this winter, giving them 22% of the total bid capacity, but leveraged over 3 years. It may be possible with this huge incentive to manipulate the price of the auction to the auction ceiling price of £75/KW. **If this were to happen, this could result in a £2.6 billion windfall for EDF** (i.e. £75 x 11.3699GW x 3 years).

Customer flexing

A key aim of the Capacity Market was to attract customers to submit demand-side response to the market. However, they were put off by the conditions imposed on them such as the need to put up bonds, and that they could not access 3-year and 15-year contracts which were exclusively designed for generators. In the end 712MW of demand-side response qualify for the capacity mechanism, all

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on 1-year contracts. In addition, 290MW were rejected, although many of these are expected to be accepted on appeal.

New capacity

8.5GW (7.5GW de-rated) of new CCGT gas power stations applied for 15-year contracts. Only 2.1GW of this is from the big-6. The projects are:

- 910MW Carrington power station in Manchester (although this is already being built without subsidy from the capacity market)
- 1880MW Wainstones Energy Limited at Trafford, Manchester
- 1245MW Intergen's Gateway Energy Centre in London
- 1200MW Scottish Power extension of Damhead Creek in Kent
- 1200MW Thorpe Marsh in South Yorkshire
- 670MW expansion of Spalding power station in Lincolnshire
- 500MW CHP plant next to South Hook LNG
- 500MW SSE's Abernedd in South Wales.
- 370MW Centrica's Kings Lynn (not clear whether this will utilise any parts of the existing Kings Lynn power station, which is closing).

Gas capacity shrinking in size?

Lastly, the Capacity Mechanism appears to be incentivising new, small generators (about 1.6GW have qualified) most of which are small enough to avoid carbon legislation, rather than bringing back old retired gas capacity (Barking, Peterhead 2, Teeside, Kings Lynn, Roosecote, Derwent are all notified as closing).

Updated summary of Coal Power Station status

20GW of coal is currently running in the UK. Here is the status of every power station. Presumably the 3-year contracts are used to comply with new air quality legislation, which means they can run unabated past the 2020's, threatening the UK's legal climate goals.

- **Eggborough (2GW)** – applied for 3-year contract; how serious is their intention?
- **West Burton and Cottam (4GW)** – applied for 3-year contracts, so likely to invest to stay open; are EDF likely to use these as bidding pawns for their total 14GW fleet submitted into 3-year contracts?
- **Ratcliffe (2GW)** –Ratcliffe has already invested to make themselves IED-compliant.
- **Drax (4GW)** – Drax already complies with legislation after biomass conversion of some units. Only units 5 and 6 are in the CM. Unit 1 has a biomass CFD so is not in the CM, unit 2+3 are running on biomass under ROC's, so are not applying for contract in the CM and unit 4 would be expected to get biomass conversion by then.
- **Longannet (2.4GW)** – Has decided not to participate in the CM. Scottish Power has issued a press release looking to National Grid and the Scottish Government for ways to finance Longannet to stay open.
- **Aberthaw (1.5GW)** – Aberthaw was rejected from the capacity mechanism, RWE has said they expect this to be over-turned. They applied for 1-year capacity contract.
- **Fiddlers and Ferrybridge (3GW)** – SSE is not applying for a 3-year contract yet, but may do so in later auctions.
- **Rugeley (1GW)** – SSE is not applying for a 3-year contract yet, but may do so later.

About this briefing

We are grateful to the **European Climate Foundation** for helping to fund this work. Full information on Sandbag and our funding is available on our website (www.sandbag.org.uk).

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