

# Capacity Market T-4 results

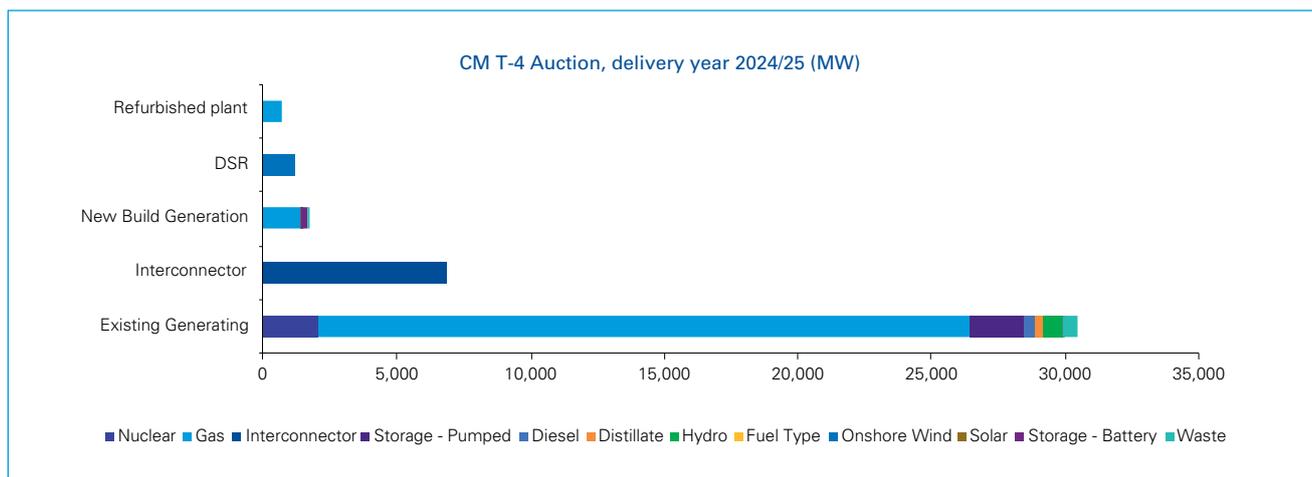
**Does new gas capacity displacing nuclear accelerate need for market reform?**

March 2021



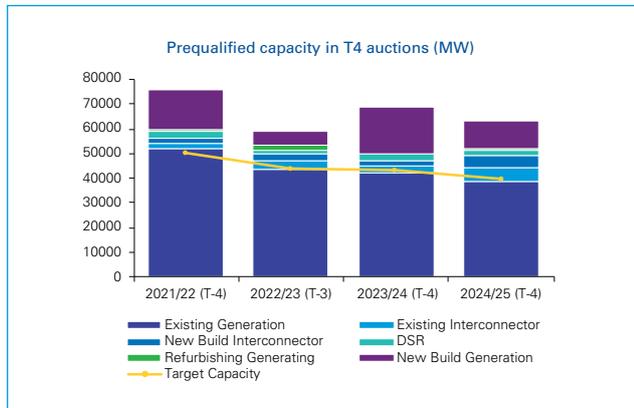
## Headline results

- **T-4 Capacity Market (CM):** cleared at a price of £18/kW procuring 40.9GW for delivery year 2024/25 translating into a total cost of £735m for consumers.
- **Summary:** Gas makes up 65% of total capacity, with Interconnectors representing 17% and nuclear falling to just 5%
- **New Build:** Drax were the only company to win agreements for new large-scale gas, with three of their four OCGT projects winning an agreement – a de-rated capacity of 854MW
- **Biggest shock:** Only 60% of EDF pre-qualified Nuclear units won agreements
- **Missed out:** Other large units which missed out include Intergen’s Rocksavage (750MW), SSE’s Medway (661MW) & Keadby (716MW), and one unit at Dinorwig (274MW)
- **End of coal:** It’s the first auction where coal could not participate following the introduction of Emissions limits and Governments desire to bring forward coal closure from Oct-25 to Oct-24.
- **Success:** All Interconnector projects (6.9GW), 1GW of DSR and 252MW of Battery Storage capacity won an agreement.
- **T-1:** Last week’s T-1 CM auction (2021/22) to top up this winter’s capacity cleared at a record price of £40/kW largely due to a revised procurement target following Calon Energy’s administration

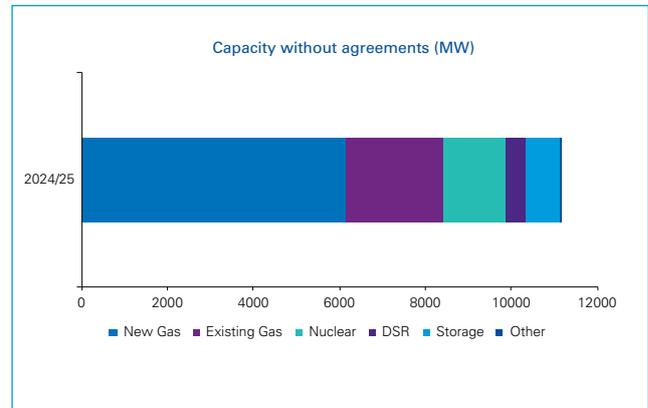


## The CM continues to be oversupplied...

There continues to be an oversupply in the Capacity Market (CM). Going into the T-4 auction, existing generation and interconnector capacity combined were greater than the target capacity meaning that existing plant would have to close if new capacity was to be required.



robust hydrogen strategy for future conversion or more aggressive forward looking emissions limits in the CM) there remains significant risk that greater electrification, currently mooted as the primary solution for decarbonising the heat and transport sectors, may see us miss our decarbonisation targets.



## ...but we did see new capacity replace existing capacity...

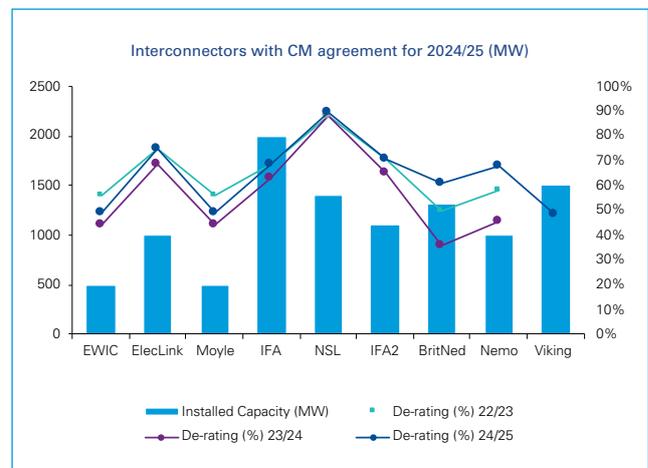
Whilst we did expect some old gas such as Medway, Keadby and arguably Rocksavage to exit without agreements, the surprise of the auction has to be EDF's decision not to take an agreement for 1.5GW (40%) of their pre-qualified Nuclear capacity. In addition to not winning an agreement for Dungeness B, EDF also failed to win agreements for 1 unit at each of Torness and Heysham but did take agreements for other units at those sites. This suggests a risk motivated decision to (a) limit exposure of non-delivery; and/or (b) price hedge as they may look to enter the units in to the future T-1 for the same delivery year. Without this unanticipated exit of 1.5GW of nuclear, it is unlikely that we would have seen Drax secure agreements for 854MW of new gas peaking (OCGT) capacity and a host of developers win c.500MW of agreements for small flexible unabated gas reciprocating engines.

This was the first CM auction where coal generators were unable to participate. The EU Electricity Regulation, which entered into force on 4 July 2019, introduced a requirement for CMs to apply carbon emissions limits. In Q3-2019 BEIS consulted on and subsequently introduced changes to the CM Rules to introduce carbon emissions limits. These changes came into force in June-20 and prevent the most carbon intensive existing capacity (including unabated coal) from competing in auctions for delivery years from 1 October 2024. All new build plant continues to be subject to the carbon emissions limits for delivery years from 1 October 2020.

Without further market reform, there was always a risk that we would begin see new gas capacity replace nuclear, coal, old gas and biomass in the mid-2020's. Granted this is new peaking, rather than baseload gas capacity, but there will still be some inevitable consequences for the carbon intensity of the electricity system. Without market reform (e.g. a

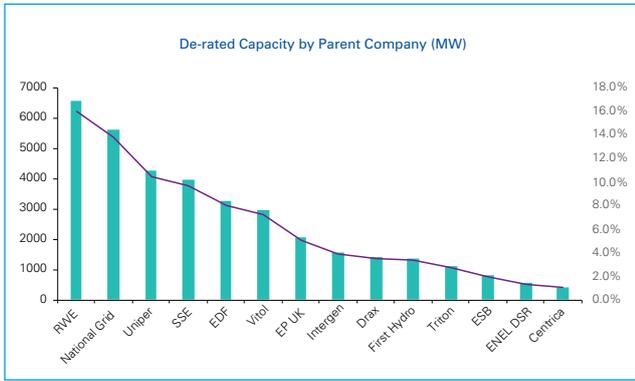
## ...and Interconnectors share of total capacity in the CM rise to 17%...

With the target capacity declining, combined with the continued success of a growing Interconnector pipeline (which were originally included as a proxy for the EU's foreign participation rules), Interconnectors now represent more than 1MW out of every 6MW procured through the mechanism.



National Grid are now the second largest owner of de-rated capacity in this years T-4 auction, with only RWE owning a greater percentage of capacity. Vitol move up the list following their recent acquisition of Drax's CCGT assets and EDF continue to fall as coal capacity is closing, nuclear is declining and they continue to explore their options for West Burton B CCGT.

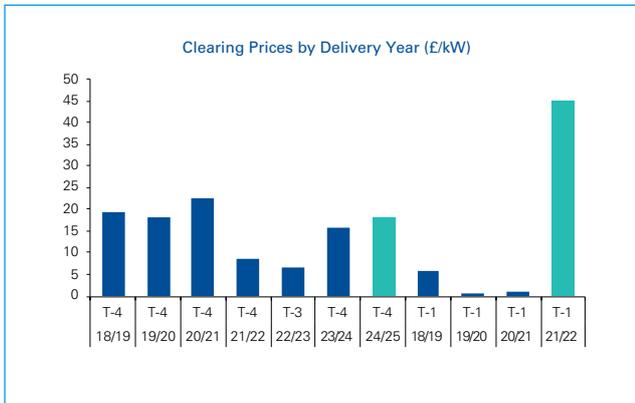
Whilst interconnectors are critical for an increasingly intermittent system, questions will be asked about their contribution to security of supply given the ongoing discussions with the EU and the recent market de-coupling following Brexit.



SSE continue to take one-year agreements for their CCGT at Peterhead (1GW) which appears critical for system stability in a region dominated by wind. They also secured agreements for their CCGT at Marchwood (820MW), Pumped Hydro asset at Foyers (284MW) and the co-owned 1132MW CCGT at Seabank. SSE continue with construction of their new Keadby 2 CCGT which has a 15-year agreement beginning in Oct-23 and could potentially be the last unabated CCGT to be commissioned in the UK depending on EP UK's and Vitol's appetite for Kings Lynn B and Damhead Creek 2 respectively.

**Note: A record clearing price in the T-1:**

The latest T-1 auction for delivery in 2021/22 cleared on the first day in Round 6 at a record price of £40/kW procuring 2252MW vs. a target of 2481MW. This premium price somewhat reflects the decision to contract an additional 2GW of capacity as a result of the non-delivery from several CMU's such as Calon Energy's CCGT assets. Whilst this generated a lot of excitement from some in the sector, it is important to note that the T-1 auction is unique and tells us nothing about the T-4 auction.



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**Conclusions**

**The results of this auction tell us three things:**

1. The CM continues to be oversupplied and new capacity is beginning to price out existing capacity. Given that c.50% of the existing CCGT fleet was commissioned pre-2000, we would expect end of life decisions to be taken in the coming years against the backdrop of a growing decarbonisation agenda underpinned by the UK's commitment to Net Zero 2050 and the emerging desire to operate a zero carbon power system by 2035.
2. If Government aren't careful, they could drive the carbon intensity of the electricity system higher in the mid/late 2020's. If new gas continues to replace old gas and nuclear (and potentially >2.5GW of Biomass in 2027 if a solution is not found for Drax's BECCs ambitions) then there is a risk of rising CO2 emissions. This puts further pressure on the UK to deliver on the ambitious 40GW offshore wind target by 2030 in addition finding a way to stimulate investment in to new flexible assets such as batteries, long duration storage (e.g. Drax's Crucachan 2, SSE's Coire Glas and Highview Power's Cryogenic Storage) or even hydrogen fuelled GT's at sites within Industrial Clusters (e.g. Triton's Saltend or SSE's Keadby 3 project) as mooted in the open consultation with BEIS exploring improvements to the CM.
3. Market reform is required sooner rather than later. In a year where the UK have a significant international platform in COP26, it's difficult to see how the issue of market reform can wait any longer. Whilst the current consultation is welcome, the focus is on technical rather than strategic change to the mechanism. The Government need to urgently consider more significant reform to the CM to prevent it compromising its ability to achieve now legislated decarbonisation targets. A system continuing to rely on unabated natural gas and renewables will obviously not deliver a zero carbon power system.

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