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BARONESS BLENHEIM OF HINTON WALDRIST
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21 September 2022

Dear Baroness Worthington,

I am writing to thank you for your contribution to the Committee Stage debate on Part 2 of the Energy Bill on Wednesday 7 September and to follow up on your questions in relation to low carbon hydrogen standards and fugitive hydrogen emissions and in relation to projects that have delayed taking up their contracts for difference to sell electricity on the open market.

Amendment 47, tabled in your name, sought to amend the definition of “low carbon hydrogen producer” in clause 61 to align with the Green Hydrogen Organisation’s ‘Green Hydrogen Standard’. This proposal of 1kg of hydrogen per 1kg of greenhouse gas (GHG) emissions would equate to 8.33gCO₂e/MJ LHV (grams of carbon dioxide equivalent per megajoule lower heating value). The UK Low Carbon Hydrogen Standard (LCHS) currently sets a maximum GHG threshold of 20gCO₂e/MJ LHV of hydrogen produced.

The Government consulted on the LCHS last year and a government response was published in April this year. This world leading standard sets out a GHG threshold, as well as other criteria, for hydrogen production to be considered low carbon and sets out in detail the methodology for calculating the emissions associated with hydrogen production. This includes the steps producers are expected to take to prove that the hydrogen they produce is compliant.

The standard was developed following a public consultation and multiple engagement sessions with industry and academic experts including the Hydrogen Advisory Council and its Low Carbon Hydrogen Standard Working Group.

As set out in the response to the consultation on a Low Carbon Hydrogen Business Model, published in April this year, we are proceeding with our proposal to require volumes of hydrogen produced to meet the LCHS to qualify for and receive funding under the Hydrogen Business Model.

The LCHS is set out in guidance, and we expect for it to be updated over time to ensure it remains fit for purpose and reflects our growing understanding of how new technologies work in practice, including how hydrogen production interacts with the broader energy system. Including a threshold on the face of the Bill would undermine the need for a low carbon hydrogen standard to be capable of evolving over time.

Moving on to your question about hydrogen’s global warming potential (GWP), it is correct to say that hydrogen is an indirect GHG due to its interactions with other atmospheric gases. Effective use of hydrogen does not lead to its release into the atmosphere, but accidental emissions due to leakage or faulty equipment (‘fugitive emissions’) from hydrogen production plants could have a material impact on the atmosphere if left unaddressed.

In April 2022 BEIS published a paper on 'Atmospheric implications of increased hydrogen use'¹, following work with the University of Cambridge and the National Centre for Atmospheric Sciences with the University of Reading. This report suggested that hydrogen use in the economy will have significant climate benefits, but that some of these benefits will be partially offset if we emit hydrogen into the atmosphere, as it is an indirect GHG with a GWP of 11 due to its interaction with other atmospheric gases. Therefore, we are committed to working with industry with a view to developing measures to minimise leakage in production processes as well as in transport and end use, to help ensure we maximise the climate benefit of hydrogen use in the economy.

The LCHS includes clear guidance for hydrogen producers to monitor and reduce fugitive emissions, and we will continue to consider whether a hydrogen GWP factor should be included in future iterations of the LCHS. We are also committed to further research on the atmospheric impacts of hydrogen use, including the role of soil as a sink, and methodologies and technologies to monitor and reduce fugitive emissions.

In relation to electricity sales under the Contracts for Difference (CfD) scheme, the Government is aware of three projects supported by the CfD scheme that have delayed their contract start dates so that they can sell their electricity at current high market prices rather than at the strike price agreed with Government. They are:

- the third phase of RWE's Triton Knoll offshore wind farm;
- Moray East windfarm, owned by a consortium including EDP Renewables and Engie; and
- Hornsea 2, owned by Ørsted.

CfDs are private law contracts between low-carbon electricity generators and the Low Carbon Contracts Company, a government-owned company that is operationally independent. However, BEIS ministers have raised this matter with the industry and made it clear that they do not think that these developers are acting within the spirit of the CfD scheme, which is intended to deliver benefits to both consumers and developers. I should point out that CfD projects that do this will not receive CfD payments while operating on commercial terms. The Government is currently examining possible changes to the scheme to prevent future CfD projects from acting in this way.

While the behaviour of a small number of developers is regrettable, it is important to bear in mind that the CfD scheme is vital to developing domestic sources of renewable electricity to reduce our exposure to volatile global fossil fuel markets and protect consumers in the long term. The vast majority of operational CfD projects are currently paying back into the scheme due to current high energy prices. This has helped to reduce the level of the default tariff cap for this October by some £23, as confirmed by Ofgem in their default tariff cap update letter (copy attached) published on 26 August 2022.

I hope you find this letter helpful. I will also place a copy in the House library.



BARONESS BLOOMFIELD OF HINTON WALDRIST

Baroness Worthington
House of Lords

¹ <https://www.gov.uk/government/publications/atmospheric-implications-of-increased-hydrogen-use>



Making a positive difference
for energy consumers

To all market participants and
interested parties

Email: RetailPriceRegulation@ofgem.gov.uk

Date: 26 August 2022

Dear colleagues,

Default tariff cap update from 1 October 2022

Today we have published the updated cap levels for charge restriction period ("cap period") 9a, covering the three months from 1 October 2022 to 31 December 2022.¹ Alongside the cap levels we have also published the updated versions of the cost allowance models / annexes.

Drivers of change

The level of the cap^{2,3} for the cap period 9a (1 October 2022 to 31 December 2022) has increased by 80% since the last update. From 1 October 2022, the level of the cap will increase to £3,549.^{4,5}

The main drivers for this change are due to updates in the model inputs for:

- **Wholesale costs** – Wholesale related costs have increased by £1391 since the last update, primarily due to the invasion of Ukraine by Russia and the subsequent political fall-out. Record high prices were seen around the beginning of the invasion and they have been volatile since, especially increasing each time that Russia has reduced its gas flows to Europe. Recent supply reductions to unprecedentedly low levels of gas have driven forward prices for the coming winter and next summer to new record highs. The unreliability of Russian flows now and in future have severely

¹ In August 2022, Ofgem decided the Default Tariff Cap will be updated on a quarterly basis rather than every six months. For details on the reason for this change, please see the [decision on changes to the wholesale methodology](#).

² The level of the cap shown is for a dual fuel, direct debit customer, calculated using the latest Typical Domestic Consumption Values (TDCVs). All values rounded to the nearest £.

³ On 1 April 2020 Ofgem decided to decrease the [Typical Domestic Consumption Values](#) (TDCVs) for electricity to reflect continued decreases in consumption for electricity and to keep the TDCV's for gas unchanged. From 1 April 2020, Ofgem has been using the new TDCVs to express the default tariff price cap and prepayment meter cap level in all publications. Previous publications on the levels of the caps will therefore not be the same / directly comparable.

⁴ The default tariff cap sets maximum prices, not maximum bills. For an individual customer, the amount they will pay under the cap varies depending on how much energy they use, where they live, and how they pay for their energy. The cap level will not depend on who a customer's energy supplier is.

⁵ We do not set a 'dual fuel' cap. Caps are set for each fuel separately. When we express the dual fuel 'cap level' for a typical customer, this is the combined effect of the gas cap at typical consumption and the electricity cap at typical consumption.

The Office of Gas and Electricity Markets

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increased the risk of Europe facing gas shortages this winter, pushing up prices to attract other import sources such as liquefied natural gas.

As well as high gas prices, power prices have seen extra pressure from a worsening outlook for French electricity margins as issues with its nuclear generation fleet have taken significant amounts of generation offline. France is seeing incredibly high wholesale power prices and interconnected countries, including Great Britain, have been impacted due to its import demand.

- **Increased wholesale volatility costs and adjustment allowance** - In our 4 August 2022 decision, we determined that an adjustment of £46 per customer per year to the cap level was necessary to allow for efficient unexpected SVT demand costs (for non-prepayment meter customers only) incurred over cap period eight.⁶ We have assessed these costs using a more stringent benchmark (ie a lower quartile benchmark) than in our February 2022 decision (where we used a weighted average benchmark). This adjustment will be applied through the adjustment allowance (currently at £0) from 1 October 2022 for a 12-month period.⁷
- **Backwardation costs** - In the current period of high volatility, suppliers are facing significant costs from backwardation. We have updated the wholesale methodology in our 4 August decision to allow suppliers to recover the costs of backwardation in a reasonable period.⁸ This accounts for £143 per customer per year on the cap level.

Please find below the table stating our changes from the 4 August policy package:

Cap level impact for P9a (per customer per year impact from 1 Oct (DF, TDCV)⁹		Notes
Backwardation costs – May consultation position (12 month recovery)	£91	This cost shows the incremental cost to customers of adding backwardation costs to the wholesale methodology and recovering costs over 12 months - our May statutory consultation position.
Additional backwardation costs due to August decision position (6 month recovery)	£58	This cost shows the incremental cost to customers of moving from recovering backwardation over 12 months to recovering over 6 months. This was a change from our May statutory consultation to our August decision.
Additional wholesale costs (P8 credit only)	£41	These are the extra costs that we have allowed for due to unexpected SVT demand costs incurred during cap period 8. Zero for prepay customers.
Additional wholesale costs (P7 review)	£7	These are the extra costs that we have allowed for due to a revision made to our cap period 7 backwardation estimate (as part of our Feb 2022 decision).
Smart Metering Net Cost Change (SMNCC) (credit)	£0.41	The changes in the SMNCC allowance (+£1 for credit, -£6 for PPM) represent our latest assessment of the net cost to suppliers of the smart meter rollout, from the SMNCC August decision document."
TOTAL	£197	

⁶ Ofgem (2022), Price Cap – Decision on possible wholesale cost adjustment, <https://www.ofgem.gov.uk/publications/price-cap-decision-possible-wholesale-cost-adjustment>. This also includes the £6 backwardation costs from Period 7.

⁷ An allowance covering any adjustments to the default tariff cap. For cap period 9a this includes an adjustment for backwardation cost (£6.27) and unexpected SVT demand costs (£39.81).

⁸ Ofgem (2022), Price cap - Decision on changes to the wholesale methodology, <https://www.ofgem.gov.uk/publications/price-cap-decision-changes-wholesale-methodology>

⁹ The numbers in this table include the impact of indexed allowances (EBIT, Headroom, etc)

- **Network costs** – Network costs have remained broadly static, increasing by ~£1 overall. There was a reduction of £8 due to the decision to require Independent Gas Transporters (IGTs's) to charge their customers / shippers a proportion of the total gas SoLR costs. However, this is offset by an increase in electricity balancing costs by £5 due to the current market conditions as the balancing costs are driven by high market and gas prices, and gas transmission charges by £3 due to the increased costs of shrinkage on the NTS as a result of the current high wholesale price of gas.
- **Other costs (which include policy costs, smart costs and the indexed allowances)** – Policy costs overall have decreased by £1 and remain broadly consistent when compared to the previous cap period.

The remaining indexed components of the cap have increased in line with the overall cap increase or inflation. This includes EBIT (£63), Payment method uplift (£22), Headroom (£43), VAT (£169) and Operating costs (£214). Finally, Smart metering costs for those on standard credit or direct debit have increased by £1 while costs have decreased by £6 for PPM customers. These changes primarily reflect updated estimates of the change in net smart metering costs incurred by suppliers, rather than changes in pass through costs.

Changes in the components making up the direct debit level of the cap (shown for dual fuel) are shown in Figure 1 below:¹⁰

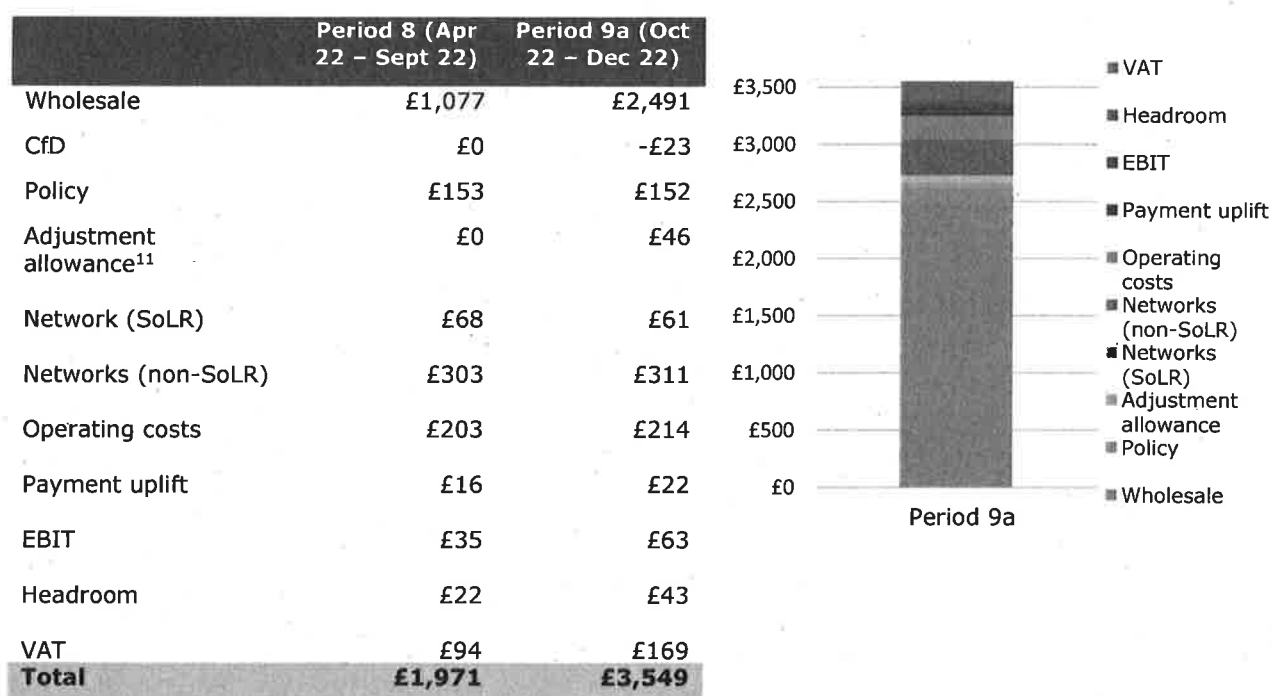


Figure 1: Breakdown of default tariff cap components, direct debit, dual fuel

Other payment methods

¹⁰All values shown are for a dual fuel, direct debit customer, calculated using the latest Typical Domestic Consumption Values (TDCVS). All values rounded to the nearest £.

¹¹ An allowance covering any adjustments to the default tariff cap. For cap period 9a this includes costs related to unexpected SVT demand incurred during period 8 and costs related to backwardation incurred during period 7.

The standard credit cap level has also increased and will be £3764 (£1663 increase) for the reasons set out above. Customers who pay by standard credit (cash or cheque) pay an additional £215 (compared to direct debit) primarily based on the higher cost for suppliers to serve them.

The prepayment meter (PPM) cap level has also increased and will be £3608 (£1591 increase). Customers on prepayment meters pay an additional £59 compared to direct debit customers. This is primarily based on the higher cost for suppliers to serve them in comparison to customers paying by standard credit. However, as a result of our latest review of smart metering costs, the SMNCC allowance in the PPM cap level has reduced while the SMNCC for credit has increased, reducing the gap between PPM and credit by around £7. The unexpected SVT cost allowance (£43) does not apply to the PPM cap, also narrowing the gap between payment types.

Compliance with the price caps

We expect suppliers to take seriously their obligations to implement the default tariff cap and will be closely monitoring their compliance. Suppliers should continue to comply with their obligations as set out in SLC28.A and SLC28.AD, and the values used in those licence conditions. We will continue to take firm action against suppliers who fall short of their price cap requirements.

We expect any related data provided to Ofgem to be accurate, complete and provided in a timely manner. We will also continue to monitor the quality of service suppliers deliver to their customers and stand ready to take compliance and enforcement action in the event that any licence requirements are not met.

Yours faithfully,

Dan Norton

Deputy Director, Price Cap

Annex

Annex 1 – Changes to the default tariff cap split by payment method.

Cap level	Period 8 (Apr 22 – Sep 22)	Period 9a (Oct 22 – Dec 22)
Direct Debit	£1,971	£3549
Standard Credit	£2,100	£3764
Prepayment	£2,017	£3608