UK STEEL – SUBMISSION TO CLIMATE CHANGE AGREEMENTS CONSULTATION

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To: cca@beis.gov.uk

About UK Steel

UK Steel, a division of Make UK, is the trade association for the UK steel industry. It represents all the country's steelmakers and a large number of downstream steel processors. For the purpose of this consultation, it represents energy consumers.

Submission to the consultation on Climate Change Agreements

Introduction:

UK Steel welcomes the opportunity to respond to this consultation on the future of the Climate Change Agreement Scheme. Before dealing with the specific questions in the consultation, it is worth restating some characteristics of the steel sector and its current interaction with the Climate Change Agreement (CCA) scheme that will be relevant considerations for BEIS in this consultation.

- The steel sector has been a member of the CCA scheme since its introduction in 2001, exemplifying the type of industry the scheme was designed to support. Namely a highly energy, carbon, and trade-intensive sector at high risk of competitive disadvantage and carbon leakage due to increased energy costs.
- This point is well demonstrated by HMT's Net Zero review, which shows that the basic metals sector (dominated in tonnage and value by steel products) has a trade openness (value of imports + exports / value of UK market) of 72%, combined with the highest carbon intensity (cost of carbon / gross output), and the third-highest proportion of CO2 from domestic sources.
- Considering steel specifically: a trade openness calculation based on steel volumes (rather than value) provides a trade openness level of 102%[1]. On average, over the last five years, the sector has used 5.1MWh of energy (coal/coke, electricity, and natural gas) to produce each tonne of steel. Whilst this represents an 8% reduction in specific energy consumption since 2000, there is no doubt that steel production is one of the most energy-intensive products produced globally, in the UK, and within the CCA scheme. The eligibility of the steel sector, and all steel-producing companies, to the Energy Intensive Industries Package, requiring a company to demonstrate an electro-intensity (electricity costs/GVA) of 20%, is further evidence of the energy intensity of the sector.
- As of 2014, the vast majority of the energy consumed by the steel sector is eligible for a 100% exemption from the CCL due to the Government's introduction of Mineralogical and Metallurgical (min & met) exemption. As a result, the majority of steel production sites have withdrawn from the CCA scheme as the financial incentive to participate is now effectively available through another more cost-effective and less administratively burdensome option.
- Even amongst sites remaining in the scheme, a large amount of energy (in some cases, the vast majority) is also covered by the min & met exemption. The CCL reduction provided by CCA participation is, therefore, only often related to a small amount of 'residual' energy on sites not with the scope of min & met exemption. This reduction in the financial benefit directly provided by the CCA to steel sites correspondingly results in a significant weakening of the incentivising effect the CCA scheme can have on energy efficiency investments. Furthermore, in cases of failure to meet targets, there will be a much finer balance between the costs of the buy-out fee and the financial benefits of remaining in the CCA scheme.
- For example, if 95% of a site's energy consumption (split equally between electricity and gas consumption) is within scope of the min & met exemption, then membership of the CCA provides

[1] 2019 HMRC data for tariff codes 7206 through to 7306. Exports 4.0MT + Imports 6.4MT / UK Supply/Market Size 10.2 MT = Trade Openness of 102%

just a 0.3% reduction in energy prices for the site[2]. The overall cost of energy clearly remains a strong driver for energy efficiency investments, but the CCL discount available through CCA participation will make a negligible difference in business cases for investment at such sites.

- As of 2023, there are 6 TUs left in the steel sector CCA comprising 12 facilities. The production and energy consumption of the sector is dominated by the primary steel producer remaining in the scheme, which accounts for over half of the facilities and the overwhelming majority of the energy – approximately 95% of the target facility energy and 99.99% of the eligible energy.
- As with most energy-intensive industrial sites, the vast majority of eligible energy consumption on site is direct combustion of fossil fuels sitting within the scope of the UK ETS. The target energy is, therefore, primarily electricity. As the UK's primary steel production decarbonises over the next two decades, its electricity consumption will significantly increase as the three major routes available (electric arc furnaces, CCUS, and hydrogen DRI) are all electricity intensive. Under some pathways, the ability to self-generate electricity on site using waste gases will also be removed, further increasing the use of grid electricity.
- In these circumstances, a straightforward energy efficiency target predominately requiring regular reductions in electricity consumption may cease to work for the steel sector. A mechanism will need to be found to ensure the steel sector continues to remain in the scheme and/or receive the reductions in energy costs provided by it. The UK has the highest industrial electricity costs in Europe, already acting as a significant barrier to investment in decarbonisation in the steel sector and undermining industry competitiveness. This should not be made worse by the operation of a new CCA scheme.
- The Government must take these considerations into account in the design of the new scheme, including taking additional necessary steps outside the scope of this consultation to safeguard the competitiveness of the steel sector and its ability to invest in decarbonisation. This should include consideration with HMT of amending the operation of the min & met exemption if it were determined that the new CCA scheme couldn't cater for the likely trajectory of the sector's target facility energy consumption as it decarbonises.

1. Do you foresee any impacts arising from this two-year extension?
We welcome the extension to the Climate Change Agreements (CCA) scheme, which provides a vital service in reducing Government imposed taxes and thereby improving the steel industry's competitiveness. However, the lack of long-term certainty is a significant concern when the Government again extends the scheme with just one Target Period (TP) instead of a multi-TP extension. This makes it more difficult for companies to plan accordingly and reduces the signal and incentive for investment in energy efficiency.

2. Do you agree with the proposed dates for Target Period 6 and Certification Period 6?
While our preference would have been a longer extension of the CCA scheme, the proposed dates do seem like the natural conclusion of a one-TP extension. However, we are concerned that this again will lead to very tight windows for data collection, which CCA participants will struggle to meet.

3. Do you see any issues with maintaining the current scheme eligibility criteria?
No, we agree with the proposed approach.

4. Do you agree with the dates proposed for new entrant applications?
Yes.

5. Do you agree with the proposal to maintain 2018 as the baseline year?
Yes.

6. Do you agree with process as set out for agreeing sectoral targets?
No, we believe this provides too little time for trade associations to engage with the DESNZ, collect data, and consult the CCA participants. UK Steel was not successful in collecting data during the last round of target negotiations due to the limited time and the time of year when companies were often submitting data for compliance with other Government schemes and regulations. The Department will set industry up for failure if it proceeds with the proposed timeline for agreeing targets.

[2] Benefit of CCA calculated at 0.3% reduction in energy prices based on equal consumption of delivered natural gas and electricity, energy prices of extra-large energy user in 2020 from BEIS/ONS "Prices of fuels purchased by non-domestic consumers in the UK".

7. Do you agree with the proposal that surplus from previous Target Periods should not be brought forward for use in TP6?
No, we strongly disagree with this proposal. If surplus from TP5 cannot be brought forward for TP6, then it losses its value, and CCA participants are not rewarded for investing in energy efficiency. The surplus mechanism should continue to benefit those who overperform against targets by allowing any accumulated surplus to be used to offset underperformance in subsequent Target Periods. As the Government states in its consultation document, "it was evident that a surplus mechanism encourages performance and rewards where one has overperformed". It is inconsistent, and the Government should allow surplus from TP5 to be brought forward for TP6.

8. Do you agree with the proposed amendment to Rule 6.4 to account for operators with absolute targets?
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9. Do you agree with the proposal to introduce mandatory reporting to the Environment Agency of action taken in Target Period 6 by 1 May 2025?
We disagree with this proposal, as it will be another unnecessary reporting requirement, which will not bring any additional benefits to the participants or scheme administrators. Furthermore, for some sectors, anonymising the data will not be possible. For the Steel CCA scheme, one participant represents 99% of the energy used within the scheme, and it will therefore not be possible to be done in aggregate form "with consideration for commercial confidentiality". The Government must take a balanced approach that aims to minimise administrative burden and data requests on industry where possible.

10. What are your views on extending this reporting to include provision of further evidence of energy efficiency and decarbonisation potential?
When introducing new reporting requirements, it must be considered whether the lack of information or insufficient information is the key barrier to investment in energy efficiency. There are already many other schemes under which companies report, such as the ESOS, SECR, and UK ETS. Companies are already highly aware of their energy use and options to reduce this. There is no further need for reporting, which will likely duplicate existing efforts and additional administrative burden. It is clear mission creep for the Government to propose using the CCA for monitoring investments when the scheme's main objective is to provide an exemption from the CCL, which will only push organisations out of the scheme.

11. Do you agree with the proposal to increase the buy-out price to £25/tCO2e?
We do not agree with the proposal to increase the buy-out price again after it was just recently raised at the beginning of TP5. The buy-out price has been calculated at an estimated £13.70/tCO2e for electricity and £20.84/tCO2e for gas (based on current emission factors). As many of the steel sector facilities are covered by UK ETS, and therefore the targets are based on electricity only (predominantly), it seems unreasonable to set the buy-out price far higher than the value of the CCL discount for electricity.

Further increases in the buy-out price will only put increased pressure on industry, which is already facing challenging trading environments due to substantial increases in energy prices. Additional penalties will only serve to reduce the available capex for investments in energy efficiency.

12. Do you agree with the proposal to increase the minimum financial penalty from £250 to £500?
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13. Do you agree with the proposal to increase the financial penalty price for providing inaccurate Target Period data in line with the buy-out cost per tCO2e for TP6?
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14. Do you agree with giving the scheme administrator discretion to waive or reduce penalty amount when considered appropriate?
We agree with this proposal, as there could be incidents where errors were made without any financial gain, which would subsequently trigger penalties. Providing the administrator with the flexibility to reduce or waive penalties where appropriate would ensure a fair and proper scheme administration.

15. In which situations do you believe it would be appropriate for a penalty to be waived or reduced?
Where TU have misreported data but would not financially gain from this data error is a prime example of where a penalty would be inappropriate.

16. Do you agree with the proposal to maintain scheme rules for the purpose of this extension?
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17. Beyond the proposals listed above, are there any other reforms / changes you would recommend for this extension?
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18. Do you agree with the proposed timeline for the target setting and agreement variation process?
As stated above, we believe the proposed timeline is too tight to allow TUs and trade associations to collect the necessary data and engage in target negotiations.

19. How would the proposed timeline affect you and/or businesses within your sector?
There is a risk that if too ambitious targets are set due to insufficient time for data collection and negotiations, some TUs will be forced to leave.

20. Do you agree with the proposed approach of collecting facility level data to establish targets for a future scheme?
We do not support this if it imposes additional data reporting requirements.

21. What else should be considered in setting targets for any potential future scheme?
The sector decarbonisation pathways must be considered. For example, a key technology to reduce emissions for the steel industry is switching from an integrated blast furnace to an electric arc furnace, which would substantially increase the onsite electricity consumption and decrease energy efficiency as defined by the CCA scheme. It would therefore be appropriate to build in a mechanism within the target setting to take account of fuel switching and emission reduction pathways.

22. Do you agree that targets should remain primarily focused on the implementation of cost-effective energy efficiency improvements, and that the target setting exercise is the best way to determine where carbon targets would be more appropriate?
We do not agree with this approach. It is unlikely that the CfD programme supporting the decarbonisation of the electricity system would be able to assist with industrial decarbonisation. Instead, the CCA scheme must consider Net Zero pathways and not punish industries for reducing emissions if it increases energy consumption.

While we recognise the rationale for focusing on energy efficiency, it will soon cease to be a valuable metric for the steel sector, at least in the context of how CCAs currently operate. The Government's Net-Zero target will require fundamental changes to steel production in the UK and necessitate substantial investment in new processes and equipment over the next dozen years. The Climate Change Committee (CCC) has recommended that the ore-based steelmaking sites be near-zero emissions by 2035. To meet this ambition, steel companies must invest in new production methods, increasing the sector's electricity consumption. There are broadly three routes to reduce emissions for integrated steelmaking substantially: Carbon Capture and Storage (CCS), Electric Arc Furnaces (EAF), and hydrogen-based steelmaking.

The sector currently consumes 2.5TWh of grid electricity each year, the equivalent of 800,000 houses. With a sectoral switch to EAFs, the consumption would more than double to 5.5TWh and increase by five times for the affected sites. Hydrogen-based steel production would increase the entire sector's electricity demand to over 8.3TWh (assuming blue hydrogen is produced offsite via natural gas steam reforming), which would more than triple the whole sector's consumption, increasing the demand of the affected sites by almost 9 times. CCS experiences energy losses significantly when capturing emissions, which will also lead to much higher electricity consumption. Moreover, removing blast furnaces and coke ovens from steel sites would also remove the ability to produce electricity from waste gases, also increasing the use of grid electricity.

By focusing solely on the energy efficiency of target facilities, the scheme could prove ineffective at driving carbon reductions and may even provide a disincentive to the decarbonisation of steel production, albeit an extremely small one.

The new CCA scheme must recognise this. If, for example, an integrated site switches to electric arc furnace production, its emissions would plummet, but its target facility energy use would skyrocket, requiring significant buy-out fees to remain eligible for the CCA. It is likely that primary steel producers would simply leave the scheme, resulting in an increase in energy costs for the company – clearly not what the CCA scheme intends.

23. Do you agree with moving to Facility level reporting and performance measurement?
24. What do you think the impact of this change would be for your sector?
We disagree with the proposal to move to facility level reporting and measurement as it would have several negative impacts on the steel industry:

- This will increase administration for TUs and companies if they must report separately for each facility without any apparent benefit. The administration of filling out several spreadsheets rather than just one will require additional resources and also increase the administrative burden for the trade associations. The Government must take a balanced approach that minimises administrative burden and data requests on industry where possible.
- The energy efficiency investment at one facility would not benefit the overall TU, where one facility's improvement can balance the underperformance of another. Instead, as each facility would have its own target, it would only benefit from energy efficiency at that site. This would dissuade companies from making large investments in energy efficiency, as the benefits of this would not be shared across the whole company. Instead, the rational investments would be in minor measures at each site with small improvements.
- Therefore, any surplus built up would only benefit the one facility rather than the overall company. This again reduces the attractiveness of the CCA scheme, as it will likely increase the overall buy-out fees paid, forcing many companies to leave the scheme.

25. Do you agree with the proposal to reform reporting as described above?
26. What would the impact of this change of reporting be for you and/or your sector (e.g. estimated operational/logistical costs or overarching impacts)?
We disagree with the proposal to move to mandatory Novem targets, as this would substantially increase the administrational burden of the scheme and force participants out of the CCA scheme. There are over 3,500 grades of steel, and even though a steelmaker does not produce all, it will be horrendously complicated to have reporting broken down by each product type. The necessary and most economically rational decision would be to leave the CCA scheme, which would reduce their competitiveness and reduce the Government's ability to meet its energy efficiency target.

We would strongly urge the Government to reconsider enforcing mandatory Novem targets for all CCA participants, as the number of products would increase the reporting requirements substantially without any significant benefits to the Government or CCA participants.

27. Do you agree that carbon emissions factors should be updated to the currently available factors for each TP?
We agree that the carbon intensity factor should be updated to reflect the current grid intensity. The 0.52037 kgCO2e/kWh for electricity (2012 Guidelines to Defra/DECC's GHG Conversion Factors for company reporting) was appropriate for 2012 but not for 2023. Since 2012 the emission intensity of the electricity grid has fallen from 0.507 kgCO2e/kWh to 0.177 kgCO2e/kWh for 2022 (Drax Electric Insights), which should be reflected in the CCA scheme. Industry has helped finance the decarbonisation of the electricity grid through RO, CfDs, and FiTs, and they should not be penalised further as the grid emission intensity has dropped.

28. Do you agree that the primary electricity factor for electricity should be updated for a new scheme?
Yes, we agree.

29. Do you agree that self-generated electricity should be accounted for as set out above?
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30. Do you agree with the proposal to bring UK ETS energy into the target energy for any new scheme?
We disagree as this would further penalise industrial users for underperformance and lead to double carbon pricing for participating companies. It is unnecessary and will again reduce the attractiveness of the CCA scheme.

31. Do you have any further views on adding annual reporting beyond those provided in the last consultation?
We do not feel there is any major benefit from requiring companies to report annually. Annual energy efficiency gains are likely to be minor, and therefore reporting on a bi-annual basis retains a good balance between administrative burden and providing progress reports. The Government must take a balanced approach that aims to minimise administrative burden and data requests on industry where possible. It should also be noted that data provided through CCAs in many sectors is also of limited value to both the Government and industry. Because such a large proportion of energy sits under the UK ETS – data sets represent just a partial picture of consumption and improvements made on site. We, therefore, do not believe that it is an efficient use of the time and resources of the participating companies to report more frequently. Annual reporting will only increase the burden of participating in the scheme, with little extra value to companies or the Government.

32. Do you agree with maintaining the calculation for buy-out in carbon rather than energy?
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33. What are your views on how buy-out could be calculated for any potential future scheme?
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34. Would you agree or disagree with this utilising a formula rather than a fixed value set out in legislation?
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35. With consideration for the reforms outlined elsewhere in this consultation, do you have any comments on how surplus should operate for a future scheme?
The proposed reforms to the CCA scheme will make it much less attractive to companies to participate in, prevent them from benefitting from energy efficiency made at different facilities, and increase the reporting burden. We would encourage the Government to review its proposal to ensure that the CCA scheme still supports businesses and is part of an overall attractive business environment.

36. Please provide any comments on the timing of any potential future scheme.
Given the complexity of establishing a new scheme as well as the long investment timelines sectors like steel will be working to, a ten-year scheme would seem the minimum required. Anything else would not provide sufficient certainty, and the admin burden of setting up the scheme may outweigh the benefits it provides. Ten years is similar to the first two phases of the scheme and has worked well to date.

For further information, contact:
Frank Aaskov, Energy & Climate Change Policy Manager, 07872 190965, faaskov@makeuk.org