



Department for
Business, Energy
& Industrial Strategy

Summary of Responses to the Clean Steel Fund Call for Evidence

Putting the steel sector on a path consistent
with net zero

December 2020





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Executive Summary

Steel is a strategically important industry for the UK. Previous stakeholder engagement highlighted that there is potential for decarbonisation and identified the barriers that prevent the investment in, and take up of, new greener technologies and processes. In response, the Government announced the £250 million Clean Steel Fund and call for evidence on 28th August 2019 to provide a long-term signal of support to the steel sector and its decarbonisation efforts.

Published on 29th August 2019, the Clean Steel Fund (CSF) call for evidence sought views on fourteen questions covering five themes:

- Why is a Clean Steel Fund needed?
- What are the barriers to decarbonising the steel sector?
- What could a Clean Steel Fund support?
- What are the technology options for clean steel?
- What are the next steps in further engagement with stakeholders on design of the Fund?

The call for evidence received 29 responses from a range of stakeholders including UK Steel, GREENSTEEL Council, Liberty Steel, Tata Steel, the British Ceramic Confederation, as well as several academics. The main issues raised fall into three categories: energy prices and other barriers, timing of the Fund, and decarbonisation technology options.

Energy prices

It was clear from the responses that though the Fund is a very welcome addition to the policy environment, it is not a universal solution to all the issues the sector faces and other significant shorter-term difficulties. The global economic environment is especially challenging for the steel sector and the relatively high costs of electricity in the UK mean that this is felt even more keenly by UK steel producers. This also makes it difficult for companies to justify spending money on decarbonisation projects, many of which are likely to raise operational costs, at least in the short-term. Lack of investment in the UK steel sector has meant that UK steel companies have fallen behind their international counterparts. They will need make significant changes to equipment and processes in order to decarbonise.

Timing of the Fund

Although the Fund is needed by the steel sector, several factors mean that it would help if funding started to be released only from 2023 onwards:

- The sector needs time to develop plans for decarbonising.
- Currently, the technologies required for carbon capture usage and storage (CCUS) and low carbon hydrogen production are not ready for implementation. In the Prime Minister's 10 Point Plan published in November 2020, a £240m investment into new hydrogen production facilities was announced and an extra £200m for the CCUS Infrastructure Fund, totalling this investment to £1bn. It would be advantageous if the CSF coincided with the technological advancements these investment will produce to ensure the steel industry can capitalise on these developments.
- The Fund therefore needs to link up with other policies working in this area such as the Industrial Decarbonisation Challenge clusters mission, Industrial Energy Transformation Fund (IETF) and Net Zero Hydrogen Fund.
- The IETF opened in summer 2020 and steel companies have been able to apply. The IETF currently runs until March 2024 so it would be useful if CSF could then continue providing support to the sector.

Decarbonisation Technologies

On the three main decarbonisation technologies (switching to lower carbon fuels, CCUS; and energy and material efficiency) discussed in the consultation, respondents stated that each of the technologies required further development to reduce the financial and technical risks. There was no clear consensus on which technology would be most suitable to decarbonise the industry, with a range of different solutions required, and a range of views on the most suitable way to proceed.

- CCUS would require a redesign of the blast furnaces to take full advantage of the technology and is expected to become commercially available in the next decade, tying the technology's deployment to investment cycles. Infrastructure would need to be redesigned in line with CCUS requirements to support this.
- Hydrogen steelmaking was discussed as having great potential, both in terms of using hydrogen in a blast furnace, and also in the fossil-fuel-free Direct Reduced Iron process. However, a lack of available hydrogen is currently hindering development.
- Recycling steel using electric arc furnaces (EAF) is proven to increase consumption of scrap steel and to reduce overall CO₂ intensities of steel. This option faces the challenge from the industrial price of electricity in the UK, which is currently relatively high.
- Energy efficiency measures are in use, with remaining energy efficiency projects having too high a minimum rate of return to be constructed without additional support.

As such, the responses suggest that the Fund should be technology neutral, allowing a broad range of projects and technologies to apply, with the aim of progressing each of the three options towards the long-term decarbonisation of the sector.

This call for evidence closed on 21st November 2019. The responses received therefore do not consider the Coronavirus outbreak or the ensuing economic downturn in 2020. This has had a significant impact on the steel sector and BEIS is aware that the Clean Steel Fund will be operating in a changed environment.