

Environmental Audit Committee Inquiry

Technological Innovations and Climate Change: Green Steel

Community Union submission

Community is the largest and leading union in the steel sector with representation in all the major steel employers across the UK including Tata Steel, British Steel (Jingye), Liberty Steel, Celsa and smaller producers like Sheffield Forgemasters and Outokumpu, as well as downstream suppliers.

We are pleased to be able to submit evidence to the committee's inquiry.

Routes to decarbonisation

The steel industry will face a deep transformation in the coming years, but it is unclear what steelworks will look like in the future. Technologies can be combined in different ways to reach the emission targets, and considering decarbonisation prospects, it is possible to distinguish in principle between three approaches:

- Carbon Direct Avoidance: using hydrogen and/or electricity for producing iron and steel.
- Smart carbon usage: making processes more efficient so that less energy is required, partially cutting emissions. This can be complemented by carbon capture and storage (CCS) or carbon capture and usage (CCU) to transform CO₂ into by-products for other industries.
- Circular approach: the carbon input is substituted by utilising other by-products as carbon carriers.

Community's research report into preparing for a just transition heard from industry experts who remarked that these approaches are not mutually exclusive, and companies will likely adopt a combination of different approaches and technologies to cut their emissions¹.

In March 2021 the consultancy Syndex and the Material Processing Institute (MPI) produced a report² detailing the specific leading options for the decarbonisation of the steel industry. One of the key themes stressed in the report was the need for a rapid decision on green steel technologies, because the need for decisions on investments in existing plants need to be made.

The Syndex and MPI report proposed that direct reduced iron (DRI) hydrogen would offer a possible way forward for the UK steel industry, as discussed in the call for evidence, but also presented a range of other options which could be considered by the industry. They make clear in a mid-term scenario blast furnaces and DRI furnaces will remain the main routes for European steel producers, and Electric Arc Furnaces (EAF) based steel will only reach a share of 40% production by 2050.

¹ Community Union and Cardiff University, 'Preparing for a Just Transition: meeting the green skill needs for a sustainable steel industry' (2021). <https://indd.adobe.com/view/a9bc234c-6235-442a-8355-bc9fab727c00>

² Marcel Spatari, Chris McDonald, and Stephane Portet, *Decarbonisation of the Steel Industry in the UK: Towards a Mutualised Green Solution*, 2021 <www.syndex.org.uk> [accessed 18 March 2021].

As part of our research into preparing for a just transition, experts pointed to a two-phase scenario.³ The first 'transition' phase can lead to an increase in employment and could last up to 2050. The second phase, however, might result in a reduced workforce because of the resizing of the plants and leaner processes.

Community supports technologies that secure the protection of jobs, communities, and the planet. The majority of our members working in steel view the green transition of the industry as necessary, with 78% believing the green transition will lead to radical technological change in the UK steel industry.⁴

However, we are deeply concerned that no progress has been made towards supporting the industry to decarbonise, placing the UK at increasing risk of being outcompeted. This becomes even more urgent as many of the blast furnaces within the UK are reaching the end of their lifecycle, so critical decisions need to be made about whether to carry out repairs and replacement of key parts in the very near future.

Green steel must mean primary steelmaking

If the just transition is not managed correctly in the UK then there will be no choice but to import steel from abroad. This will increase overall levels of pollution, particularly if imported from countries with lower environmental standards, but also on account of emissions from transport, which can contribute substantially to the overall carbon footprint of steel products. Indeed, evidence from UK Steel suggests that a tonne of steel produced in China has fifty times the emissions of one produced in the UK, primarily on account of such transport costs⁵.

Supporting primary steelmaking is popular. When we surveyed ordinary people in 4 steel constituencies, we found that 98% agreed or strongly agreed that it was important that we make steel in the UK rather than importing it from abroad. Retaining primary steelmaking in the UK is the only environmentally and socially conscionable option.

Industrial strategy and government policy

Long-term sustainability requires new industrial strategies as well as strong government support. We believe that a plan for the UK's steel industry, with guidance from the government is critical in helping steel employers to take the next steps on the climate transition journey. The government's plan for growth was notably lacking in detail on how incumbent industries such as steel should prepare for the net zero transition.

The government must provide clarity on the technological direction of travel so that employers can plan ahead appropriately.

In addition, two immediate short-term priorities must be:

- A financial contribution including for research and development into disruptive technologies, including the promised but not yet delivered £250m clean steel fund. This fund is critical in giving steel employers the support they need to drive forward the transition.

³Community Union and Cardiff University, 'Preparing for a Just Transition: meeting the green skill needs for a sustainable steel industry' (2021). <https://indd.adobe.com/view/a9bc234c-6235-442a-8355-bc9fab727c00>

⁴ Community Union and Cardiff University, 'Preparing for a Just Transition: meeting the green skill needs for a sustainable steel industry' (2021). <https://indd.adobe.com/view/a9bc234c-6235-442a-8355-bc9fab727c00>

⁵ UK Steel, *Maximising Value: Positive Procurement of Steel*, 2021, p. 6 <www.makeuk.org/uksteel>.

- Immediate support to ensure that the industry can survive and make needed investments. The UK's steel industry is currently at a competitive disadvantage compared to international competitors thanks to issues such as energy prices. Energy prices continue to be the major policy change that government needs to make to ensure that the steel industry survives to be able to decarbonise. In February 2022, there were on average just five hours a day when it was cost effective to make steel thanks to soaring energy prices.

We are deeply concerned by the total lack of action taken by the UK government. This contrasts starkly with the huge sums of money co-invested by the French and Belgian governments with steelmakers like Arcelor to facilitate decarbonisation.

The consequences of failing to invest

At Community we have seen too many times in the past the dire consequences of failure to support the steel industry. Fundamentally, the steel industry requires massive investment to continue to flourish, and there is an existential threat to the industry if this is not done correctly.

The tragic case study of Redcar steelworks, which closed suddenly in 2015 shows the harms done to the community when the steelworks suddenly closed. Our report⁶, published in 2020 explored the need for a just transition for workers and demonstrated the consequences when such a transition and support for the workforce is not secured.

Whilst those who worked at the steelworks were able to find new jobs, our research found that they were typically lower paid and on worse conditions than the jobs they were previously employed on in the steelworks. The area also lost a strong sense of community which the steelworks had produced, and there were significant effects on workers' mental health including several cases of family breakdown. The Redcar site remains undeveloped nearly seven years later, showing that immediate recovery is challenging and requires significant investment.

It appears that successive governments have not learned the lessons of history, as the effects in Redcar mirrored the effects of plant closures in Ravenscraig, Bilston and others throughout the 20th century.

Should the UK government fail to invest in low carbon steelmaking, other steel communities are at risk of suffering the same fate.

Today communities where steelworks remain are strong with a deep-rooted sense of local pride. In 2022 Community has conducted polling in four constituencies where steelworks are currently present. We found that, conducting polling in four steel constituencies, 91.5% agreed or strongly agreed that the steel industry makes an important contribution to their community. In parallel 88% agree/strongly agree that the steel industry is a source of pride for their community.

We also conducted a poll of our steel members with similarly striking results showing the importance of steel jobs to their communities. 88% of respondents told us they were the main earner in their household, and 52% had other family members working in the steel industry or the supply chain. 94% told us they were proud to be a steelworker. And 90% told us they believed that "the future of my local community relies on the future of the steelworks".

Additional policy support required to encourage the transition to low-carbon steelmaking

⁶ David Coats, *A Just Transition? Managing the Challenges of Technology, Trade, Climate Change and COVID-19*, 2020 <<https://www.ferryfoundation.org.uk/Handlers/Download.ashx?IDMF=d3595d49-cb31-40c3-8a28-d6e7a4846866>>.

Carbon border adjustment mechanism

We are deeply concerned that no progress has been made towards developing a carbon border adjustment mechanism in the UK, whilst a proposal is being rapidly developed in the EU. Such a mechanism would be critical for protecting the profitability of companies which do the right thing and decarbonise preventing them from being undercut from dirty imports from abroad.

This is an important piece of policy support which has not been the focus of enough attention within the UK. This could mean that UK producers who take steps towards decarbonisation will be undercut by less environmentally friendly imports, but that they also risk harming UK exports into the EU market if work is not done to ensure alignment on standards.

Skills development

Whilst there remains high uncertainty regarding the technologies and routes that will provide the best opportunities for companies, as well as uncertainties at the policy level, it is crucial for policymakers, employers and unions to be proactive in anticipation of change, particularly on skills. Whilst jobs, tasks and processes are likely to change in the future, the skillset workers will need is not expected to change significantly as transferability of skills will play a greater role in the industry. Our research found skills such as advanced digital skills, entrepreneurship, sustainable development and analytical thinking are underdeveloped.⁷

⁷ Community Union and Cardiff University, 'Preparing for a Just Transition: meeting the green skill needs for a sustainable steel industry' (2021). <https://indd.adobe.com/view/a9bc234c-6235-442a-8355-bc9fab727c00>