

Statement on the future need for coal in the steel industry

Submission to Cumbria County Council Development Control Committee, 12 June 2020

There is a [planning application \(ref 4/17/9007\)](#) currently before Cumbria County Council, for the development of an underground metallurgical coal mine.

The developers, West Cumbria Mining, state that coal from the mine will be needed for steelmaking throughout the fifty-year lifetime of the permission (i.e. until about 2070). West Cumbria Mining's planning statement says:

"Emerging technologies are capable of producing steel without metallurgical coal. However these technologies are in their infancy and, as Dr Bristow [the expert employed by West Cumbria Mining; [his statement is here](#)] explains, will not replace blast furnace steel production as the primary process for steel production for the foreseeable future, and indeed for the proposed life of the planning permission. Therefore, the production of steel in the quality and quantity that is likely to be required by society will require continued blast furnace production in Europe with the use metallurgical coal throughout the lifetime of the Proposed Development"

WCM Planning Statement p21, paragraph 4.2.11

West Cumbria Mining further state that if the planning application were refused (what they term the 'Do Nothing' Scenario) the same amount of coal would be used in existing or future steel works, so there are no additional greenhouse gas emissions caused by the use of the coal they intend to extract:

"in this case the use of the WCM coal produced by the Proposed Development would not, as assessed by AECOM [the consultants commissioned by WCM; their report is here] give rise to any additional environmental impacts above the existing baseline (of "Do Nothing") , because as explained in the AECOM Report (also evidenced elsewhere in the application documentation) it would simply be replacing coal that is already being used in existing steel works or else would otherwise be supplied from existing sources elsewhere for any future steel works. Based upon the evidence before it and upon the professional judgement of AECOM, the Proposed Development would not give rise to any additional effects as a result of its coal being burnt at steel plants. Any such effects would not be significant or materially different from the existing baseline should the proposed development not be granted planning permission" WCM Environmental Statement p5, paragraph 10 ii

As independent experts with specialist knowledge in this area (listed at the end of this statement), we do not agree with this position. In contrast, we state that:

1. Currently, 95% of primary steel is made in blast furnaces, using metallurgical (coking) coal¹. Steelmaking is responsible for around 5-7% of global carbon emissions².
2. Decarbonising the global economy, in line with the Paris Agreement to avoid dangerous climate change, will require a significant reduction in the amount of metallurgical coal used for steelmaking.
3. There are existing and emerging technologies which eliminate or reduce the need for coking coal. These include improving the process efficiency of blast furnace steel production; Direct Reduced Iron (DRI) using natural gas; recycling steel using Electric Arc Furnaces (EAF); and hydrogen direct reduction (H-DRI). Examples of innovation include Arcelor Mittal's Torero project, using biocoal to substitute for coal;³ and the Hybrit project, Sweden, using hydrogen in place of coal, which aims to produce fossil-free steel by 2026.⁴
4. The Energy Transitions Commission states that "a complete decarbonisation of the steelmaking industry is achievable by mid-century".⁵ Many steel companies have reduction targets – for example, Arcelor Mittal has pledged to reduce its emissions in Europe to zero by 2050. The Swedish company SSAB will cut emissions by 25% by 2025.
5. Given these developments, and the EU and UK's climate change commitments, we consider that the need for metallurgical coal in the European market will reduce very significantly in the next few decades, and will need to do so if the temperature targets in the Paris Agreement are to be met.

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¹ Energy Transitions Commission, July 2018, 'Reaching zero carbon emissions from steel', consultation paper

² Energy Efficiency and CO₂ Reduction in the Iron and Steel Industry, European Commission, n.d.

https://setis.ec.europa.eu/system/files/Technology_Information_Sheet_Energy_Efficiency_and_CO2_Reduction_in_the_Iron_and_Steel_Industry.pdf

³ <http://www.torero.eu/>

⁴ <http://www.hybritdevelopment.com/>

⁵ Energy Transitions Commission, July 2018, 'Reaching zero carbon emissions from steel', consultation paper