<table>
<thead>
<tr>
<th>Criterion</th>
<th>RS Member?</th>
<th>Level of Support</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criterion 10.4, 10.4.7.d: Do you support the inclusion of a credit for the utilisation of recovered waste heat?</td>
<td>No</td>
<td>Strongly support</td>
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Thank you for the suggestion to substitute “waste energy” for “waste heat” in order to extend the classification to include waste pressure and other waste byproducts. We propose to replace the term “waste heat” with “waste energy” in 10.4.7.d. With regards to the use of waste energy, credit should be given for not only process generation but also heat utilisation (i.e. steam utilisation). We propose to change 10.4.7.a. to: “Cred for the re-use or recycling of process gas or waste energy” and revise the requirements accordingly. Add “Cool Dry Quenching (CDQ): Waste energy recovery facility that recovers sensible heat in steam” as an example of waste energy recovery facility. TRT and CDQ are both standard equipment in many countries.”

Although the intention of the consultation was to look at the inclusion of waste heat with process gases, we understand your logic and want to address all off-setting related concerns. I was wondering if we could organise a meeting to discuss further? Of note, I would like to understand how to fairly and credibly treat electricity produced using steel plant process gases if it is consumed offsite/downstream of the system boundary.

Please refer to the last bullet point of Guidance for 10.4.7.d.

In response to your disagreement to Criterion 10.6’s proposed adjustment, we completely understand your position on the importance of maintaining a level playing field between all steel producers regardless of scrap input. However, we would like to stress that we are not proposing a policy change — the original, current policy is to have a slightly shallower gradient in favour of high scrap sites to encourage increased recycling rates within the bounds of constrained end-of-life scrap availability. A slightly shallower gradient should be optimal in terms of overall GHG emissions reduction for the sector, and in terms of being the least trade distorting” method to achieve the environmental objective of steel sector GHG reduction.

The rigorous data analysis process that ResponsibleSteel went through last year to ensure high-quality data on current steelmakers was obtained, we believe that 0.5 t CO2e/t steel at the 100% scrap end is optimal in terms of overall GHG emissions reduction for the sector, and in terms of being the least trade distorting” method to achieve the environmental objective of steel sector GHG reduction.

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Generally support

What is the definition of scrap (should be included in this section)? Should clarify that the % of scrap threshold is based on CRU data. 2020 and 2021 are referred to as the years being compared - which is it? Progress level 4 is based on IEA - but what method was followed? Why are the total metallics included as the denominator given that not all metallics are added end up in the steel?

For the purpose of determining the ResponsibleSteel GHG emissions intensity for crude steel, the quantity of scrap used in the annual production of crude steel includes end of life scrap, manufacturing scrap and home scrap, but excludes internal scrap (see glossary).

CRU 2020 data was originally used, but the latest update are based on CRU 2021 data.

Generally support

Note the next comment: a data revision would form the basis for another threshold once the underlying data used for threshold regression been adjusted to reflect the proposed revisions to Principle 10. Our expressed support is conditional on this being affirmed. Our concern is that the emissions credits for surplus process gas utilisation will materially impact the data.

The CRU methodology was already encoding from utilization of batch process gases and waste heat to produce electricity/steam. The wording adjustment to include waste heat only causes an adjustment to the standard wording, not the thresholds.

Strongly support

The test in 10.6.5 needs clarification as it creates a range of understanding. Especially, in 10.6.5.e, it should be clearly mentioned that hot rolled steel emissions intensity is calculated by "crude steel intensity (ton-CO2e/ton-steel)" amount of crude steel required to produce 1 ton of hot rolled coil (ton-CO2e/ton-hot rolled coil) emissions intensity of hot rolling process (ton-CO2e/ton hot coil).

Mixed stakeholder support was evidenced on the inclusion of GHG emissions related to hot rolling, which prompted multiple discussions regarding the RS emissions boundary. Agreement within the Secretariat was eventually achieved that to maintain the integrity of ResponsibleSteel’s position on the crude steel boundary, we should not collect additional data on hot rolling. It is an unnecessary requirement for sustainability outcomes of the standard and is potentially confusing. There may be value in extending to hot rolling to align with other methodologies (e.g. SBTi) and include a larger portion of the overall steel product emissions (especially for scrap-based EAF producers). However, there are clear advantages to maintain crude steel boundaries (notably comparability across all steel products). The prospect of extending the hot rolling emissions boundaries could be revisited in the future.

No support

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Strongly support

We neither support nor disagree with the current proposal and its wording. We support transparency on emissions. If inclusion of hot rolled steel was come to changing the progress level thresholds then we would advocate for it to require further consultation.

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Strongly support

The standard is about certifying steel products, not specifically about developing a database of numbers to compare differences in rolling outcomes of the standard and is potentially confusing. There may be value in extending to hot rolling to align with other methodologies (e.g. SBTi) and include a larger portion of the overall steel product emissions (especially for scrap-based EAF producers). However, there are clear advantages to maintain crude steel boundaries (notably comparability across all steel products). The prospect of extending the hot rolling emissions boundaries could be revisited in the future.

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Strongly support

All efforts are to be made to include SCOPE 3 emissions as soon as possible and thus also be able to fully integrate the production of high alloy steels (+5%). Development of a high alloy and stainless steel (HAIS) threshold is a priority for this year.

Mixed stakeholder support was evidenced on the inclusion of GHG emissions related to hot rolling, which prompted multiple discussions regarding the RS emissions boundary. Agreement within the Secretariat was eventually achieved that to maintain the integrity of ResponsibleSteel’s position on the crude steel boundary, we should not collect additional data on hot rolling. It is an unnecessary requirement for sustainability outcomes of the standard and is potentially confusing. There may be value in extending to hot rolling to align with other methodologies (e.g. SBTi) and include a larger portion of the overall steel product emissions (especially for scrap-based EAF producers). However, there are clear advantages to maintain crude steel boundaries (notably comparability across all steel products). The prospect of extending the hot rolling emissions boundaries could be revisited in the future.

Strongly support

"In current 10.7.2 a.e the ResponsibleSteel crude steel GHG emissions intensity performance level 1, 2, 3 or 4) as specified in 10.6.5.e that has been achieved by the site) is going to be replaced by "x", the hot rolled steel GHG emissions intensity performance of the site (metric tonnes of CO2e/metric tonne hot rolled steel), as determined in conformity with the requirements of 10.6.5.e."
Citation 13.7.3-2.7.2. Do you support the proposal to publicly report the GHG emissions intensity of hot rolled steel for sites wishing to market or sell steel products, by products, and co-products?

No Strongly disagree

Do you intend to report this as the hot rolling process or the hot rolled product? What about yield losses? If tonne of hot rolled product uses more than 1 tonne crude steel? Should different hot rolled products be combined if coming from the same crude steel? I imagine a site would know how much crude steel are produced for their annual production and on top of that you are proposing hot rolled products - this could be multiple depending what products a site makes - and then on top of this the product carbon footprint. This seems unnecessary and potentially confusing. How to maintain consistency between hot rolled values at site level (e.g. within replacement value etc) and the hot rolled product CFP?

If only that the product is being certified and then it should be the product carbon footprint. Mixed stakeholder support was evidenced on the inclusion of GHG emissions related to hot rolling, which prompted multiple discussions regarding the RS emissions boundary. Agreement within the Secretariat was eventually achieved to maintain the integrity of ResponsibleSteel’s position on the crude steel boundary, whereby we should not collect additional data on hot rolling. It is an unnecessary requirement for sustainability outcomes of the standard and is potentially confusing. There may be value in extending the hot rolling emissions boundary could be revisited in the future.

Citation 13.7.3-2.7.2. Do you support the proposal to publicly report the GHG emissions intensity of hot rolled steel for sites wishing to market or sell steel products, by products, and co-products?

Yes Strongly support

The expansion of the boundary condition from crude steel to hot-rolled steel has advantages: (i) the transformation activities of secondary steel producers can be strongly rewarded and thus incentivize decarbonization investments in the second route. Note, in addition to the use of green electricity, the decarbonization challenges on the EAF side is in the downstream processing of crude steel to hot rolled steel. (ii) It gives a chance to account also for, Scope 3 emissions (alloying agents), which are responsible for a high share of emissions. Therefore, it is useful to be reasonable to generally expand the boundary condition from crude steel to hot rolled steel while including Scope2 and Scope3 emissions. If Scope3 emissions will be included in the future, there must be adjustment of the decarbonization level thresholds.

Mixed stakeholder support was evidenced on the inclusion of GHG emissions related to hot rolling, which prompted multiple discussions regarding the RS emissions boundary. Agreement within the Secretariat was eventually achieved to maintain the integrity of ResponsibleSteel’s position on the crude steel boundary, whereby we should not collect additional data on hot rolling. It is an unnecessary requirement for sustainability outcomes of the standard and is potentially confusing. There may be value in extending the hot rolling emissions boundary could be revisited in the future.

Citation 13.7.3-2.7.2. Do you support the proposal to publicly report the GHG emissions intensity of hot rolled steel for sites wishing to market or sell steel products, by products, and co-products?

No Strongly support

Emissions of hot rolling should over time be included in the boundary, and the progress level thresholds should be adjusted accordingly. Doing so would incentivize decarbonization of the hot rolling process which is common in a vast majority of steel products, and would reward efforts to decarbonize hot rolling.

Mixed stakeholder support was evidenced on the inclusion of GHG emissions related to hot rolling, which prompted multiple discussions regarding the RS emissions boundary. Agreement within the Secretariat was eventually achieved to maintain the integrity of ResponsibleSteel’s position on the crude steel boundary, whereby we should not collect additional data on hot rolling. It is an unnecessary requirement for sustainability outcomes of the standard and is potentially confusing. There may be value in extending the hot rolling emissions boundary could be revisited in the future.

Citation 13.7.3-2.7.3. Do you support the proposal to publicly report the GHG emissions intensity of hot rolled steel for sites wishing to market or sell steel products, by products, and co-products?

Yes Strongly support

We believe the generic value should be either with an average value for non-ferrous or ferro alloys. This value for cold iron grosses the extra footprint of the alloying elements. A too low value will not stimulate identifying the true value. It will also not stimulate decarbonization of alloy element production.

Mixed stakeholder support was evidenced on the inclusion of GHG emissions related to hot rolling, which prompted multiple discussions regarding the RS emissions boundary. Agreement within the Secretariat was eventually achieved to maintain the integrity of ResponsibleSteel’s position on the crude steel boundary, whereby we should not collect additional data on hot rolling. It is an unnecessary requirement for sustainability outcomes of the standard and is potentially confusing. There may be value in extending the hot rolling emissions boundary could be revisited in the future.

Citation 13.7.3-2.7.3. Do you support the proposal to publicly report the GHG emissions intensity of hot rolled steel for sites wishing to market or sell steel products, by products, and co-products?

No Strongly support

The proposal to change the hot metal seems to be better, but this would then cause deviation from the site based actual GHG emissions. This is a measure of the actual emissions, but is too use the threshold values. In harmonisation projects, this would be outlined to show why the numbers for RepliSteel certified sites will be lower than other approaches to measure site based emissions. So the site could produce both levels with and without replacement values, to ensure CFP of alloys etc is included. The proposal has a potential type - should by 5% scrap and not 5% iron one. Where does the value 2.323 come from? 2nd paragraph of discussion - assume you mean non-ferrous and ferro alloys? Ager, what about scrap share of metals in the product footprint of the alloying elements? A too low value will not stimulate identifying the true value. It will also not stimulate decarbonization of alloy element production.

Mixed stakeholder support was evidenced on the inclusion of GHG emissions related to hot rolling, which prompted multiple discussions regarding the RS emissions boundary. Agreement within the Secretariat was eventually achieved to maintain the integrity of ResponsibleSteel’s position on the crude steel boundary, whereby we should not collect additional data on hot rolling. It is an unnecessary requirement for sustainability outcomes of the standard and is potentially confusing. There may be value in extending the hot rolling emissions boundary could be revisited in the future.

Citation 13.7.3-2.7.3. Do you support the proposal to publicly report the GHG emissions intensity of hot rolled steel for sites wishing to market or sell steel products, by products, and co-products?

No Strongly support

Before we can provide our opinion, we would like to see some worked examples to demonstrate the effect and the rationale behind the proposed approach.

Mixed stakeholder support was evidenced on the inclusion of GHG emissions related to hot rolling, which prompted multiple discussions regarding the RS emissions boundary. Agreement within the Secretariat was eventually achieved to maintain the integrity of ResponsibleSteel’s position on the crude steel boundary, whereby we should not collect additional data on hot rolling. It is an unnecessary requirement for sustainability outcomes of the standard and is potentially confusing. There may be value in extending the hot rolling emissions boundary could be revisited in the future.

Citation 13.7.3-2.7.4. Do you support the proposal to publicly report the GHG emissions intensity of hot rolled steel for sites wishing to market or sell steel products, by products, and co-products?

Yes Strongly disagree

We have a technical resource who is in leave at the moment, who could provide an opinion next week if needed. Please email me if you would like to consult her on GWP emission factor estimates for alloys.

Yes Strongly disagree

Yes Strongly disagree

Yes Strongly disagree

Yes Strongly disagree
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<td>Finally! Please leave any overarching comments you would like to make. And thank you for your time!</td>
<td>Since the electricity consumption of an oxygen plant is relatively large in a steel mill, we would like to ask the following question: Responsible Steel's default emissions value for oxygen and nitrogen are defined as worldsteel's emission factors x 1.2, but what is the basis for the 1.2? Simply, a slight increase above the global average is applied as a conservative factor that takes into consideration uncertainty and encourages members to seek out primary data. A factor of 1.6 is applied to metallurgical coal and natural gas to consider the additional uncertainty of methane emissions in these supply chains.</td>
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<td>Yes</td>
<td>Regarding general transparency, as members we would like to be able to access information regarding key audit findings and GHG values for steel producing sites. The same would be good with recycled content (pre- and post-consumer, as well as % home scrap used). Required disclosure includes emissions intensities and recycled content for progress levels. Recycled content is currently not split (conversation to be had during CoC consultation).</td>
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<td>Yes</td>
<td>Re Q9 - We would like to see greater clarity on the accounting methodology to understand the alignment of the proposed methodology with internationally recognised LCA standards. We would be concerned if it created confusion in the market with LCAs. As part of our work under Steel Standards Principles, we are working with other bodies to standardise GHG accounting methodologies, including LCAs, and where standardisation is not possible at least ensure interoperability. For ResponsibleSteel’s site-based crude steel thresholds, there are differences in purposes when compared to product-based LCAs, however a level of harmonisation has already been achieved across the methodologies and will continue to be strengthened.</td>
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