

TEG MANUFACTURING SECTOR WORKSHOP SUMMARY

Meeting of March 27, 2019

1. Opening

The manufacturing workshop was opened by the sub-group co-chairs [REDACTED] and [REDACTED] who welcomed experts and reminded the participants (see annex with list of attendees) that the purpose of this workshop was to gather further feedback and contributions on the outstanding questions evolving from the TEG's deliberations on a taxonomy framework and more specifically within the manufacturing sector and sub sectors. The workshop is held in order to facilitate a focused and constructive exchange of views across the following main agenda points:

- **Current Taxonomy progress update**
- **Overarching issues across the Manufacturing Group and collated responses** from manufacturing experts on the main questions asked relative to metrics and thresholds:
 - *Based on the mitigation principle provided, what metrics would you recommend to measure mitigation performance? Relative or absolute indicators? What strengths and weaknesses could you identify in the metrics that you would recommend?*
 - *Is it possible to establish thresholds for these metrics? If yes, what criteria shall be used in establishing the thresholds? Shall thresholds be constant or dynamic?*
 - *What is your advice on the use of thresholds over time? Please take into account available methodologies/scenarios, and usability.*
- **Focused discussions, learnings and outstanding questions for each of the main economic activities**
- **Next steps**

2. General Issues for discussion

The discussions started by focusing on several cross-cutting issues that the manufacturing group had identified as still needing to be resolved. What follows below is a summary of feedback in the discussions on these general issues.

The Co-Chairs reminded the participants on several occasions that the scope of economic activities could have been much narrower and only focused on low carbon technologies. It is due to the continuous demands from energy intensive sectors in Europe to be given the opportunity to demonstrate low carbon investments and production processes that the scope was extended to address energy intensive and general manufacturing sectors.

a) Clarification for terminology and usability (requested by participants)

The opening discussions revealed some misunderstandings around the focus and application of the Taxonomy –which were clarified as follows:

- The taxonomy is focused on contributing to “substantial mitigation” not focused on measuring sustainability.

- The taxonomy will set criteria for economic activities and not companies. A single company may carry out a number of different economic activities and more than one may be taxonomy eligible activities. The criteria set in taxonomy do not evaluate companies but rather the activities of companies.
- The taxonomy does not operate in isolation but is part of a package which includes disclosure, benchmarks, and the green bond standard and fits in a much broader policy context.
- The taxonomy is not about identification of lower risks. That is still the job of each investor.

The participants requested that clarifications are provided on the definition of terms (e.g. "economic activity", "substantial contribution") and the fact that the current focus is only on activities making a substantial contribution to climate change mitigation (rather than broader sustainability objectives) in order to avoid confusion and manage expectations.

The participants also requested the clarification on how the Taxonomy would apply to various financial instruments, e.g. equity; how a Company would report the compliance with the Taxonomy.

Action for Manufacturing Group Chairs: To bring this request for a published glossary of terms to the attention of the TEG and European Commission.

b) Many activities have not yet been considered by the TEG and the Taxonomy sector groups:

Issue: The focus of the TEG has been on those economic activities that have the highest GHG emissions and/or can make a substantial contribution to climate mitigation. Additional economic activities and further environmental objectives will be considered by a future Platform for sustainable finance, under the direction of the Commission.

Discussion:

It was noted that steel, copper, and aluminum could fall under both the greening of and greening by categories as could the manufacture of low carbon fuels, e.g. green hydrogen. Discussions clarified that the manufacturing of any product or technology that leads to demonstrated substantial emission reductions (over its life-cycle) through its use (including new innovative technologies that are or are not yet on the market today) could be taxonomy eligible if fulfilling the screening criteria to be set under the category 4 of the manufacturing of low carbon technologies activity.

c) EU – ETS CO2 Benchmarks

Issue: The use of EU ETS Benchmarks has been criticised for being backward looking and for only rewarding incremental progress. They are also EU focused and may not always be an appropriate reference point for activities taking place outside of the EU or activities that are not covered by the ETS.

Discussion:

TEG members affirmed that the use of the EU ETS benchmarks was a starting point and selected due to the available robust data underlying them. A major difference to the EU ETS is that the taxonomy will consider more than scope 1 emissions.

Still several participants pointed out that the EU ETS Benchmarks are not necessarily aligned with the transition to a Paris-agreement aligned economy. Some participants recommended using

qualitative screening criteria instead. It was noted that qualitative screening criteria have the disadvantage that they would prescribe specific approaches or solutions and it is easier to assure technological neutrality using quantitative screening criteria (e.g. tCO₂e/t product) that can be met in a variety of ways. Other participants supported the use of the EU ETS benchmarks as they would avoid the need for companies to generate other parallel data sets.

It was clarified that the EU ETS Benchmarks are based on the performance of the top 10% facilities in the EU producing a certain product and that the benchmarks are being revised and will be revised over time, so they will reflect low carbon solutions as soon as these are actually adopted in the market.

A participant mentioned that another useful source of data could be the EU Transition Log (EUTL).

The issue of recycling was raised, and how this could be assessed in the thresholds since recycling can result in significant emission reductions. A possible approach proposed by a participant would be setting absolute threshold in terms of tCO₂e/t product at a level that actually requires a high share of secondary (rather than primary) production in order to be met. However, other participants stressed that for many materials (e.g. aluminium), all what is available for recycling is recycled because it makes economic sense. Therefore, the only way to encourage more recycling through the taxonomy would be encouraging further separate collection of these waste streams.

Participants were encouraged to share proposals of screening criteria for waste management activities (to be suggested to the waste group) or other possible methodological approaches for incorporating recycling into thresholds.

b) Considering sources of electricity

Issue: Is using low carbon electricity (e.g. RE, Nuclear) as an energy source for manufacturing considered as ‘greening of’? This is specifically, relevant for aluminium, steel (arc furnaces) and the chemical sector.

Discussion: Several participants stated that switching to green electricity should be considered, and that setting absolute energy use thresholds to encourage the efficient use of low carbon fuels would go out of the remits of the Taxonomy. Other participants were of the view that they should be included, since we will need to ensure ever increasing efficiency to maximise the availability of electricity, since all participants agreed that the availability of renewable energy is likely to be a limiting factor as we transition to a low carbon future. The Manufacturing Group Chairs and sub sector leads indicated that an economic activity that would only switch to a low carbon energy source without energy efficiency gains would not qualify under the “greening of” category.

3. Discussions on subsectors under Manufacturing

3.1 Manufacture of aluminium and copper

Other issues recommended to the TEG to take into consideration:

- **Impact of mining on the energy consumption in manufacturing in the setting of screening criteria.** The supply of materials is decreasing in quality, resulting in more energy consumption to produce copper at the quality we are used to. i.e. energy intensity of the copper industry can increase due to the increasing complexity of raw materials.

Action: Participants to provide inputs on quality of ores and its impact on energy use

- Participants acknowledged **both performance data for CO2 and performance data for electricity consumption are relevant for threshold setting**, as well as the carbon intensity of the electricity supply.
- **Addressing the mitigation enabled by products of these sectors.**

Action: Participants to send evidence on "greening by" potential of copper and aluminium products to head of subgroup and co-chairs of manufacturing

- **Impact of switching production off and on again (in the framework of interruptability arrangements) on GHG emissions.** A participant asked for this important function to be recognised: in case a plant is providing interruptability services to the electricity network (which enables having more renewable energy on the grid), it should be allowed having GHG emissions 10-20% higher than the threshold that would be fixed.
- **Criteria for rates of recycling.** It was recommended that the Taxonomy consider establishing criteria for end of life recycling. A participant stated that criteria on recycled content would interfere with optimised recycling paths that are followed otherwise. The group was reminded that the NACE Codes for aluminium and copper manufacturing include secondary production, i.e. recycling, but not waste collection. Separate criteria should be developed for primary production and secondary production as these processes are very different and take place in different facilities.

Action: participants can provide suggestions of criteria addressing copper and aluminium recycling. (If these are on waste collection, they will be passed on to the waste group for consideration.)

3.2 Manufacture of steel and iron

Other issues recommended to the TEG to take into consideration:

- **Need to consider how the thresholds will impact the different types of steel products produced.** The proposed thresholds would result in only simple steel products being eligible and perhaps excluding products that are needed for a low carbon future.
- **Consider both "greening of" and "greening by" contribution of steel manufacturing.** Steel can be both greening of and greening by. In response participants were reminded that the category manufacturing of low carbon technology allows for inclusion of the manufacture of greening by products via a life cycle analysis from all manufacturing sectors. Thus, a steel manufacturer could have some of its operations eligible because meeting the threshold set for greening of steel manufacturing and other operations eligible because meeting the screening criteria set for "manufacturing of other low carbon technologies" (which will be LCA-based).

- **It was suggested that LCA should be used to define thresholds for steel.** Discussions noted that the difficulty is defining what the LCA should be compared to. Accepting all improvements in LCA results is not coherent with the taxonomy approach. The taxonomy is intended to acknowledge those activities that result in substantial mitigation contributions. The aim is assessing this against an absolute reference in terms of performance level for the economic activity.

Action: participant to provide suggestions of how a robust threshold could be set in terms of life cycle carbon emissions and available evidence/data that could be referred to for setting the threshold at an appropriate level of ambition.

- **It was suggested by a participant to further look into innovations** , for instance in the use of blast furnace gas to produce chemicals

3.3 Manufacture of cement

Discussions focused on the following topics:

- **Clarification of the scope:** The taxonomy looks at those processes in the manufacture of cement that results in the most emissions. It is broader than just the grinding centres.
- **Exclusion of concrete and mining operations:** Participants agreed with the exclusion of concrete and mining operations in general. Concrete can be addressed in later phases of the taxonomy when contributions to adaptation and a circular economy will be the focus.
- **Metrics:** EU-ETS benchmarks are only available for two types of cement. No data for cement with alternative binders. So, not all options would be captured. Furthermore, cement experts stated the limitations in using ETS benchmarks are threshold criterion. **Action:** Participants to provide further input needed to set basis for threshold criteria.
- **Sources of information:** TEG should also refer to the roadmap developed by the cement industry in addition to the IEA Cement Roadmap.
- **Scope of emissions considered:** a participant suggested to only focus on scope 1 emissions for cement, because of the limited electricity use. For this same reason, if ETS benchmarks are adopted as the chosen metrics, there would be no need to also set an energy metrics on top of it. Participants from the cement industry were surprised that the Taxonomy was focused on economic activities rather than companies as their operations are international.

As an example, participants were reminded that the EBRD currently does not include cement plants or steel plants in their green bonds. In other words the taxonomy is opening up the opportunity to acknowledge improvements in these sectors as supporting the transition.

3.4 Manufacture of chemicals

- **Inclusion of chemicals produced by refineries:** it was clarified that the taxonomy is on economic activities, not facilities; therefore if a refinery produced a chemical for which the taxonomy has a screening criteria and can demonstrate to meet that screening criteria, that portion of their operations would be taxonomy compliant.
- **Hydrogen:** participants had split views about the level of ambition of the threshold to be set for the manufacturing of hydrogen. Some argued that it should be at the level of emissions achieved by electrolysis using renewable electricity; others that it would be important to set it at a less ambitious level in order to allow a variety of ways of producing low(er) carbon hydrogen to be eligible. Regarding 'greening by', a less ambitious level may also help to promote hydrogen as feedstock replacing fossil fuels, considering the key role hydrogen is expected to play in a zero carbon economy.
- **Coverage of other chemicals:** participants recommended going on with the current list of prioritised chemicals.
- **Considering greening by of chemicals:** that is addressed in the category "manufacture of other low carbon technologies".

3.5 Mining of materials critical for the low carbon economy

Participants welcomed the inclusion of mining in the taxonomy but noted that other issues the TEG might want to consider included:

- **Defining critical** - The issue regarding how to define "critical" was raised. Two different definitions could be considered:
 - One is based on historical data and access to materials.
 - The other is based on an assessment of supply and demand in the future.The second definition of "critical" might be more useful. The TEG would need to qualify the list of references in these terms.

There are also other definitions now being used for such materials including strategic vs critical.

- **Problems of considering the recycling potential as a criteria to exclude them from this category.** this is difficult since some materials are not recyclable, e.g. graphite.

Action: Euromines will submit data.

- **Consideration of materials that are extracted jointly:** some metals are only extractable through the extraction of other metals. E.g. Rare earth is found in the waste from extracting other metals. Similarly, for poly metallic mines: it is not possible to mine for silver without also mining for lead and zinc. How to distinguish between these activities if only one is eligible.

3.6 General manufacturing

The TEG lead on General Manufacturing explained that it seems difficult to include this category because what could work as a threshold or metric for a manufacturing sector does not necessarily work for others. The only way forward seems to analyse manufacturing activities in these sectors one by one, but that would not be possible in the current phase of the work.

Participants suggested:

- If this category is kept, consider including oil and gas sector (refineries) in this category in order to ensure fair treatment across sectors. The refinery representatives said they would send examples of activities of their sector they think should qualify.

The manufacturing Chair reminded the participants that the door was not necessarily closed to other economic activities for coverage as long as it is clear that such activities can offer a substantial mitigation opportunity

3.7 Manufacture of low carbon technologies

A participant offered that she can put the TEG members in touch with consultants expert in LCA that have worked with them on LCA of all their products in order to help formulate an LCA based criteria for manufacturing of other low carbon technologies.

Action: all participants invited to provide suggestions for such criteria.

4. Next steps

- TEG to organise follow up calls next week to resolve outstanding issues.
- Workshop report and power point to be shared with all participants and workshop manufacturing group members.
- Participants to review the workshop report and submit comments if necessary.
- Participants to share data, information sources and proposals for setting thresholds and any further suggestions on metrics.