MYTILINEOS

To:
European Commission
1049 Bruxelles/Brussel
Belgium

Maroussi, 22nd April 2020

Mytilineos is one of the largest industrial companies in Greece, with activities in numerous sectors (*including Metallurgy, Electricity generation and supply, Gas trading, and EPC works*). One of our key lines of business concerns the operation of the largest vertically integrated alumina/aluminium production facility in Europe, where roughly 185,000 tonnes of primary aluminium are produced annually. The company is also making significant strides in the field of aluminium recycling, having recently completed the takeover of 'EPALME', the largest independent producer of secondary (*recycled*) aluminium in Greece. This enables Mytilineos to produce another 11,000 tonnes of recycled aluminium each year, with plans to further scale up the production capacity so as to reach 50,000 tonnes by the year 2022.

Mytilineos fully supports the need for a taxonomy of sustainable economic activities. As identified in the Commission's Inception Impact Assessment, the lack of a harmonised, EU-wide definition of 'environmentally sustainable' activities leads to varying interpretations across different sustainable investment schemes. This creates significant uncertainty for companies that want to access sustainable finance in order to fund investments that could contribute towards the achievement of the EU's environmental goals. Companies need to know which economic activities can be considered environmentally sustainable, and under which conditions.

In this regard, the technical screening criteria that will be defined in the Delegated Acts are absolutely crucial. These criteria need to be ambitious, in order to ensure that the relevant investments actually contribute towards the EU's environmental objectives. However, the criteria also need to be realistic and achievable, in order to ensure that it is actually possible for companies to proceed with the sustainable investments that the taxonomy aims to foster, particularly considering the exposure to global competition of affected companies. Unfortunately, the Technical Expert Group on Sustainable Finance (*TEG*) was characterised by a noticeable absence of representatives from the real economy (*including industry*). As a result, some of the TEG's recommendations do not reflect industrial reality and are therefore unfit for their intended purpose.

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The TEG Report recommends that the production of primary aluminium should be considered as contributing towards climate change mitigation if the first criterion (*below*) is met in combination with **either** criterion 2 or criterion 3:

1. Direct emissions should be equal to (or lower than) the value of the related EU-ETS benchmark (*currently 1.514 tCO2e/t, although this value will be updated in view of Phase IV of the EU ETS*).
2. No more than 15.29 MWh of electricity should be consumed for every tonne of aluminium produced (*i.e. the European average, to be updated annually*),
3. The average carbon intensity of the electricity that is consumed during the electrolytic process should be no higher than 100 g CO2e/kWh (*i.e. the taxonomy threshold for electricity, subject to periodical update*).

The link between the threshold for direct emissions (*criterion 1*) and the EU-ETS benchmark is highly problematic. Until now, the EU-ETS benchmarks have reflected the top 10% performers in each sector. If this were still the case, then the ETS benchmark would be a reasonable technical screening criterion for a primary aluminium producer's direct emissions. However, following the update of the ETS Directive in view of Phase IV of the EU ETS, the benchmarks have been linked with an arbitrary yearly reduction rate (*in line with the formula foreseen in Article 10a(2) of Directive 2003/87/EC*). Therefore, there is no longer any guarantee that the ETS benchmarks will actually reflect the performance of the most efficient installations in each sector (*i.e. the top 10%*). The yearly reduction factor will be based on the historical performance of installations within the sector and there is no guarantee that the same rate of improvement will be (*or even can be*) repeated in the future. Indeed, performance improvements in the aluminium sector tend to happen in larger 'steps' (*caused by technological breakthroughs*), instead of following a linear annual improvement. Therefore, there is a very real possibility that it will be completely impossible for **any** primary aluminium producer to satisfy the technical screening criteria. This would effectively exclude our entire sector from sustainable finance, thereby undermining the taxonomy's stated objective of fostering investments in sustainable production.

The proposed technical screening criterion for indirect emissions (*100 g CO2e/kWh*) is also incredibly unrealistic. Primary aluminium is produced via the process of electrolysis, and the requirement for massive volumes of baseload electricity makes it very difficult to cover this demand using low-carbon generation, which tends to be much more variable (*particularly in the case of wind and solar production*). These difficulties are outlined in detail in a report that was recently issued by the European Commission itself[1]. Greening Europe's electricity mix while simultaneously safeguarding security of supply and maintaining the global competitiveness of energy-intensive industries constitutes a major challenge, which cannot be overcome by simply setting overly aggressive benchmarks. The proposed indirect carbon footprint threshold of 100gCO2e/kWh is simply unrealistic under current circumstances, apart from in very specific situations (*e.g. where the electricity mix is dominated by hydropower*). **This is even acknowledged in the TEG Report itself**, which specifically mentions (*on p.173 of the Technical Annex*) the fact that "*in the short term the availability of low*

[1] European Commission, 2019. Competitiveness of corporate sourcing of renewable energy, Part 2 of the Study on the competitiveness of the renewable energy sector.

carbon electricity may be a limiting factor, depending on the region", before noting that "*this will change in the medium term, when sufficient low carbon electricity will become available*".

It should go without saying that the technical screening criteria should reflect possibilities that are actually available to us today, based on our current level of knowledge and technological progress. Otherwise, it would be completely impossible for any company to access sustainable finance, and therefore the taxonomy would not achieve its stated purpose of stimulating sustainable investments. The possibility of using an investment plan to outline how an economic activity will be able to meet the technical screening criteria over a longer period of time (*e.g. 5 or 10 years, as foreseen on p.172 of the TEG report's Technical Annex*) is a step in the right direction, and will help companies that are aiming to transition towards 'sustainability'. However, this alone is not enough: there is absolutely no guarantee that it will be possible for an aluminium producer to reduce its indirect carbon footprint to below 100gCO2e/kWh in 5 or 10 years. The taxonomy's technical screening criteria must reflect levels of performance that are actually attainable; if sufficient volumes of affordable low carbon electricity are available in the future, then (*and only then*) would it be reasonable to set a more aggressive threshold (*e.g. 100gCO2e/kWh*)[2].

Given the aforementioned problems with the TEG's proposed technical screening criteria for direct and indirect emissions, it would be far more appropriate to base the screening criteria for primary aluminium production on the Aluminium Stewardship Initiative's (ASI) Performance Standard[3]. The ASI Performance Standard was developed by industry experts following a comprehensive consultation process, and contains an extensive set of environmental, social and governance criteria, with the aim of defining best practice with regard to sustainability issues across the aluminium value chain[4]. The Standard is regularly reviewed, in order to keep it up to date with ongoing developments (*the next formal review will take place before the end of 2022*). In fact, the ASI Performance Standard is already referenced as one of the sources of information that the TEG relied on in order to develop its recommendations (*p.173 of the TEG Report's Technical Annex*). The Performance Standard (*which our company has signed up to*) currently foresees a combined threshold of **8 tCO2** (*direct + indirect emissions*) for every tonne of aluminium produced. New primary aluminium smelting facilities must meet this target from 2020 onwards, whereas existing smelters must ensure compliance by 2030. To put this threshold into context, the average carbon footprint of Chinese primary aluminium production

[2] This is also evidenced by the International Energy Agency's modeling exercise, which notes that the average carbon intensity of EU electricity supply is currently around 280tn/MWh and is unlikely to drop below 100 before 2030. Demanding that the primary aluminium indirect carbon footprint is well below the average of the electricity grid appears at odds with the exceptional exposure of primary aluminium production to electricity costs (which represent roughly 40% of overall production costs), and the unique, technical requirement for massive volumes of uninterrupted/baseload supply.

[3] Aluminium Stewardship Initiative, 2017. ASI Performance Standard.

[4] It could be argued that, with the exception the "*minimum safeguards"* laid down in Article 13, the Regulation regretfully focuses almost exclusively on '*environmentally sustainable*' activities, overlooking all of the other UN Sustainable Development Goals, even though all "*17 Goals are interconnected, and in order to leave no one behind, it is important that we achieve them all by 2030"*.

(*which accounts for almost 60% of global production*[5]) is **20 tCO2/t**[6], i.e. 2.5 times higher than the ASI threshold.

In light of the above, we propose that the mitigation criteria for the production of primary aluminium should foresee one single threshold (*combining both scope 1 and scope 2 emissions*) as defined by the ASI Performance Standard (*i.e. 8 tCO2/t*). This threshold could be reduced over time, in line with the reviews of the ASI Performance Standard, in order to reflect technological advancements (*including access to low-carbon electricity*) and best practice with regard to the sustainable production of aluminium.

Setting a single threshold based on the ASI Performance Standard would also help to ensure a level playing field between different sectors. The TEG Report recommends three thresholds for aluminium (*at least two of which must be met*) whereas only one criterion is recommended for various other sectors, including iron and steel. This would make it much easier for companies operating in certain sectors to access sustainable finance than others, leading to a distortion of competition between different sectors (*which often compete to cover the same demand, e.g. aluminium competes with steel for the production of cars*).

Elsewhere, it is positive that the TEG Report acknowledges (*on p.173 of the Technical Annex*) that "*aluminium will play a role in a low carbon economy, in particular enabling light weight products and electrification (including transmission wires). Such applications could also be considered eligible under the activity 'Manufacture of other low carbon technologies' provided they can demonstrate substantial emissions reductions according to the criteria for that activity*". However, further guidance is required with regard to the conditions under which the production of aluminium could be eligible under the '*Manufacture of other low carbon technologies*' heading. In particular, this heading should reflect the significant energy savings that aluminium can achieve during its use phase. Due to its attractive properties (*light weight, conductivity etc.*), aluminium is used in numerous energy-efficient applications, including lightweight mobility and energy-efficient buildings. As a result, aluminium can entirely offset the initial energy consumption used to produce it by providing significant savings during its use phase.

Finally, it is unfortunate that although the TEG Report acknowledges the fact that "*aluminium production facilities can play an important role in stabilizing electricity grids by active management of electricity demand*", these benefits have not been taken into account. As mentioned in the TEG Report, the active participation of aluminium facilities in demand response schemes can result in "*substantial mitigation contributions*", including reducing the need for electricity storage and facilitating the integration of more (variable) RES into the system. These benefits should be reflected in the technical screening criteria, which should also reflect the fact that the active management of an aluminium smelter's electricity demand (*in order to stabilise the grid*) reduces the efficiency of the smelter's electricity consumption (*thereby also leading to an increase in indirect emissions*). In particular, any

[5] World Aluminium, 2020. Primary Aluminium Production.
[6] European Aluminium, 2019. Vision 2050; European Aluminium's Contribution to the EU's Mid-Century Low-Carbon Roadmap.

threshold that relates to either an aluminium producer's efficiency in electricity consumption (*MWh/t Al*) or its indirect emissions should be applied less strictly in the case of smelters that actively participate in demand response schemes.

Cogeneration

Given that our company owns and operates an industrial-scale high-efficiency cogeneration plant (*to cover our alumina plant's demand for heat*), we would also like to comment on the TEG's proposals with regard to CHP. Cogeneration entails the simultaneous production of heat and electricity. It is a highly efficient process that is capable of achieving significant primary energy savings (*and therefore also GHG emission reductions*) compared to the separate production of electricity and heat. For this reason, cogeneration is routinely supported in EU legislation, whereas the Energy Efficiency Directive (*2012/27/EU, see Article 14 in particular*) mandates that cogeneration should be prioritised over the separate production of electricity and heat. However, these clear efficiency benefits (*the importance of which will continue to increase both as a valuable tool for sector integration and due to the need to make the best use of limited resources such as biomass and decarbonised fuels*) are not reflected in the TEG Report, which focuses almost exclusively on GHG emission reductions without also assessing other aspects of environmental sustainability (*including energy efficiency, which the recently adopted Clean Energy Package set as a top priority*).

The TEG proposes that cogeneration should be considered eligible for sustainable finance if it meets the "*combined heat/cool and power threshold of 100 gCO2e/kWh*". It is unclear how this threshold would be calculated and/or applied; the TEG Report merely notes that "*a power-to-heat ratio has been adopted to draw an equivalence between the declining emissions intensity threshold set on the production of electricity and that which applies to production of heating/cooling*", without actually clarifying what this ratio is! This is even more surprising when compared against the proposed thresholds for other technologies, such as heat pumps (*which would not even have to comply with the taxonomy-wide 100gCO2e/kWh threshold for electricity, despite usually consuming electricity from the grid, which tends to have a much higher carbon footprint than 100gCO2/kWh*).

Given that cogeneration can achieve significant primary energy savings compared to the separate production of electricity and heat, **investing in cogeneration should be considered as a sustainability criterion in and of itself**. The threshold for the 'climate change mitigation' criterion should be determined in terms of the primary energy savings; it would make sense to set this threshold at **10%**, in line with the EU definition of high-efficiency cogeneration (*to this end, see Annex II of the Energy Efficiency Directive*).

Yours sincerely,
For MYTILINEOS S.A.

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