9 December 2020

**Revision of the 2014 Guidelines on State aid for   
environmental protection and energy (EEAG)**

**ArcelorMittal feedback to   
the European Commission Inception Impact Assessment (IIA)**

ArcelorMittal welcomes the European Commission’s consultation on the Inception Impact Assessment (IIA) regarding its initial plans to revise its 2014 Guidelines on State aid for environmental protection and energy (EEAG) and the corresponding provisions of the General Block Exemption Regulation (GBER). ArcelorMittal firmly believes in the importance of this initiative and in the value that input from relevant stakeholder can have to assist the Commission in formulating the revised provisions of the EEAG and the GBER. To this end, ArcelorMittal is honoured to respectfully submit the following comments to the IIA for the Commission’s consideration.

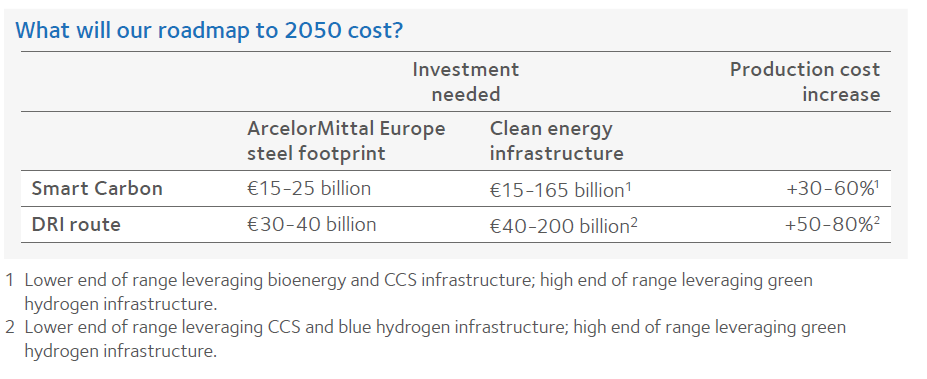
This paper presents first the current situation of the steel industry in Europe and its aims and challenges in relation to the realization of the European Green Deal’s objectives. Then it describes ArcelorMittal presence in Europe and its own decarbonisation efforts. Finally, it provides detailed comments on the policy options presented by Commission in IIA.

# The steel industry in Europe today is fully committed to the Green Deal, but its compliance cost constitutes a market failure

1. The European Union has set itself the objective of achieving climate neutrality by 2050. The steel industry accounts for around 30% of industrial emissions and so its commitment to switching to low CO2 technologies can make a decisive contribution to achieving this goal.
2. The transition towards climate neutrality will inevitably require a profound technological transformation of the industry, with considerable CAPEX investments and ensuing operating costs. A switch to green sustainable energy will also represent higher operating costs.
3. All these costs cannot, however, be internalized without damaging the competitiveness of EU producers. And they cannot be passed on to customers. Prices of steel are determined at the global level and, in the absence of convergent climate ambition in the world, carbon leakage is going to occur.
4. Over the past two decades, the European steel industry has been able to streamline its production capacity and reduce overcapacity. However, the industry is sensitive to macroeconomic fluctuations in the global economy, which are impacted by many factors, ranging from trade and geopolitical tensions to global and regional monetary policy to specific disruptive events such as pandemics and natural disasters.
5. Steel market conditions have heavily deteriorated in 2020 due to the COVID-19 pandemic and its economic ramifications. For example, according to Eurofer, apparent steel consumption in the EU fell 25.5% year-on-year in the second quarter of 2020, after a drop of 12% in the first quarter.
6. The European steel industry is also heavily affected by global production capacity and fluctuations in steel imports and exports. The current global steelmaking capacity exceeds the current global consumption of steel. Thus, overcapacity in, for instance, China, Brazil Russia and Ukraine weighs in on global prices and results in a flood of steel exports towards other markets, such as Europe. And exports from third countries are also influenced by the existence and amounts of tariffs, subsidies, dumping and other unfair trading practices.
7. In this scenario, if the European steel industry is to be successful in pushing the European Green Deal goals, while remaining competitive in the global steel industry, it needs the full support of the European Union and of its Member States. And the Commission will play a pivotal role in how this support will be shaped, starting with the revision of the EEAG compatibility rules.

# ArcelorMittal’s role and decarbonisation efforts

1. ArcelorMittal is the world's leading steel and mining company, with a presence in 60 countries and primary steelmaking facilities in 18 countries. It results from the merger in 2007 of its predecessor companies Mittal Steel Company N.V. and Arcelor. ArcelorMittal produces approximately 10% of the world's steel. In 2019, ArcelorMittal had crude steel production of 89.8 million metric tonnes, while iron ore production reached 57.1 million metric tonnes. ArcelorMittal is based in Luxembourg and is listed on the stock exchanges of New York, Amsterdam, Paris, Luxembourg and on the Spanish stock exchanges of Barcelona, Bilbao, Madrid and Valencia, and is a member of more than 120 indices. In 2019, ArcelorMittal had total revenue of EUR 63 billion.
2. ArcelorMittal is the only EEA manufacturer with an EEA-wide production network, with production facilities, including primary steel making facilities, throughout the continent in Luxembourg (Belval, Differdange, Rodange, Bissen, Dommeldange), Spain (Pedrola, Gijon, Lesaka, Etxebarri, Sestao, Sagunto, Villaverde, Bergara, Zumarraga, Olaberria and Aviles), Italy (Taranto, Genova, Novi Ligure), France (Fos-sur-Mer, Saint Chély d'Apcher, Gandrange and Florange, Dunkerque, Mardyck, Desvres, Montataire, Mouzon and Basse -Indre), Belgium (Ghent, Liège, Genk en Geel), Germany (Hamburg, Duisburg, Bremen and Eisenhüttenstadt), and Poland (Zdzieszowice, Chorzów, Sosnowiec, Kraków, Dąbrowa Górnicza).
3. ArcelorMittal’s goal is to become the steel company of the future and to help build a better world with smarter steels, which are cleaner, stronger and reusable, made using innovative processes that use less energy, emit significantly less carbon and reduce costs. Its steel products will be used also for electric vehicles and renewable energy infrastructure that will support societies as they transform through this century.
4. ArcelorMittal has been actively pursuing an ambitious decarbonisation strategy.[[1]](#footnote-2) Recently, on 30 September 2020, ArcelorMittal announced its latest and most ambitious carbon emissions target, a group-wide commitment to being carbon neutral by 2050. Already in 2019 ArcelorMittal made a commitment for its European business to reduce emissions by 30% by 2030 versus 2018 and be carbon neutral by 2050.[[2]](#footnote-3)
5. ArcelorMittal firmly believes that, if the world is to achieve net zero emissions by 2050, all parts of the economy in all regions of the world will have to contribute. As the world’s leading steel company, ArcelorMittal is fully conscious of its responsibility to lead the efforts to decarbonise the steel-making process, which today has a significant carbon footprint. As steel will remain an essential component and the most circular of all materials, the challenge for ArcelorMittal is to be able to make steel using clean energy technologies on a commercial scale, while remaining competitive in the global steel industry. In particular, in order to reach its announced goals, ArcelorMittal expects to need to make significant investments in a scale in the scale of EUR 30 to 80 billion direct gross investments at group level before 2050) .
6. In particular, ArcelorMittal is developing innovative solutions and considering significant investments in alternative methods and clean energy technology for steel production. It has identified low-emissions technologies for the two technologically-mature steelmaking routes, both of which have the potential to lead to carbon-neutral steelmaking:
7. The *Hydrogen-DRI* route: This route will be using hydrogen as a reducing agent to produce Direct Reduced Iron (DRI) from iron-ore, and then also use DRI in an Electric Arc Furnace (EAF) to make steel. This route has a lot of potential, but also currently requires significant transition costs and therefore its unlikely to have significant industrial scale production in time to meet the 2030 target.
8. The *Smart Carbon* route: This is centred around modifying the integrated route, which uses a blast furnace, to produce carbon neutral steel using green hydrogen, circular carbon and carbon capture and use (CCU) in the form of sustainable bio-energy/biomass or carbon and hydrogen containing waste as plastics, and carbon capture and storage (CCS) for the part of the production where fossil fuels cannot be replaced. By-products of this process can be used by the chemical industry to make carbon neutral products, such as plastics. This route can deliver results sooner and already make meaningful contributions to meet the 2030 emissions reduction target.
9. For both routes, the development and planning of specific investment commercial-scale projects into ArcelorMittal’s European operations is well underway. These projects have a very high potential to reduce carbon emissions, but at the price of significantly increased operational and capital investment expenditures.[[3]](#footnote-4)



1. For instance, for the Hydrogen-DRI route, relevant projects include:

* The replacement of one or more blast furnaces by the DRI-EAF route. It should be kept in mind that the replacement of a 2 MT BF-BOF route by DRI-EAF requires about 1 billion € CAPEX + extra operational cost of 40 to 60 €/t. Only when the power is produced with CO2 intensity below 300kg/MWh, this switch starts to reduce CO2.
* A demonstration plant to produce DRI with 100% hydrogen in Hamburg, where ArcelorMittal owns Europe’s only operational DRI-EAF plant, currently planned with a targeted start-up in 2024.[[4]](#footnote-5) This development will enable (when successful) to connect with a 50MW green hydrogen electrolyser plant to produce the first steel made out of renewable energy.
* The Siderwin project for developing the technology to reduce iron ore via direct electrolysis powered by electricity alone.[[5]](#footnote-6) Also here in case of success, the feasibility study for an investment in a first industrial plant to produce steel from 100% renewable power will be launched. The advantage of SIDERWIN versus the Hydrogen DRI plant is that significantly less renewable power would be required (minus 20-25%)

1. For the Smart Carbon route, relevant projects include:

* The Torero project, a EUR 40 million demonstration plant in Ghent, to convert 120,000 tonnes (dry) of waste wood into biocoal for use in iron ore reduction in place of coal.[[6]](#footnote-7)
* The Carbalyst project for CCU, the 165 m€ industrial-scale demonstration plant in Ghent to capture carbon offgases and convert them into the Carbalyst® range of products, a partnership with LanzaTech.[[7]](#footnote-8)
* The RecHycle project, to recycling Hydrogen as an alternative reductant to replace carbon fossil in the Ghent steelmaking plant.[[8]](#footnote-9)
* The CabHFlex project, to recycle the unavoidable steel production gases into chemicals using green hydrogen and to replace current fossil-based chemicals and produce CarbonSmart™ Product, a partnership with LanzaTech.[[9]](#footnote-10)
* The IGAR projects for CCU, converting waste CO2 from the blast furnace in Dunkerque into a synthetic gas that can be reinjected into the blast furnace in place of coal.[[10]](#footnote-11)
* The ConScraMelt project, developing an innovative solution to continuously produce liquid scrap from low quality steel scrap and dedicated waste streams to feed the existing Blast Oxygen Furnace process for steel refining in ArcelorMittal’s Bremen facilities.[[11]](#footnote-12)
* The HyBit project, aiming at the integration of renewable energy from wind through a 100 MW electrolyzer and injection of green hydrogen into ArcelorMittal’s blast furnace in Bremen, in partnership with EWE and SWB.[[12]](#footnote-13)
* DMX project in Dunkirk for CCS/CCU, piloting the capture and purification of CO2 using waste heat, for later storage or reuse.[[13]](#footnote-14)
* The Calisto project for CCS, in partnership with Nippon Gas, which aims to purify, liquefy, and intermediately store the CO2[[14]](#footnote-15), and with Northern Lights to develop the transport and permanent storage of CO2 in a reservoir in the North Sea.

1. In order to withstand the increased operational and capital investment expenditures that the completion and operation of these new technologies entail, including their higher energy costs, while retaining the competitiveness of its European operation, ArcelorMittal believes an appropriate policy framework is necessary. In this context, the revised EEAG and corresponding GBER provisions have a key role to play, in combination and interplay with other relevant policy routes, such as

* establishing a global level playing field to avoid the risk of carbon leakage through various mechanisms such as green or carbon border adjustments, free allocation and indirect costs compensation;
* ensuring access to abundant and affordable clean energy, including by supporting the development of the necessary infrastructure;
* guaranteeing access to sustainable finance for low-emissions steelmaking; and
* foreseeing measures to accelerate the transition to a circular economy.

# Comments on policy options presented in the IIA

## First building block of the IIA

1. With regard to the review of the compatibility criteria for environmental protection to promote the green transition, while effectively controlling distortions of trade and competition, ArcelorMittal is largely supportive of the Commission’s intention to widen the scope of the EEAG and to include broader policy objectives such as environmental protection (including climate neutrality and other Green Deal objectives) and prevention of relocation risk due to energy related charges.
2. To this end, ArcelorMittal would also strongly encourage including in the EEAG further types of possible support measures. In particular, in order to fully reflect past technological developments and anticipate future ones and thus remain fit-for-purpose in the long term, the revised EEAG need to cover also ‘demand-side’ measures. ArcelorMittal considers that the following one are essential in order to maintain the competitiveness of the steel industry while reaching the Green Deal objectives:

* Carbon Contracts for Difference (CCfDs) to promote projects to introduce low-carbon production processes. The steel industry should be the prime target of pilot schemes for a ‘carbon contracts for difference’ program considering the high impact of any low-carbon steel process on the environment;
* aid for industrial development of new technologies with high-potential for emissions reduction that are currently available but have not yet been widespread in the required large scale;
* aid for dismantling CO2 heavy productions sites after ‘green transformation’, similar to the existing environmental aid for remediation of contaminated production sites;
* aid for reuse of waste, for example to guarantee a circular production and/or the use of waste from one industry to another, thus steering away from incentives for incineration as is currently the case; and support for certification of products made from carbon containing synthetic gasses produced in steelmaking processes (CCU);
* aid for purchase of RES electricity e.g. through long-term power purchase agreements, to compensate higher costs for its use in electricity intensive production processes, such as electric steel production e.g. through the EAF route.

1. Furthermore, with regard to whether and to what extent a distinction between operating and investment aid is still justified, ArcelorMittal believes that, at least in certain instances, such distinction is not justified anymore. In particular, the new EEAG compatibility rules should allow Member States to support both the investment cost and the increased ongoing operating costs that may result from the transition to ‘green’ production technologies. As indicated above, the transition to low carbon technologies requires sizeable CAPEX investments and will entail increased OPEX for production in Europe. New decarbonization projects and investments often could have a different cost nature with more OPEX, which means that without full coverage of OPEX costs they will not be economically viable. These extra costs cannot be internalized or passed on to consumers and so constitute a market failure that needs to be adequately addressed at a policy level and with adequate level of State support. In this light, ArcelorMittal is of the view that perpetuating a distinction between investment and operating aid creates additional complexity. It would also discriminate between different industries that are asked to undergo similar transitions, as aid measures to support the transition to RES have been allowed both for investment and for operating costs.
2. As a related point, ArcelorMittal wishes to emphasise that the aid intensities for both investment and operating aid should also be adjusted to a level that would allow the completion of the required ‘green transition’ in time to reach the EU’s 2030 and 2050 targets. Accordingly, ArcelorMittal maintains that the current limits on aid intensities for aid instruments already foreseen in the EEAG and the GBER are too restrictive and should be revised. Similarly, and even more so, aid intensities for newly introduced aid instruments, such as those outlined above, should not be unduly restrictive. To ensure a correct allocation of public resources, increased aid intensities up to full coverage could possibly be accompanied by efficiency incentives and realistic environmental targets to be achieved by the beneficiaries.
3. In light of the above, in addition to the specific provisions discussed above, ArcelorMittal believes that the strategic importance of achieving climate neutrality deserves the introduction of a new specific compatibility criterion. In particular, we suggest that the objective of “conversion to low CO2 or CO2-neutral production” be considered as an objective of common interest worth protecting *per se* under Article 107(3)(c) TFEU with regard to both investment and operating aid.
4. With regard to the following proposals, ArcelorMittal has the following comments:

* tendering of aid beyond RES and capacity mechanisms – we believe tendering of aid is not suited to be applied across the board but should be reserved to commoditized projects that do not require particular skills, R&D&I or substantial investments.
* transparency requirements for Member States granting aid to identify the contribution to environmental protection and make transparent the environmental protection cost in their aid schemes in a harmonised manner – we believe this would be in line with the transparency requirement introduced by the State aid Modernisation. It could help maintain a level playing field among companies and across Member States and would prevent greenwashing, i.e. Member States selecting projects that are not truly eco-friendly. So aid could be steered to more ambitious, large and realistic project such as those of ArcelorMittal.
* mandatory broadening of aid schemes to direct competitors in the same sector and other related sectors who could achieve the same environmental objectives –the rationale for this proposal is not clear in the IIA.
* open one country’s support measures to operators from across Member States – given that climate change hardly knows borders, ArcelorMittal believes that this principle could help furthering the Green Deal objectives, as well as strengthening the internal market. However, the Member States may be rightly reluctant to finance projects that will be carried out outside their territory. It is not clear how the Commission would intend to actually develop this principle, but it could be advisable to require some proven link with or benefit to the territory of the Member State granting the aid.

## Second building block of the IIA

1. With regard to the review of the compatibility criteria for support measures to Energy-Intensive Users (EIUs), ArcelorMittal firmly supports maintaining and expanding the current level of support. As explained previously, EIUs are disproportionally affected by the investment and operational costs resulting from the ‘green transition’, and are particularly exposed to ‘carbon leakage’.
2. In the previous section, we have proposed some ‘demand-side’ measures that should be covered by the new EEAG rules. These measures should be reserved primarily to EIUs, in addition to other economic operators, given the particular risks and market failures that EIUs face.
3. In addition to those measures, ArcelorMittal supports at least maintaining, and if necessary increasing, exemptions or reductions for EIUs from energy contributions and charges to finance RES electricity production, as well as to finance combined heat and power (CHP) production and capacity mechanisms. For this new link to capacity mechanisms, the rules have to be updated so as to reach this objective in line with the Commission’s established practice under the 2014 EEAG. If energy contributions and charges are used to finance other energy and environmental objectives, e.g. social tariffs or electricity in outermost regions, similar exemptions or reductions for EIUs should be allowed.
4. With regard to the proposal of including some form of conditionality similar to the ETS Guidelines, ArcelorMittal believes that this should be carefully treated as in some cases it may conflict with the attainment of the same Green Deal objectives that the EEAG aim to promote. For instance, the steel industry will have to use more electricity to move away from the blast furnaces using fossil fuels and turn to low carbon technologies. For this reason, it will be almost impossible to reduce the carbon footprint linked to electricity consumption. Therefore, conditionality should only be introduced if and when

* It does not harm the Green Deal goals and competitiveness, since otherwise it would result in carbon leakage;
* It is technically and economically feasible taking into account the relevant targets and measures to be implemented, as well as the overall goals to be reached;
* It does not add an unnecessary administrative burden for companies and Member States’ authorities that would raise further the costs of greening production, to the detriment of competitiveness.

# Conclusion

1. ArcelorMittal supports the European Commission’s objectives to modernize its compatibility rules so that EU Green Deal’s objectives be met and welcomes the opportunity to be part of this process. We therefore look forward to working with the European Commission to ensure that the revision of the EEAG 2014 and of the parallel GBER rules delivers on the stated goals.

1. ArcelorMittal is a member of the Energy Transitions Commission (ETC) and is an active member of the ETC’s Net Zero Steel Initiative underway in partnership with the World Economic Forum. ArcelorMittal is also actively engaged with the Science Based Targets Initiative (SBTI) to define an achievable SBT for the steel industry taking into account the two distinct routes in operation today. [↑](#footnote-ref-2)
2. For more information please see <https://corporate.arcelormittal.com/media/press-releases/arcelormittal-sets-2050-group-carbon-emissions-target-of-net-zero>. [↑](#footnote-ref-3)
3. For further information about such projects please see [https://corporate.arcelormittal.com/sustainability/our-low-emissions-innovation-portfolio-covers-all-possible-technology-pathways](https://corporate.arcelormittal.com/sustainability/our-low-emissions-innovation-portfolio-covers-all-possible-technology-pathways%20). [↑](#footnote-ref-4)
4. The project has an estimated timeline of 2024 and an estimated Direct CO2 saving of 70kt/year with a CAPEX of EUR 110 million. For more information please see <https://corporate.arcelormittal.com/media/case-studies/hydrogen-based-steelmaking-to-begin-in-hamburg>. [↑](#footnote-ref-5)
5. The project has an estimated timeline of 2040 and an estimated Direct CO2 saving of 3 000kt/year with a CAPEX of EUR 1 600 million. For more information please see <https://storagearcelormittalprod.blob.core.windows.net/media/qjllndv5/siderwin-content-final.pdf>. [↑](#footnote-ref-6)
6. The project has an estimated timeline of 2024 (2 units) and an estimated Direct CO2 saving of 300kt/year with a CAPEX of EUR 40 million. For more information please see <https://storagearcelormittalprod.blob.core.windows.net/media/onjplkw3/torero-content-final.pdf>. [↑](#footnote-ref-7)
7. The project has an estimated timeline of 2022 and an estimated Direct CO2 saving of 125kt/year with a CAPEX of EUR 165 million. For more information please see <https://storagearcelormittalprod.blob.core.windows.net/media/mkhfx2ft/carbalyst-content-final.pdf>. [↑](#footnote-ref-8)
8. The project has an estimated timeline of 2022-2024 and an estimated Direct CO2 saving of 360kt/year with a CAPEX of EUR 65 million. For more information please see <https://www.smartdeltaresources.com/en/news/fd-arcelor-and-dow-solve-each-others-problems> [↑](#footnote-ref-9)
9. The project has an estimated timeline of 2022-2026 and an estimated Direct CO2 saving of 120kt/year with a CAPEX of EUR 184 million. For more information please see <https://www.tagaday.fr/media/watch/account/-/v/10/client/969/docid/189666356/pass/e0cab0b73f8ac8aab24675ffafb0676eada55339/contact/0/from/veilles/sha/e3846c5907d70f8c9fe0708414534cb3679c4a18> [↑](#footnote-ref-10)
10. The project has an estimated timeline of 2022-2024 and an estimated Direct CO2 saving of 500kt/year with a CAPEX of EUR 275 million. For more information please see [https://storagearcelormittalprod.blob.core.windows.net/media/lukmokpc/igar-content-final.pdf](https://storagearcelormittalprod.blob.core.windows.net/media/lukmokpc/igar-content-final.pdf%20). [↑](#footnote-ref-11)
11. The project has an estimated timeline of 2022-2025 and an estimated Direct CO2 saving of 1450kt/year with a CAPEX of EUR 180 million [↑](#footnote-ref-12)
12. The project has an estimated timeline of 2022-2026 and an estimated Direct CO2 saving of 370kt/year with a CAPEX of EUR 165 million. [↑](#footnote-ref-13)
13. The projects have an estimated timeline of 2027 and an estimated Direct CO2 saving of 1 000kt/year with a CAPEX of EUR 185 million. For more information please see <https://storagearcelormittalprod.blob.core.windows.net/media/ri1gh4rs/carbon2value-content-final.pdf> [↑](#footnote-ref-14)
14. The project has an estimated timeline of 2022-2025 and an estimated Direct CO2 saving of 330kt/year with a CAPEX of EUR 82 million. [↑](#footnote-ref-15)