



# Reform of the Electricity Market Design

## First thoughts and reactions

Brussels, February 2023

### Position Paper

Since October 2021, Europe has had to close or halt 50% of its primary aluminium production<sup>1</sup> (equivalent to 1.1 million tonnes) due to sky rocketing energy prices. These losses have been directly replaced by increased capacity<sup>2</sup> in third countries such as Indonesia or China. This replacement is having a considerable impact on global emissions: if you remove one tonne of aluminium in Europe and produce it in China instead, the net impact is an additional 12t of CO<sub>2</sub> in global emissions. In total in 2021, we expect the reduction of the European production led to an extra 10.3 million tonnes of CO<sub>2</sub> emitted<sup>3</sup>. We expect more closures<sup>4</sup> are to come this winter, worsening this issue, as well as directly hitting the EU strategic autonomy efforts.

The aluminium production is disproportionately hit because it is extremely energy intensive: before the energy crisis, electricity costs already represented up to 40% of primary aluminium production costs<sup>5</sup>. Compared to 2021, wholesale electricity prices have increased up to 10 times, leading to considerable increase in aluminium production costs. Additionally, the downstream aluminium industry is heavily dependent on gas, and has been directly hit by the rise in gas prices. The sky-high energy prices and uncertain supply situation across Europe are dire for our sector, and we are deeply concerned about next winter and its impacts both on Europe's efforts on climate and raw materials strategic autonomy. We see the discussion on the Electricity Market Design Reform as an opportunity to take measures delivering these objectives, as well as the needed predictability and decarbonization of industry.

In this paper, we outline our thoughts on the Reform, its scope, and principles that should be encompassed by the upcoming proposal.

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<sup>1</sup> Energy Monitor, "Europe on the brink of 'disastrous' deindustrialisation, 21 October 2022, available [here](#)

<sup>2</sup> For more information, see our position paper on "Why including indirect emissions in the CBAM will lead to higher global

<sup>3</sup> When 1 tonne of aluminium is produced in Europe, 6.7 tonnes of CO<sub>2</sub> are emitted. When 1 tonne of aluminium is produced in the rest of the world, 16.1 tonnes of CO<sub>2</sub> are emitted. The EU has lost 1.1 million tonnes of its primary aluminium production, equivalent to 7.4 million tonnes of CO<sub>2</sub>. In parallel, this drop in production is being replaced abroad. Producing the lost EU production in non-EU countries leads to emissions of 17.7 million tonnes of CO<sub>2</sub> (1.1Mt of aluminium\*16.1 tonnes of CO<sub>2</sub>), against 7.4 million tonnes of CO<sub>2</sub> (1.1 Mt \*6.7 tonnes of CO<sub>2</sub>) for the same production in the EU. In total, the replacement of the EU production by third countries' will lead to an extra 10.3 million tonnes of CO<sub>2</sub> emitted abroad during this last year (17.7Mt-7.4 Mt).

<sup>4</sup> Financial times, "More smelters face closure as Europe enters power starved winter", August 2022, available [here](#)

<sup>5</sup> Source: CEPS study for DG ENER, Jan 2019: [Composition and drivers of energy prices and costs in Energy Intensive industries](#)

## Profound reforms should not be done in time of crisis

It is paramount to differentiate between time of crisis, which tend to have a temporary character, and long-term structural issues. The current electricity market design provides for key dispatch and investment signals and has considerably contributed to lower electricity prices, as well as the deployment of renewable energy in the EU. The last reform of the electricity market design has taken two years before being approved by the co-legislators and has been accompanied by a careful consultation of key stakeholders, as well as a detailed impact assessment. A structural reform of the electricity market design, because of its considerable impact, should be done in consensus, and follow the normal co-decision process.

In addition, the European Commission should have the necessary amount of time to prepare the discussion and come up with a detailed, thought through proposal. Finally, the co-legislators should have the time needed to accommodate such a massive reform. It seems highly unlikely the current reform will not be rushed through seeing the next European elections are set for 2024 and the Parliament dissolved in March 2024. Finally, if the Council and Parliament were to fail to reach an agreement before the Assembly's dissolution, any attempt to restart the process in the next legislature may be compromised, never mind the risk that current short-term measures contradict the long-term ones and vice-versa<sup>6</sup>.

Certainty and predictability are the two key elements of any market that intends to foster investments, business and economic development – therefore, any in-depth reform must be done with caution, careful consideration and must not be driven by temporary crisis without thorough assessment of the effect in the longer term.

## Effective Market dynamics should be preserved

The current market design offers key signals to producers and consumers, that must be safeguarded through any reform. The announced electricity market design reform must not lead to a massive legal overhaul that would result in legal and business uncertainty, a market stalemate, higher electricity prices and a draining of market liquidity. It must also enable physical dispatch of the most cost-effective producers to ensure security of supply at any given time. European electricity market should continue to foster market integrity, competition between energy sources, transparent transactions, competitive prices, efficient investment signals and decarbonization.

## Shortcomings of the market should be addressed

Although the current electricity market design does provide key investment and dispatch signals, there are also areas in which it can be improved, especially regarding long term hedging, and the need to cater for the increasing part of RES in the energy mix. One of the main issues that the Reform of the Electricity Market Design should improve is the need to account for volatility of RES. The energy transition will lead to more RES entering the market and controllable generation exiting the market, which will increase volatility, hence the need to develop flexibility via increased generation but also storage and better use of the grid. Demand-side response can also contribute to flexibility, and interruptibility mechanisms should be introduced to facilitate industrial demand-side response,

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<sup>6</sup> CEPS, "Electricity markets will need an overhaul, but not now", 4 October 2022, available at: <https://www.ceps.eu/electricity-markets-will-need-an-overhaul-but-not-now/>.

reflecting industrial consumers' ability to offer such services (and the relevant technical limitations). Temporary crisis situation, such as the one we are currently facing, should be addressed through in-built market emergency mechanisms that address the pressure and shave peak price levels, but only if this is done in a pre-determined way that does not hinder the fundamentals of the market (for example, by introducing a "price shock absorber", which has already been operating successfully in the American electricity market for many years). A strong investment signal for these technologies must remain, via for example capacity mechanisms coordinated at the EU level<sup>7</sup>, provided that the cost impact on consumers who are especially sensitive to electricity prices, like electro-intensive consumers, is mitigated.

The reform of the electricity market design should also incentivize a ramp up in investment in RES, primarily via PPAs. As was recognized in DG ENER's 2019 report on the "Competitiveness of corporate sourcing of renewable energy"<sup>8</sup>, CfDs and other types of RES support hinder the development of the PPA market, since it gives RES developers the easy option of a guaranteed revenue from the state, instead of signing a PPA. CfDs also mute important market signals towards generators, leading to inefficient investments and ultimately higher electricity prices. CfDs should therefore be phased out as quickly as possible, and PPAs should be incentivised instead. It is paramount long-term markets are more efficiently protected against risks and investments are stimulated.

## Incentivise long term hedging solutions

The investment aid measures must be accompanied by an improvement of the legal and regulatory regime of long-term contracts, particularly with renewable energy producers. Unfortunately, the consultation document suggests that RES PPAs for large consumers is something of a "solved exercise", and that attention needs only to be paid to facilitating RES PPAs for smaller consumers. However, this is not true: electro-intensive consumers have been able to sign RES PPAs in the Nordic region, but companies across the rest of Europe are still struggling due to remaining barriers, and especially the issue of shaping costs

We therefore propose the following measures, which could further facilitate RES PPAs for aluminium companies:

- Increase liquidity for PPAs by incentivising existing and new generators to offer electricity for this purpose (e.g. through tax incentives, green bonds, investment aid conditional on signing PPAs in case of new generation capacity)
- Incentivise RES plants participating in auctions for state-backed PPAs to contract part of the installed capacity/output through long-term corporate PPAs. Subsequently terminate auction schemes and state-backed PPAs.
- State/EU guarantees to foster signing of RES PPAs with electro-intensive industry, as the Nordic scheme or the Spanish FERREI system.
- Addressing firming and shaping costs of RES PPAs, through schemes like the Green Pool; explore the possibility of an EU-wide Green Pool-style solution that could help mitigate the impact of gas on respective power prices.

An improvement to the regime of long-term contracts as mentioned above would bring the following positives outcomes:

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<sup>7</sup> ACER Final assessment of the electricity market design, available [here](#)

<sup>8</sup> Available [here](#)

- Facilitate Over-the-Counter (OTC) agreements between producers and suppliers
- Power generators will be in a better position to make investments in both intermittent RES and backup capacity. Through PPAs, intermittent RES, which count for an increasing share of the power mix, will enjoy a guaranteed price (the PPA strike price), instead of being exposed to decreasing captured spot prices. This will therefore attract more investors. In the meantime, the predictable overall revenues stemming from long-term contracts reduce the risk of investment in backup capacity (i.e. gas-fired power plants, hydrogen, batteries...) for which expected returns are difficult to assess.
- Market reform should also aim at delivering investments in grid flexibility and grid adequacy, demand response, storage.
- New electricity generation capacity (particularly RES) cannot be quickly built without fast improvement of the permitting regime – particularly implementation at local level.

## Review mechanisms

The review of the electricity market design should be accompanied by regular reviews, to ensure the impact of the reform is positive.

## Complete the implementation of the Clean Energy Package

The Electricity market design has been subject of an overhaul in 2018, with a revamp of the Electricity Directive and Electricity Regulation. Many Member States have not implemented the Electricity Market Directive yet. It is paramount that before reforming the functioning of the electricity market, the Clean Energy Package is formally implemented.

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