Joint Statement

Demand Response in industry: when industrial flexibility supports competitiveness and climate neutrality

Energy-intensive industries and industrial Demand Response (DR) companies welcome the initiative by the European Commission to shape an Energy System Integration Strategy to support the objectives of the European Green Deal.

Energy-intensive industries are indispensable to Europe's economy. Their role in the clean energy transition and contribution to climate neutrality is of crucial importance.

To lead this change, a truly forward-looking Energy System Integration Strategy should support the objectives of the European Green Deal and be consistent with the recently adopted Clean Energy Package. We have come together to highlight the importance of industrial DR in supporting companies to cost-effectively contribute to climate-neutrality while minimising energy system costs and facilitating renewables integration, and to seize new business opportunities resulting from a smart integration of different sectors.

Although historically some industrial consumers have participated in DR programmes on a more significant scale than residential and small and medium-size businesses, their participation is still limited in modern DR offerings in which their changes in energy consumption are pooled with other end users. The DR potential of European energy intensive industries alone is estimated at 16 GW[1]. As an example, Germany currently auctions 1.5 GW of industrial DR each week, while it will need 3 GW by 2025 and 5 GW by 2035 due to phasing out nuclear and coal[2].

Facilitating the expansion of industrial DR can:

- reduce electricity costs for industries thanks to an adequate monetisation of industrial DR. This will contribute to make the EU more attractive to energy intensive industries keen to electrify (part of) their industrial processes and limit EU imports and dependency on essential goods from third countries,
- increase system efficiency and maintain security of supply at the lowest possible cost. If properly managed and aggregated, industrial DR can reliably provide competitive resources to system operators which would not need investments in capital intensive grid reinforcements,
- support the European Green Deal as making best use of industrial load flexibility will significantly ease the integration of renewable energy in the energy system,
- boost digitalisation and automation of industrial processes to contribute to the Strategy on Europe's digital future.

In view of the forthcoming Energy System Integration Strategy, we urge the European Commission to:

- Recognise the value and attribute a strategic relevance to the activation and expansion of industrial DR in increasing the competitiveness of European industries, enabling cost savings and remunerations while facilitating the cost-efficient integration of variable renewables in the energy system, as also acknowledged in the Report of the Technical Expert Group (TEG) accompanying the taxonomy/sustainable finance package[3]. Differently from new power plants, industrial DR assets

[1] Klobasa; Marian "Load Management and Demand Side Management in Germany and other EU Countries, Fraunhofer ISI, 2012

[2] Confirmed scenario framework of German TSO network development plan 2019-2030

[3] In particular, the aluminium smelters' contribution to network stability is highlighted thanks to massive, instant load shedding on page 173 - https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy-annexes_en.pdf

already exist and do not require extensive approval processes, additional network expansion or provoke civil protests;

- Take all necessary measures to implement the Electricity Market Design correctly and in a timely manner to eliminate regulatory barriers for industrial demand-side resources to participate in all electricity markets. All energy end users, including energy-intensive industries, should be put at the heart of the implementation of both the Electricity Directive and Regulation in order to shape regulatory frameworks aligned with their needs and expectations to stimulate their active engagement in the clean energy transition.

When implementing the Electricity Market Design, Member States should take into account the lessons learnt from the successful mechanisms that allow the valorisation of energy intensive industries flexible loads, also with the support of aggregators of industrial DR:

1. No mandatory requirement should be set for energy intensive industries to participate in DR programmes. It should not be imposed on industry, but remain a voluntary service they can provide to the system, upon payment, and contribute to increase their corporate sustainability. Only a thorough assessment of each industrial site will tell which industrial processes can participate in DR schemes;
2. Industrial output and sales agreements should not be compromised by the activation of their DR capacity, even if well compensated. Participating in modern DR schemes should not disrupt their core businesses as they only happen within pre-determined operating boundaries;
3. Energy-intensive industries vary greatly from one another and no one-size-fits-all approach should be imposed. However, the flexibility in the national implementation of the Electricity Market Design should not be detrimental to investments allowing end users to participate in all electricity markets;
4. Regulatory and commercial barriers to industrial DR should be eliminated to facilitate the move towards an increase in electrification of industrial processes and smart sector integration.

The activation of industrial DR is a crucial opportunity that will enable energy-intensive industries, market players and the entire energy system to reap the full benefits of a truly smart sector integration.