

Response to Inception Impact Assessments

Revision of the Directive on the promotion of the use of energy from renewable sources and of the Directive on energy efficiency

The Electrification Alliance welcomes the initiative by the European Commission to review the Renewable Energy Directive (2018/2001/EU) and the Energy Efficiency Directive (2018/2002/EU) to allow a cost-efficient integration of renewables in all energy end uses, to increase demand-side flexibility and system efficiency.

The cost-effective, clean, and smart electrification of the European energy system will be essential to achieve the European Green Deal's objective to reach climate neutrality by 2050. The EU has made progress in decarbonising its electricity production through renewables. However, to reach climate neutrality on time, the electrification level of the EU economy needs to surge from 23% today to more than 30% by 2030¹. The deployment rate of renewable energy installations needs to surge too: compared to today's levels, the wind installed capacity needs to double to reach 60% of renewables in the electricity mix in 2030, and the solar installed capacity needs to triple².

Therefore, the Electrification Alliance recommends the following 7 actions for a successful revision of the Renewable Energy and Energy Efficiency Directives:

- 1. Adopt an upwards revision of the EU's 2030 renewable and energy efficiency targets to support the increased 2030 greenhouse gas emissions target, including an update of the sectoral target for the use of renewable energy in heating and cooling.**
- 2. Prioritize direct electrification of all end-use sectors combined with energy demand reduction and the deployment of clean electricity sources, as the most cost-effective way to decarbonise the EU.**
 - Accelerate the electrification rate of all sectors of the economy that unlock system efficiency gains. Studies from the Electrification Alliance members show that the rate of electrification of the EU economy can reach 60% to 85% by 2050^{3,4}. An ambitious electrification rate will enhance sectoral integration, deliver significant efficiency gains in the energy system and be the most cost-effective way to decarbonise the EU.
 - Increase the deployment of clean electricity sources. Large-scale and distributed energy sources will be the backbone of the future energy system. For example, on-site renewable electricity production should be promoted

¹ European Commission (2020), Impact Assessment. Stepping up Europe's 2030 climate ambition Investing in a climate-neutral future for the benefit of our people.

² Eurelectric (2020), Power Barometer 2020.

³ SolarPower Europe (2020), 100% Europe. How to Make Europe's Energy System Climate-Neutral Before 2050.

⁴ Wind Europe (2018) Breaking new ground. Wind Energy and the Electrification of Europe's Energy System.

through an EU solar rooftop programme that encourages the deployment of solar photovoltaics on all new and renovated residential, commercial, and industrial buildings in the EU. In this context, Member States should further remove discriminatory and disproportionate charges for renewable self-consumers.

- Direct electrification of end-use sectors like buildings, heating and cooling, transport, and industry, combined with energy demand reduction, can bring huge macroeconomic benefits in terms of economic growth and employment. Direct electrification provides affordable energy for consumers. Up to €23 billion could be saved on energy bills in Europe with breakthrough levels of smart electrification and deep buildings retrofits, leading to the net creation of potentially 1.8 million jobs⁵. As such, the Commission should revise the calculations for renewable energy targets in transport, heating, and cooling via an Impact Assessment in line with the increased 2030 greenhouse gas emission target.

3. Ensure that administrative procedures support the development of renewable energy projects to successfully meet the EU renewable energy target.

- Action is needed to require Member States to simplify permitting procedures for the deployment of renewables and their connection to the electricity grid. A fundamental review of permitting processes which is coordinated at EU level to ensure a) a super-fast track permitting for climate critical infrastructures, for example through a review of the TEN-E Regulation to accelerate permit granting for PCIs; b) a fast-track process for demonstration projects as well as for retrofitting and repowering of existing renewable energy sites; c) a coordinated planning and permitting process for generation and infrastructures.
- Enhance support for clean electrification of industrial processes by removing regulatory and administrative barriers to corporate renewable energy power purchase agreements (PPAs). This is crucial to support EU businesses and industries with competitive long-term supply of renewable energy. In addition to removing barriers to renewable energy PPAs, we encourage the European Commission to share best practices from Member States which have undertaken concrete measures to promote corporate renewable PPAs and unlock the demand-side flexibility potential of the industrial sector.

4. Enhance demand-side flexibility across all sectors to smartly manage an energy system with large shares of renewables and to reduce unnecessary grid investments.

- Enhance the use of demand-side flexibility from all sectors for a more reliable energy system. This would enable shifting power from peak to off-peak hours or adapting energy consumption on the basis of external signals to reduce grid congestion and maintain network stability. As already calculated by the European Commission in 2016, increased demand-side flexibility could lead to savings of €5.6bn/year from reduced back-up capacity, network, and fuel costs in Europe⁶. This can be done by eliminating barriers to demand-side flexibility in line with the implementation of the Electricity Market Design

⁵ Element Energy and Cambridge Econometrics (2019), Towards Fossil-free Energy in 2050.

⁶ European Commission (2016), Impact assessment of the revised rules for the electricity market, ACER and risk preparedness.

Directive/Regulation and increasing the roll out of different demand side solutions like heat pumps, smart charging infrastructure for electric vehicles, vehicle-to-grid, storage, and building energy management systems.

5. Ensure the Primary Energy Factor (PEF) supports increased system efficiency delivered by electrification in end-use sectors.

- Ensure the application of the PEF across all EU legislation and its stepwise revision in line with the 2030 targets:⁷ Given the increasing deployment of clean electricity sources, we recommend the stepwise revision of the PEF for electricity from the grid. The current PEF for electricity is a barrier to the decarbonization of the heating and transport sectors as it does not fully capture the higher efficiencies delivered by heating and electric vehicles. A stepwise revision of the PEF in line with the 2030 targets will accelerate the deployment of solutions that increase system efficiency. Replacing a fossil-fuel based boiler with a heat pump using clean electricity saves two thirds of primary energy⁸, while electric vehicles (EVs) have an efficiency of 80-90% from tank to wheel today compared to 20-30% for internal combustion engines (ICE) and Fuel Cell vehicles (FCEV).

6. Create a Clean Energy Package (CEP) Implementation Platform to promote best practices in Member States' decarbonisation strategies and share technical guidance.

- Uneven and incomplete implementation of the CEP remains a roadblock to the achievement of the EU's climate and energy targets. A CEP Implementation Platform is needed to bring together the European Commission, Member States, and industrial and civil society stakeholders with the objective to better monitor the CEP implementation and to review the progress on the implementation of Directive (2018/2001/EU) and (2018/2002/EU). This forum should also serve to share best practices and technical guidance.

7. Renewable-based indirect electrification could play an important role to decarbonise "hard to abate" sectors such as heavy industry, aviation, and shipping, where direct electrification may be less cost effective.

- Enhance direct and indirect renewable-based electrification to pave the way for a renewable-based hydrogen market. Clean hydrogen produced via electrolysis could provide flexibility and storage capacity to the energy system, to replace fossil-based molecules, and help integrate renewable power and limit its curtailment.
- Develop a taxonomy for renewable hydrogen and other renewable fuels with clear definitions informed by real-life lifecycle emissions assessments.
- Provide a robust certification system for projects coupling renewable-based hydrogen and renewable energy generation across all Member States. Guarantees of origin (GOs) should be granted to projects that ensure hydrogen

⁷ The Primary Energy Factor (PEF) connects primary and final energy. It indicates how much primary energy is used to generate a unit of electricity or a unit of useable thermal energy.

⁸ Kavvadias, K., Jimenez Navarro, J. and Thomassen, G., Decarbonising the EU heating sector: Integration of the power and heating sector, 2019.

has been produced from renewable sources, thus incentivising investors to invest in renewable energy projects. Furthermore, compatibility between renewable support schemes and GOs should be ensured.

The revision of the Renewable Energy and Energy Efficiency Directive should maximize the advantages offered by electrification. This will give Europe's citizens and industries the opportunity to invest in growth that drives green, industrial innovation, digital and market competitiveness, and improved quality of life.

As Electrification Alliance, represented by the signatories below, we would be pleased to offer our assistance and expertise to you in revising the Renewable Energy and Energy Efficiency Directive.

Electrification Alliance Partners

