



THE ELECTRIFICATION ALLIANCE

**POWERING A CLIMATE NEUTRAL,
COMPETITIVE AND SECURE EUROPE**

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The Electrification Alliance was formed in June 2017.

Our Alliance stands united in our commitment and vision to demonstrate the significant potential of electricity on its path towards decarbonisation. The Alliance partners are strong supporters of the Paris Climate Agreement and call for urgent action to achieve its objectives.

This action requires an ambitious system approach, recognising the need to decarbonise the European economy, while advancing Europe's competitiveness, economic growth, job creation, and the promotion of a sustainable, healthy society for European citizens.

Smart and efficient electrification offers this system approach, enabling the decarbonisation, sectoral integration, digitalisation, and increased efficiency of the transport, heating & cooling and industrial sectors.

The Alliance seeks to highlight in its communication essential policy decisions in EU Energy & Climate policy to fully unlock the benefits of electrification across all relevant societal sectors.

As a new institutional cycle begins, Europe has the unique opportunity to take decisive political action¹ to achieve climate neutrality by 2050. Europeans support ambitious climate action and a clean energy transition which leaves no country and no citizen behind. A European Green Deal,

as proposed by Commission President Ursula von der Leyen, is the opportunity to progress towards a carbon neutral European economy, powered by clean electricity.

We are at a pivotal moment. The European Commission's Long Term Decarbonisation strategy "A Clean Planet for All" highlighted that renewable and decarbonized electricity should increase significantly, replacing fossil fuels in Europe's energy mix and across all sectors of the economy, as a pre-condition to meeting our Climate and Energy objectives. To deliver on a carbon neutral Europe, necessary investments in network infrastructure, smart solutions and renewable energy generation must start now, and all policies must now be geared towards achieving this objective.

Recent studies show that fully decarbonized electricity is central to any cost-effective long-term climate strategy.²

Putting clean and smart electrification at the core of the European Green Deal will bring significant benefits for European citizens and the economy.

1. Make Europe's energy supply more efficient, secure and affordable:

- > **Electrification brings economic prosperity.** Fuel imports cost EU citizens more than €1bn per day. Replacing fossil fuels with renewable-based and carbon neutral electricity would significantly improve the EU's energy security and would translate into cost savings for consumers;
- > **Electrification saves energy.** Electricity delivers equivalent services with less energy input. Electric vehicles and electric driven heat pumps are more efficient than their fuel-based combustion counterparts, even when accounting for power transformation losses;³
- > **Electrification ensures a more resilient energy system thanks to sector coupling and unlocking demand-side flexibility.** New electric loads such as heat pumps, electrolyzers, smart charging infrastructure and storage solutions will drive flexibility, allowing to manage in a smart way the decarbonised energy system with large shares of variable renewables.

¹ https://europa.eu/rapid/press-release_IP-19-2360_en.htm

² Eurelectric's "Decarbonisation Pathways" (2018) study: 60% direct electrification in 2050; WindEurope's "Breaking New Ground" (2018) report: 62% direct electrification in 2050

³ For instance, battery electric vehicles have a conversion efficiency of 80-90% from tank to wheel, compared to 20-30% for internal combustion engines. This allows EVs to drive three to four times the distance with the same amount of energy. In the heating sector, heat pumps can heat space and water with high coefficients of performance, meaning that for each kW of electricity consumed about 4kW of energy is generated. Compared to green methane used in conventional boilers the efficiency factor rises to 7 or 8.

2. **Empower consumers and boost Europe's digital revolution.** Synergies with digitalisation will enable consumers to take a more active role in managing their energy consumption, become prosumers and save costs. It also drives technological developments in related businesses which help European companies to maintain global industrial leadership;
3. **Ensure that e-mobility is at the heart of Europe's climate and industrial strategy.** In order to maintain its competitiveness vis-à-vis Asia and the United States, the EU must prioritize electromobility to support the European industry and inspire the development of innovative business models in the transport sector. Continuing to invest heavily in clean mobility solutions will greatly contribute to job creation across the continent and allow Europe to swiftly transition to a zero-emissions transport system, powered by renewable-based and decarbonized electricity;
4. **Deliver Europe's industrial leadership through investments in renewable, smart and clean electricity solutions.** The European Union must enable the growth of a robust and diverse industry which supports the local economy and provide high-skill jobs for EU citizens. Increased renewable capacity and affordable electricity will also boost the economics of green hydrogen which will be important to support the decarbonisation of hard-to-abate sectors and deliver seasonal energy storage;
5. **Protect Europeans from the growing consequences of air pollution on health and quality of life.** 480,000 Europeans died prematurely from exposure to PM2.5, NO2 and O3 in 2015 according to the European Environmental Agency. Displacing fossil fuels in transport and heating through higher use of decarbonised electricity would directly address this local air quality challenge.

We call on European and national policymakers to deliver a meaningful European Green Deal to:

- 1 Mainstream clean and direct **electrification** in the heating & cooling and transport sectors, as the most cost-effective and energy efficient strategy to address climate change and enhance the quality of life of all Europeans. Deploy without delay the technologies that are already available to decarbonise industrial processes, transport and the heating & cooling sector;
- 2 Support a robust **industrial strategy** ensuring Europe's carbon neutrality serves as a springboard for European industrial leadership in renewables-based, decarbonized and digital electricity solutions including electrolyzers;
- 3 Take action to promote the further **digitalisation** of the energy value chains which is necessary to delivering successful and smart electrification strategies. Accompany the transition towards a digitalised energy sector, by helping energy professionals acquire the necessary digital skills and competences;
- 4 Ensure that investments in network **infrastructure**, especially smart electricity grids, support the transition towards a net-zero carbon economy. This must be based on an independent assessment on the need for direct and indirect electrification across sectors of the economy, by means of a revision of the TEN-E regulations;
- 5 Prioritize the revision of the **Alternative Fuels Infrastructure Directive** to support the increase of electric vehicles by accelerating the roll out of charging infrastructure;
- 6 Ensure the effective implementation of the revised Energy Performance of Buildings Directive (EPBD) and shape an integrated strategy for new and existing **buildings** pulling together synergies for electrification, on-site renewables, energy efficiency and smart technologies. This is key to achieving a decarbonized building stock by 2050;
- 7 Deliver an ambitious strategy with clear goals to decarbonize energy demand from **heating & cooling**. This should unlock system benefits resulting from sector integration, foster energy efficiency and the use of renewable energy in the heating & cooling sector;
- 8 Secure sufficient financing under the next **EU budget** to support regions and Member States with a different starting point in the decarbonisation journey including a meaningful Just Energy Transition Fund. Climate change policies should be inclusive and address the challenges of energy poverty and vulnerable consumers;
- 9 Modernise the energy **taxation** regime to accelerate the shift towards decarbonising electricity consumption and increased uptake of clean electricity in end-use sectors;
- 10 Target **Research and Innovation** funding for key climate mitigation system solutions as well as carbon neutral industrial solutions and feedstocks to accelerate the transition in hard to abate sectors in a cost effective manner. To do this, we must increase the Horizon Europe budget Climate to €120bn.

ELECTRIFICATION ALLIANCE PARTNERS



