ECOS vision for a successful Electrification Action Plan

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Electrification is a key ingredient for a successful energy transition. The mission letter to Commissioner for Energy and Housing Dan Jørgensen included the commitment to develop an Electrification Action Plan. ECOS supports this initiative, which should accelerate electrification in Europe. Below we outline our recommendations for a successful Action Plan in the areas of heating, transport, demand-side flexibility and industry.

Heating and cooling

Electrification is an effective way to decarbonise the heating and cooling sector. Electric heat pumps are an energy-efficient technology that is key to transitioning away from inefficient heating solutions that rely on fossil fuels.

With the Electrification Action Plan, the EU can lift barriers that hold back the rapid deployment of renewable heating solutions like electric heat pumps. It offers a golden opportunity to address long-term costs for consumers, energy poverty, indoor air pollution, and energy insecurity, and to give positive signals and incentives to the uptake of heat pumps.

We recommend the following actions:

- **Give clear policy signals by taking stock of the current policy framework and by finalising ongoing regulatory revisions**. The Electrification Action Plan should streamline and implement already-agreed policy decisions, such as the ones taken under the Fit-for-55 package. The Action Plan should also call for an ambitious revision of Ecodesign and Energy Labelling rules that can further support the uptake of residential and large heat pumps.
- **Support public procurement of clean and efficient heating technologies**, such as electric and F-gas free heat pumps. Public procurement is one of the EU's most important economic tools, amounting to a staggering 15% of the bloc's GDP. It can drive market transformation and behavioural changes on citizens and enterprises by leading by example and by stimulating demand. Green public procurement should incentivise the uptake of heat pumps. One way of doing this is to rapidly update the energy label for space and water heaters. According to the Energy Efficiency Directive (EU) 2023/1791, Member States may limit the purchasing choice

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to those products belonging to the highest energy efficiency class of an energy label. Revising the energy label according to stronger energy efficiency thresholds would put heat pumps in the highest energy classes and therefore incentivise public procurement to support those products.

- **Implement load flexibility features**: Heat pumps, as smart devices, can be equipped to provide demand-side flexibility to stabilise the grid and make it more renewable. To make this possible it is key heat pumps can communicate with a central energy management system by means of a future-proof communication standard. This way they can provide flexibility in coordination with other big loads, such as electric vehicles, and use renewable energy from rooftop solar. We support the implementation of the future-proof EN 50491-12-2 standard in heat pumps and energy management systems to unlock such potential.
- **Industrial heat pumps allow to replace fossil fuels in low-temperature industrial heat demands**. This is low-hanging fruit that should be promoted: this could be done by introducing targeted support and de-risk investment in the context of the plan.
- **Support the development of ambitious standards for efficient heat pumps**. It is crucial that the methodology to test the energy efficiency of heat pumps and defined by European standards is as close as possible to real-life conditions. ECOS called for the introduction of a 'compensation method' in the Ecodesign regulation while refining the methodology at European standardisation level (CEN).

Transport

The electrification of transport is finally underway. In the first quarter of 2025, battery electric vehicles accounted for 15.2% of total sales. Accelerated roll-out of charging infrastructure should further support this.

It is key that EVs can charge in a grid-friendly way. When more and more people drive electric, the importance of smooth, smart and bidirectional charging will increase. To make this happen on a large scale, we recommend the following actions:

- **Implement future-proof smart charging standards in both the charging infrastructure and the vehicles**. Now that charging stations will implement ISO 15118-20: Road vehicles — Vehicle to grid communication interface Part 20: 2nd generation network layer and application layer requirements by 2027, EVs should also be required to implement this important standard. Without the implementation of this standard by the vehicles, the implementation in the charging station network is of little use. Vehicle type approval requirements could be a way to arrange this.
- **Reduce charging station failures to a minimum, by ensuring the development and implementation of robust communication standards**. The success of the transition to electromobility partly depends on well-functioning charging infrastructure. The Open Charge Point Protocol (OCPP), which is currently used for the communication between the charging stations and the operator's Charging Station Management System (CSMS), should be improved by adopting a "design for failure" approach. This way charging stations can recover more easily from software crashes and communication outages, limiting the impact of unavoidable failures. Furthermore, the integration of the EV with the electricity grid overall,

as well as in buildings is key. OCPP can also be improved on this front, by simplifying the way integration with energy management is done.1

- **End OEM control over vehicles**. Data should belong to the owner of the vehicle who can decide which actors are allowed to make use of this data to provide services. This is needed for costumer trust and EV adoption in general, and smooth smart charging in particular. The in-vehicle data Regulation, which has been blocked for a long time, is a suitable legislative instrument to ensure this.

Demand-side flexibility

Given the cost and slow pace of grid expansion, demand-side flexibility is a key prerequisite for widescale electrification. Devices such as heat pumps and electric vehicles and their chargers should be able to adjust their electricity use to support the grid, by consuming electricity when ample renewable energy is available or when demand for electricity is low. Avoiding vendor lock-in is key to ensure that consumers do not have to rely on one technology provider or device brand when they add or replace a flexible device.

We recommend the following actions for future-proof, interoperable demand-side flexibility:

- **Ideally, an energy management system (EMS) coordinates the electricity use** of multiple devices based on grid conditions, electricity prices and consumer needs.
- **Ensure that devices communicate their flexibility potential to the EMS in a future-proof manner**. This avoids vendor lock-in and ensures devices can continue to provide flexibility during their entire lifetime, keeping the installed base of flexible devices as large as possible, which is needed for a flexible energy system.
- **Ensure that new energy flexibility use cases are added to the EMS, instead of the device**. This way, use cases only have to be added once, instead of relying on device manufacturers updating all smart devices when new use cases emerge.
- **Ensure the implementation of standardised communication protocols and data models** such as EN 50491-12-2 to guarantee future-proof, interoperable demand-side flexibility, avoiding vendor lock-in. Consult our position paper for more info.

Industry

Electrification efforts should not be hindered by **lack of infrastructure**: it is key that transmission networks are completed and deliver electricity where it is needed, fully respecting the surrounding environment by assessing and mitigating their impacts.

With reference to the **steel industry**, process electrification is developed and successful: Europe already produces around 40% of its steel with electric arc furnace technologies (EAF). The adoption of this technology should be supported with measures to boost electrification as per the revised Electricity Market Design. Among these, Contracts for Difference should be deployed, respecting competition law provisions on state aid.

1. IEC 63110: *Protocol for management of electric vehicles charging and discharging infrastructures* contains a lot of useful concepts OCPP should borrow from. An overview can be found here