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Greenwheel Insights

Double in a Decade: The EU's new Electrification Action Plan

Summary

Europe remains heavily exposed to fossil fuel supply shocks, with energy import dependency higher than most other major global economies. Against this backdrop, the **European Commission's new Electrification Action Plan sets a highly ambitious indicative target to double electricity's share of EU final energy consumption by 2040 and backs it with several proposed measures**. These include narrowing the price gap between electricity and gas, encouraging investment in electrified heating and cooling, reforming the carbon market to favour industrial electrification, and accelerating deployment of demand-side flexibility and smart grid infrastructure and operation.

The Plan directly addresses key barriers to electrification, **but uncertainty remains** around the design, timing and detailed implementation of some measures. Regardless, **the Plan and its proposals point to a structurally much larger role for electricity in Europe's economy**.

Paul Drummond

Climate and Environment Research Lead, Greenwheel

*"**The Electrification Action Plan is a clear signal that electricity is a core pillar of the EU's industrial and energy strategy**. By targeting the electricity–gas price gap, tying carbon market revenues to industrial electrification, and mandating smarter, more flexible grids, we believe that **the opportunity space for investors in electrification is wide open**. It moves from a focus on renewable power to the wider system of grids, storage, heat pumps, EV infrastructure and digital platforms that can unlock and manage a much larger pool of electrified demand across Europe's economy. **The Redwheel Ecofin Listed Infrastructure Strategy, which targets the companies and infrastructure assets at the heart of this structural growth theme, is in our view, well positioned to benefit."***

Jean-Hugues de Lamaze

Portfolio Manager, Redwheel Ecofin Listed Infrastructure Strategy

Background

The EU is highly vulnerable to fossil fuel supply shocks. The EU is the most energy import dependent major economy in the world, save Japan and South Korea.[i] Electricity delivers 23% of Europe's final energy demand. Although close to the US and global average, this is far behind countries like China - but also South Korea and Japan - which exceed 35%.[ii,iii]

Displacing fossil fuels through electrification is the critical solution, with the economic and security case increasingly clear. The EU's energy import bill in 2025 was over €335 billion.[iv] Oil and gas price volatility resulting from the conflict in Ukraine added nearly €1 trillion to the EU's import bill over 2021-2024.[i] Since the beginning of the current conflict in Iran, fossil fuel imports have already cost an additional €50 billion.[ii]

Recognising this, the European Commission has published an Electrification Action Plan. In development since early 2025, the Plan was published on 17th July 2026 and contains a combination of new and a reiteration of existing targets, plans and initiatives.

Doubling in a decade: A new target for electrification

The plan introduces an **indicative target to *double* electricity's share of EU final energy consumption from roughly 23% today to 46% by 2040**, with the Commission to assess this target as part of the post-2030 Energy Union package later this year. This sits well above the 32%-by-2030 aim set out in the Clean Industrial Deal,[ii] and implies a massive switch to electricity use across transport, homes and industry – with rate of electrification growth increasing by nearly an order of magnitude.

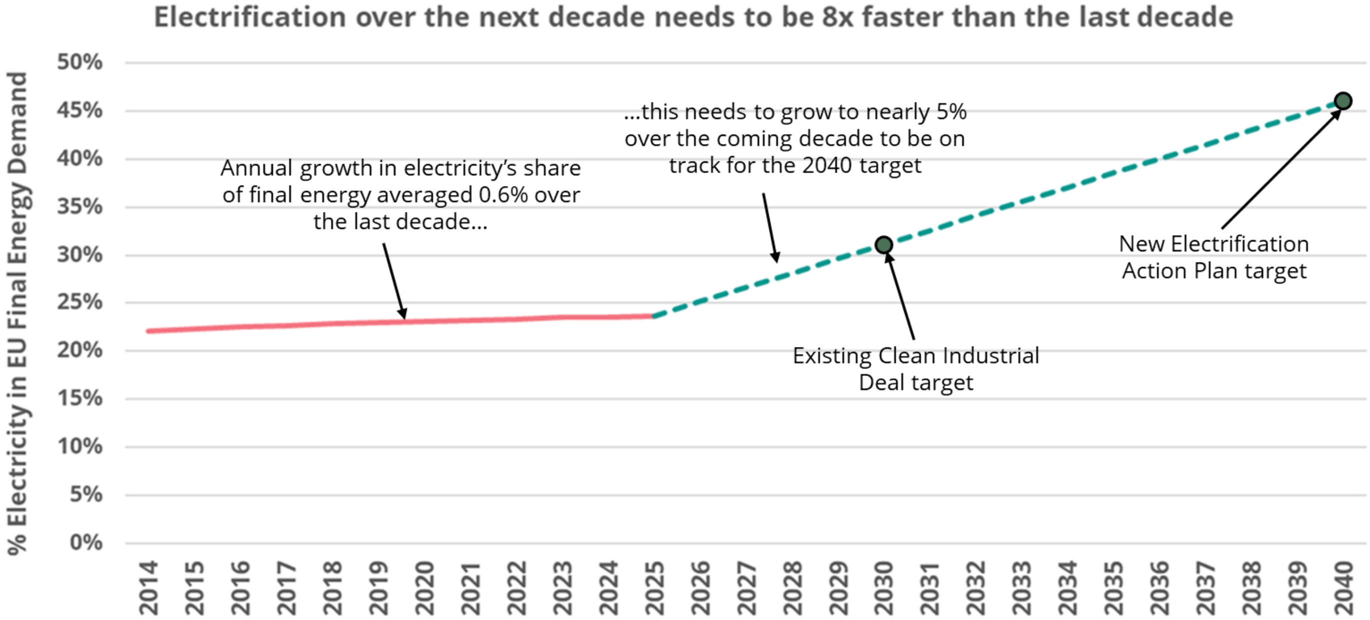

Figure 1 – Historic share of electricity in EU final energy demand vs future targets. Data sources: Eurostat (2026), European Commission (2026). Assumes linear change between 2025 and future target years. Graphic created by Greenwheel. The information shown above is for illustrative purposes. Forecasts and estimates are based upon subjective assumptions about circumstances and events that may not yet have taken place and may never do so.

The Commission estimates this could cut EU gas imports by more than 70% and crude oil imports by more than 40%, **reducing the bloc's fossil fuel import bill by up to €260 billion per year** by 2040, while **also lowering electricity generation costs by around 20%** and cutting CO_2 emissions by 20-30% from current levels.[ii]

Fifteen 'actions' to accelerate electrification

The Plan presents fifteen 'actions',[ii] which vary in their additionality and importance relative to existing or previously announced plans.

The **most significant are those designed to reduce the gap between electricity and fossil energy costs**, which the plan recognises as the most important barrier to incentivising and accelerating electrification. The Commission sets **a key objective to reduce electricity prices to below 2.5x gas prices for households and 2x for industry**. Below these levels, the operating costs of heat pumps drop below fossil-based alternatives. Only 4 and 7 member states currently achieve these ratios for households and industry, respectively.[ii]

- **Legislation to align electricity bills and networks with electrification**. Adopted alongside the Plan, a legislative proposal contains three key action themes. The first tightens EU rules to incentivise efficient grid operation, flexibility (including use of batteries), grid-enhancing technologies, and cost-reflective network charging. The second focuses on developing a smarter grid, including an EU-wide minimum requirement of at least 50% of final customers equipped with smart meters by 2030, rising to 75% by 2033. The third requires electricity to be taxed less than natural gas across member states, and a possibility to reduce electricity tax in industry further.

- **Measures to progressively phase out fossil fuel subsidies**, to be proposed as part of the post-2030 Energy Union package in Q4 2026. Such subsidies were worth around €100 billion in 2024 but peaked at nearly €170 billion at the start of the energy crisis in 2022.[ii]

Other notable actions and announcements include:

- **Carbon market reforms to drive industrial electrification**. Published alongside the Electrification Action Plan was a proposal to reform the EU's Emissions Trading System (EU ETS) to align with 'competitiveness and cost-effective decarbonisation'.[v] Most relevant to the Plan is stricter free permit allocation rules linked to electrification investment, a legally grounded focus on electrification under the €100 billion Industrial Decarbonisation Bank (funded primarily through EU ETS revenues), and a second industrial heat decarbonisation auction.

- **Binding 'vehicle-to-grid' standards and 'smart charging' by default**. Legislation in 2027 will introduce new vehicle-to-grid requirements and standards for new EVs placed on the EU market from 2030, turning EVs into two-way grid assets rather than passive loads. Smart charging as the default setting in electricity supply contracts linked to EVs will be 'assessed and promoted'. The Commission will also work to develop actions to create enabling conditions to accelerate the roll-out of electric heavy duty vehicles, ferries and inland navigation vessels.

- **An EU-wide cooling and heating strategy and mechanism to reduce heat pump costs.** Such a strategy would be the first at the EU level and foregrounds the growing need for efficient cooling alongside heating. A new, EU-level mechanism designed to close the upfront cost gap between heat pumps and gas boilers, targeting a near-doubling of heat pump installation rates to 4 million units per year by 2030, up from 2.4 million in 2025, would also be novel. However, the design and binding force remain unclear, pending exploration for adoption by 2027.

- **Energy rating and minimum performance standard for data centres.** Development and future adoption of a common rating scheme to increase transparency on data centres' energy use and promote lead markets for sustainable digital assets and services across Europe. This is alongside development of a methodology to assess the flexibility potential of large electricity loads, such as data centres, and minimum performance standards aimed at leveraging this potential.

Other aims, actions and initiatives include an effort to encourage member states to apply lower VAT rates to electrification technologies, making use of existing options already available under the VAT Directive, **a new Geothermal Stakeholder Partnership** to help address regulatory, technical and investment barriers and accelerating the deployment of geothermal, **and a new electrification value chain focus under the upcoming Strategy for Vocational Education and Training (VET)**.

Implications for investors

- **The ambitious 2040 target places electrification at the core of Europe's economic strategy**. Accelerating the annual rate of growth in electrification by nearly an order of magnitude over the coming decade is a very tall order. Doubling the share of electricity as a share of final energy demand by 2040 may be unachievable in practice, given the structurally lower energy efficiency achieved by fossil versus electrified technologies. Despite this it sets a very clear expectation that electricity generation, transmission and use in the EU is set for rapid growth in the coming years, should it be formally adopted as part of the Energy Union Package due by the end of 2026.

- **Policy risk is shifting from "if" to "how fast, and where".** Delivering cheap electricity relative to fossil alternatives is the closest thing to a silver bullet for accelerating electrification across the economy. For electrification of heating, in particular – both domestic and industrial - tackling high up-front costs is not far behind. The Plan addresses both challenges directly, but uncertainty around the design, timing and detailed implementation of measures remains.

- **Flexibility and systems thinking is taking centre stage, unlocking deep electrification potential.** A heavily electrified economy underpinned by renewable energy requires a flexible and smart electricity system. Actions to deliver vehicle-to-grid standards, 'smart' charging, accelerating smart meter rollout, data centre and other large load flexibility, other flexible grid assets (e.g. batteries) and increasingly smart grid operation all enable such a system. Action to develop domestic skills in the value chain is also crucial to its delivery. However, again, there remains uncertainty around the design, timing and detailed implementation of these measures.

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[i] Ember (2025)
[ii] European Commission (2026a)
[iii] IEA (2026)
[iv] Eurostat (2026)
[v] European Commission (2026b)

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