Electrification Alliance response to Governance Regulation call for evidence

Electrification is the most cost, resource-efficient, and scalable pathway to decarbonise final energy demand while strengthening energy security. Globally, electricity is planned to account for 40% of cumulative emissions reductions from end-use sectors by mid-century[1] and in Europe, electricity's share of final energy consumption is projected to rise to 50% in 2040[2]. This pathway is reflected in the ambitions of the European Commission, with the Clean Industrial Deal targeting a 32% electrification rate by 2030 - up from the currently stagnating level of around 23% - and projections pointing to around 50% electrification by 2040[3].

Electrification will play a central role in delivering the EU's climate, energy security and competitiveness objectives. Achieving this transition will depend on effective planning, monitoring and coordination across Member States. In this context, the EU Governance framework - and in particular the National Energy and Climate Plans (NECPs) - is a critical tool to translate EU-wide objectives into credible national pathways.

I. Electrification as a cornerstone of the Energy Union

The Governance Regulation structures the indicators Member States will have to monitor in their NECPs against the five dimensions of the Energy Union[4], all of which electrification can have a direct effect on:

- **Energy security:** electrification could halve import dependency by 2040[5], substituting imports for homegrown clean electricity production[6]. This could help reduce the EU's import dependence to only reliable partners[7, 8].
- **Internal energy market**: the EU electricity market is the world's largest integrated power market. As more end-uses shift to electricity, the EU can leverage this potential and deepen cooperation and cross-border trade, including to balance supply and

[1] International Energy Agency (IEA). "World Energy Outlook 2025", accessible here.
[2] Eurostat. "Energy statistics - an overview", accessible here.
[3] European Commission, "Electrification", accessible here.
[4] European Commission, "Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action", article 1, accessible here.
[5] EMBER, "Shockproof: how electrification can strengthen EU energy security", accessible here.
[6] In a slow transition scenario, Europe would remain highly exposed, with import dependency reaching 78% in 2030 and still 54% in 2050. By contrast, a renewables-based electrified energy system could reduce import dependency to around 22% by 2050. Source: Wind Europe and Hitachi Energy, "Delivering a cost-effective energy system for Europe, accessible here.
[7] Strategic Perspectives, "Endgame for gas dependence: electrification and regional partnerships", accessible here.
[8] Wider heat pump adoption and improved home energy efficiency alone could reduce fossil fuel import spending by EUR 60 billion by 2030, more information: European Commission, Affordable Energy Action plan, accessible here.

demand, thus strengthening the overall business case for electricity interconnectors and national grid development.

- **Energy efficiency**: direct electrification is more efficient than fossil based alternatives and alternative fuels, such as hydrogen. For example, heat pumps are up to 5 times more efficient than conventional gas boilers[9].
- **Decarbonisation:** electrification contributes directly to decarbonisation by replacing fossil fuels. For example, in 2024, EVs saved in Europe 20 million tonnes of CO_2[10]. Moreover, ensuring adequate and predictable electricity demand can strengthen investor confidence and lowers risk profiles for related electricity infrastructure, including for variable renewables and grids.
- **Research, innovation and competitiveness:** Electrification creates scale for clean-tech industries, driving cross-sectoral innovation, lowering long-term system costs, and positioning Europe as a global leader in integrated, electrified energy systems.

Despite this, no indicators on direct electrification are included in the Governance Regulation or in NECPs.

II. NECPs reveal uneven ambition and limited visibility of electrification

In addition to missing indicators, EU assessments of updated NECPs highlight persistent shortcomings in ambition, coherence and implementation between national and EU objectives[11]. For instance, while updated NECPs collectively include substantial renewable electricity additions, projected solar PV capacity of approximately 555-626 GW by 2030 remains below the EU Solar Strategy target of 750 GW and well below the sector's estimated potential[12]. Similar deployment challenges remain for wind energy. The EU installed 15.1 GW of new wind capacity in 2025. Current projections suggest installations over 2026-2030 will bring EU wind capacity to around 343 GW by 2030, well below the EU target of 425 GW, highlighting the need to address grid bottlenecks, slow electrification of demand and permitting delays[13].

Beyond renewable capacity gaps, several other KPIs lack ambition:

- Many NECPs lack long-term visibility for renewables and electrification-enabling technologies.
- Only a minority of Member States include quantitative targets for decentralised generation, storage, or smart meters, despite their central role in enabling electrification[14].

[9] European Commission, "BUILD UP: How much energy efficient are heat pumps compared to fossil fuel heating?", accessible here.
[10] T&E, "2025 State of European Transport", accessible here.
[11] SmartEn, "2025 Market monitor for Demand Side Flexibility", accessible here.
[12] SolarPower Europe, "New analysis: EU countries increase 2030 solar goals by 90% but grid planning trails", accessible here.
[13] Wind Europe, "Wind energy in Europe: 2025 statistics and the outlook for 2026-2030", accessible here.
[14] According to Ember, the NECPs indicate that Member States collectively aim for an electrification rate of around 30% by 2030, yet only Spain has included an explicit overall electrification target in its plan (EMBER, EU national targets show gas in decline, accessible here)

Ambition gaps persist in both renewable energy and energy efficiency, while delivery gaps remain difficult to address due to limited enforcement tools and absence of corrective mechanisms. The absence of comprehensive, comparable and measurable indicators further constrains effective monitoring and Commission oversight.

Recommendation:

To address these shortcomings, NECPs should be fully aligned with the EU's climate and energy targets and objectives and provide long-term visibility on system developments, including deployment volumes for renewable electricity and electrification-enabling infrastructure. Besides paving national energy and climate trajectories, NECPs inform a much wider range of processes, such as system and grid development at national and European levels. Timely submission and implementation should be ensured and enforced, alongside better alignment of planning cycles. For example, between NECPs and national long-term strategies (nLTS), and with other relevant national and EU energy and spatial planning processes. Greater coherence is also needed with complementary planning tools, including Maritime Spatial Plans (MSPs), Renewable and Grid Acceleration Areas (RAAs/GAAs), and Nature Restoration plans (NRPs). This would ensure that electrification-related infrastructure can be deployed effectively and in a timely manner.

Improving the data quality, granularity and comparability as well as transparency of NECPs is also essential. Streamlined and standardised formats and templates should be used to ensure consistent reporting while avoiding unnecessary administrative burden for Member States. NECPs should provide transparent and robust data on required investments and clear forward visibility, including on renewable energy auction schedules and capacity volumes, with a system-level approach and assessed against clear benchmarks. NECPs should also provide visibility on renewable electricity deployment trajectories, including wind energy capacity additions consistent with the EU's 2030 and future 2040 climate and energy targets. This would strengthen monitoring, support investor confidence and enable more effective oversight. The European Commission should strengthen oversight of NECP delivery through a transparent monitoring framework, including a scoreboard tracking Member States' progress in implementing key EU energy and climate legislation and deployment milestones. Moreover, embedding structured cross-border coordination mechanisms in NECPs, including regarding ambition and timing, would allow planners and decision-makers to design infrastructure efficiently and provide greater long-term certainty.

To ensure the role of direct electrification in advancing the different dimensions of the Energy Union is adequately reflected in the NECPs, the Electrification Alliance recommends the systematic inclusion of direct electrification indicators in NECPs, covering in particular:

- The share of final energy demand met by electricity overall and for each sector (transport, buildings, industry)
- Projected electricity demand growth consistent with climate targets
- The rate of flexible activation of each electrified sector
- The ratio of gas taxes and levies compared to electricity taxes and levies

To enhance coherence, NECPs should reference indicative EU-wide benchmarks, such as:

- At least 32% direct electrification of final energy consumption by 2030 – as mentioned in the Clean Industrial Deal, and
- At least 50% direct electrification across the EU by 2040 - as projected in the European Commission's 2040 targets impact assessment.

Integrating electrification targets, indicators and KPIs can be achieved within existing governance structures. These elements can be embedded in:

- NECP updates and templates.
- Biennial progress reporting.
- The Commission's integrated assessment and recommendation processes.
- National long term strategies

This process would allow tracking interim targets, assessing each Member States' advancement against different starting points, setting different but realistic national trajectories that account for domestic specificities.

Other indicators relevant to electrification:

In addition to the indicators listed above, other KPIs should be added to the Governance Regulation to monitor the development of electrification throughout Europe:

- **Permitting and administrative performance:** permitting is a prerequisite for scaling up renewables, grids and electrotech. The establishment of indicators to monitor permitting performance, including total duration of permitting procedures or identification of bottlenecks affecting infrastructure-related investments would be beneficial to monitor which areas need to be prioritised by support measures.
- **Grids and infrastructure:** While Network Development Plans (NDPs) are and should remain the main planning and investment tools, additional indicators in NECPs could cover planned grid reinforcement and capacity expansion or transmission and distribution grid investment pipelines aligned with electrification trajectories. Such an approach could help anticipate investments while enhancing system optimisation. In turn, processes such as the Ten-Year Network Development Plans, Flexibility Needs Assessments and Resource adequacy assessments could further feed into NECPs.
- **Energy security indicators:** NECPs should monitor advancement against energy security objectives, such as avoided fossil fuel imports resulting from an energy vector's or a technology's deployment, or domestic renewable electricity generation contributing to reduced import dependence, along with advancement on resilience of electricity infrastructure.
- **Workforce & Skills:** Member States should ensure a sufficient workforce with an adequate level of skills is available to achieve their energy and climate targets, by monitoring the influx of new entrants into technical education and professions as well as the uptake and participation rate in upskilling for electrification technologies.

Stakeholder engagement and public consultation

Finally, given the transformative nature of NECPs and national Long-Term Strategies, robust stakeholder engagement and public consultations should be ensured throughout the preparation and revision of NECPs, in line with the Aarhus Convention.

Up to now, the Governance Regulation has delivered significant results for energy security, competitiveness, affordability and climate mitigation by providing clarity, predictability and investment certainty. Targeted improvements, alongside stronger implementation and delivery, can enhance its effectiveness and ability to capture the benefits of direct electrification and overall, the fast-changing climate, energy and nature policy landscape, maintaining its core function as a key planning tool.