Accelerating energy efficiency and electrification in Europe

5 short- and medium-term measures to cut energy bills and enhance the EU's energy resilience

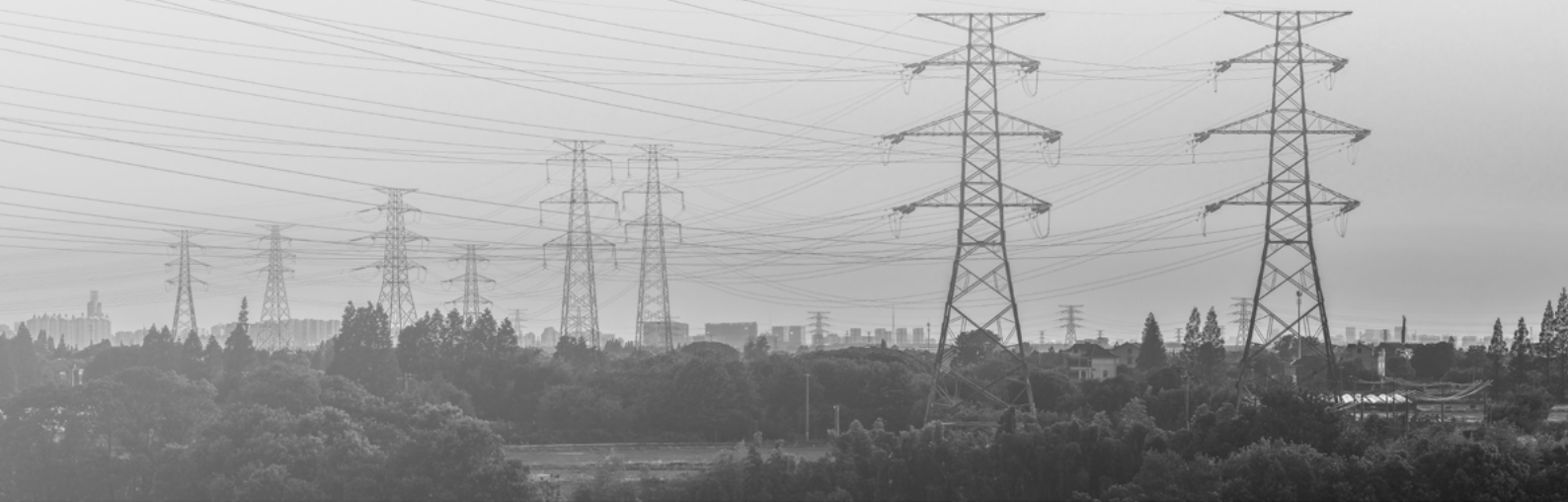
Schneider Electric

The following document has been prepared by Schneider Electric's Government Affairs team in Europe in response to the current energy context. It aims to contribute to policy discussions on energy efficiency and electrification by outlining a set of short- and medium-term measures to reduce energy costs and strengthen Europe's resilience.

About Schneider Electric

Schneider Electric is a global energy technology leader, driving efficiency and sustainability by electrifying, automating, and digitalising industries, businesses, and homes. Its technologies enable buildings, data centres, factories, infrastructure, and grids to operate as open, interconnected ecosystems, enhancing performance, resilience, and sustainability. The portfolio includes intelligent devices, software-defined architectures, AI-powered systems, digital services, and expert advisory.

With 160,000 employees and 1 million partners in over 100 countries, Schneider Electric is consistently ranked among the world's most sustainable companies.



Europe's recent energy crises have laid bare a structural vulnerability: exposure to fossil fuel imports whose prices are volatile, geopolitically risky, and largely outside European control. Price shocks in gas and oil markets translate almost immediately into higher energy bills for households, industry, and public services, and into macro-economic and political instability.

In this context, energy efficiency and electrification are not climate add-ons. They are Europe's only scalable, home-grown energy resources capable of:

- reducing energy demand structurally;
- replacing imported fossil fuels;
- cushioning consumers and businesses against future price shocks;
- and strengthening EU energy independence and competitiveness.

Many energy efficiency and electrification solutions are mature, available today, and deliver fast payback. Prioritising their rapid deployment is therefore the most cost-effective short- and medium-term response to the energy crisis, while also aligning with Europe's long-term climate and industrial objectives.

As Schneider Electric, we therefore recommend 5 main actions to be taken by Member States and the European Commission to accelerate Europe's journey towards more energy efficiency and electrification in the short- and medium-term:

01

Deploy energy efficiency solutions with short payback periods;

02

Implement existing energy efficiency legislations;

03

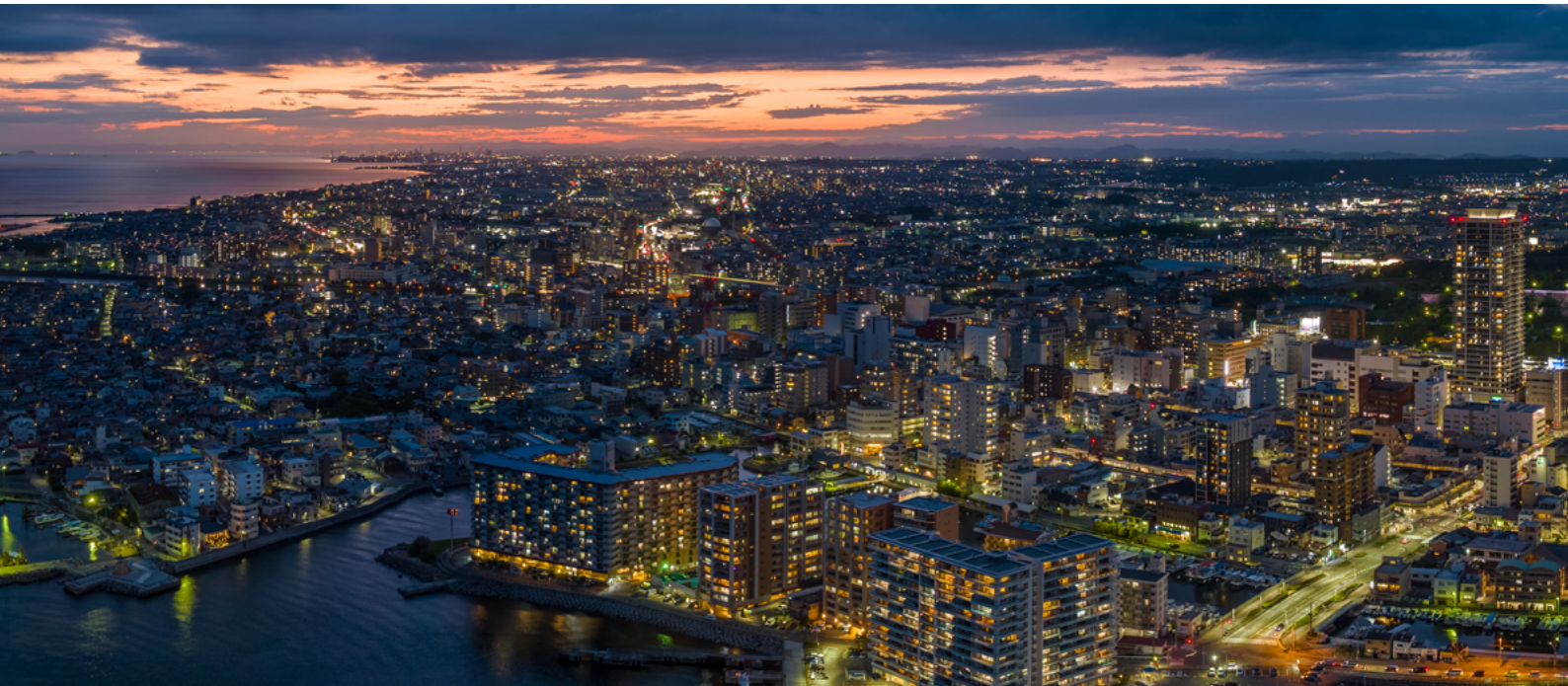
Accelerate electrification of end-uses with targeted measures and incentives;

04

Leverage funding and taxation to support energy efficiency and electrification;

05

Unleash the potential of local self-generation, flexibility, and smart grids to lower energy bills.



Laurent Bataille
EVP Europe Operations

Laurent Bataille, Executive Vice President, Europe Operations at Schneider Electric:

"The call to action for policymakers to prioritise energy efficiency and electrification is as relevant today as it was four years ago. The solutions haven't changed. Yet in that time, Europe has lurched from one energy crisis to another – without making the progress it should have to shield itself from the price shocks and sky-high costs making its businesses, households and industry so vulnerable.

Complacency is Europe's biggest energy risk. Plans to subsidise energy costs are sticking plasters, and inadequate in the long-term. Europe needs a structural change – one that incentivises adoption of clean tech solutions so businesses and households alter the way they use energy for good. We need policies that promote an energy system built in Europe, for Europe – reducing exposure to volatility, enabling clean, reliable supply, and ensuring Europe can stay competitive."

01

Deploy energy efficiency solutions with short payback periods

Energy efficiency technologies are mature, rapidly deployable, and deliver immediate protection from energy price volatility. Many measures generate positive cash flow within months or a few years, making them ideal crisis-response tools.

Buildings: digital control and active energy management first.

The fastest and most cost-effective efficiency gains in buildings come from connectable and digital solutions, which optimise energy use based on real-time conditions. Priority measures must include:

- Smart heating controls and thermostats, particularly in residential buildings, schools, and offices, enabling immediate demand reduction.
- Temperature set-point management (e.g. 19°C in winter, 24°C in summer), a low-cost sufficiency measure with large aggregate savings.
- Home Energy Management Systems (HEMS) and Building Management Systems (BMS) to continuously optimise heating, cooling, ventilation and lighting.

These measures reduce energy bills quickly, improve comfort, and prepare buildings for electrified heating and demand response.

Industry: responsible for nearly 40% of EU final energy demand, several proven measures stand out for their speed, scale, and cost-effectiveness:

- Energy Management Systems (EMS): can achieve more than 10% energy savings on average within the first three years, and 20-30% savings over time, including through low or no-cost measures. Beyond energy savings, EMSs also lay the groundwork for the digitalisation of industrial production, improving process visibility and enabling the identification of efficiency gains. Best-practice policy support includes long-term voluntary agreements and networks (e.g. Ireland, Finland), as well as targeted support for SMEs, combining technical assistance and financial incentives (e.g. France, Japan).
- Variable Speed Drives (VSDs): are among the fastest-payback industrial efficiency investments available today. They typically reduce electricity consumption by 15-40% when installed on variable-load motor systems, with a payback period of 1-3 years. Given that electric motors account for around two-thirds of industrial electricity use, systematic VSD deployment is a critical lever.

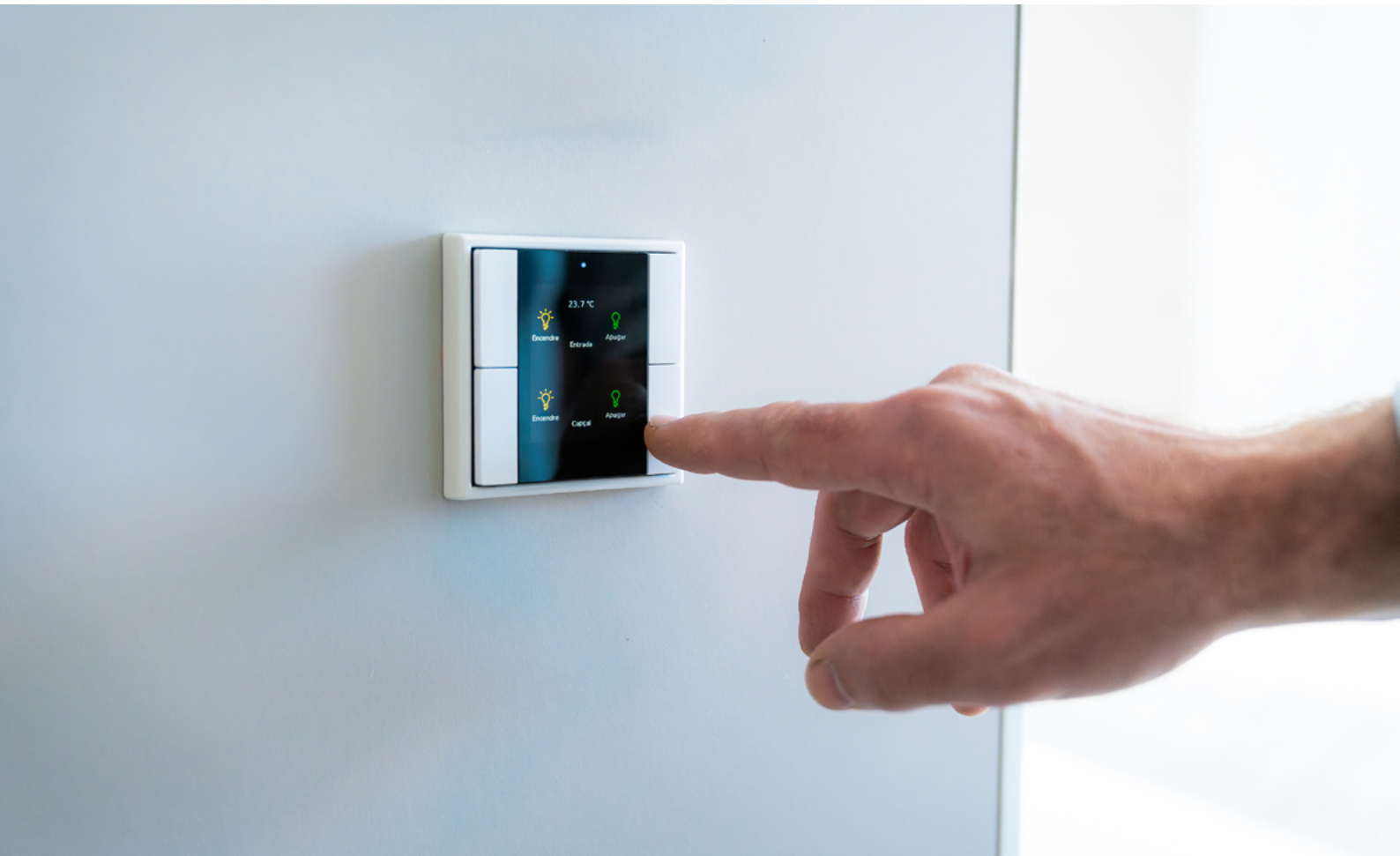
02

Implement existing energy efficiency and energy performance of buildings legislation

The Energy Efficiency Directive (EED) and the Energy Performance of Buildings Directive (EPBD) are now adopted and must be implemented rapidly and rigorously to unlock their crisis-response potential.

Among the provisions of the two legislations that can deliver short-term gains:

- Provisions of the EPBD mandating the deployment of BACS: BACS could deliver 450 TWh annual final energy savings, 64 Mt CO2 savings, and €36bn lower energy bills, with small upfront costs: around €30/m² in non-residential and €12/m² in residential buildings.
- Provisions on energy audits of the EED: and going further by mandating implementation of audit recommendations, starting with SMEs while providing innovative financing support (leasing, energy-as-a-service).
- Provisions on energy efficiency in the public sector in the EED (Articles 5 and 6): This has translated into concrete actions, such as dedicated budgets to renovate the public building stock.



03

Accelerate electrification of end-uses with targeted policy measures

Electrification is a central pillar of Europe's energy security strategy. Unlike fossil fuels, electricity can be produced domestically, increasingly from low-cost renewables. Despite this, the weight of electricity in the final energy consumption has stagnated at around 23% for 15 years, while China's share has increased sharply and continues to rise.

Policy measures and incentives should be adopted by Member States to support to adoption of available technologies enabling electrification. Heat pumps are, for example, already mature and competitive technologies for many applications across both space and industrial process heating.

Buildings: (based on proposals outlined in the French electrification plan of April 2026).

- Prohibiting gas boilers in all new buildings (as proposed in France by the end of 2026).
- Bonus/malus systems for heating technologies, to steer renovations away from fossil systems without relying solely on bans.
- Massive scale-up of heat pumps, with targets, such as France´s target of 1 million installations per year by 2030.
- Social leasing for heat pumps, reducing upfront cost barriers, inspired by EV leasing schemes.

Heat pumps are 3–5 times more efficient than gas boilers and are already cost-competitive in many applications.

Transport

- Tax exemptions for electrical vehicles: VAT and registration tax exemptions; reduced road tolls and parking charges.
- Greening corporate vehicle fleets through obligations and incentives: Company cars represent ~40% of all new vehicle sales in Europe. Fleet electrification accelerates adoption, familiarises users, and feeds the second-hand market. Targeted incentives for fleets produce faster market transformation than household subsidies alone.

Industry

- Target low- to mid-temperature process heat (<200–300°C) in sectors like Food & Beverage, Pharma, Light Manufacturing, and Pulp & Paper, which can already transition with commercial solutions such as heat pumps, electric boilers, and MVR (Mechanical Vapour Recompression).
- Support to industrial heat pumps, which can deliver more heat per unit of electricity than gas boilers, making them cost competitive when electricity to gas price ratios are below 2.5.
- Develop access to PPAs to improve the business case by locking in long-term electricity prices and ensuring price stability.

04

Leverage existing funding and taxation to support energy efficiency and electrification

First, temporary support capping or subsiding gas prices should be kept minimal and limited in time. If they bring short-term relief to targeted industrial customers and households, their costs must be supported by other consumers and could further delay investment in clean energy resources.

Then, lower taxes on electricity: One key priority should be to make electricity competitive by lowering taxes which still remain very high:

- Lower national excise duties and VAT on electricity to minimum European levels.
- Reduce the spread between retail electricity and natural gas prices, to make the electricity competitive. In most European countries, electricity is taxed more than gas, with gas-to-electricity price ratios of 3–3.5 in Germany, Italy, Belgium, Ireland, and 2 in France.
- Eliminate remaining fossil fuel subsidies, which persisted since the last energy crisis.

Third, redirect funding to energy efficiency and electrification: the use of European funding should be aligned with the core priority of supporting the shift to more sustainable energy resources:

- Short-term: remaining funding from the Recovery and Resilience Facility should be used for energy efficiency and electrification projects, before the end date. As of 10 March 2026, €395 billion had already been disbursed to Member States under the RRF, with still ~€182 billion remaining to be disbursed.
- ETS revenues: should be used by Member States to support the decarbonisation of their industries. In 2025 alone, ETS revenues totalled more than €43 billion, with some €24 billion directly benefiting EU Member States.
- EU funding: the ETS investment booster planned by the European Commission with 400 million ETS allowances, the European Innovation Fund, and the upcoming Industrial Decarbonisation Fund are instrumental in providing funding the sustainability transition of the European industry. Access to funding should be streamlined to ensure companies of all sizes can benefit, and at the necessary pace.

05

Unleash the potential of local self-generation, flexibility and smart grids to lower energy bills

Support the combination of self-generation and electrification, by removing barriers to self-generation and consumption:

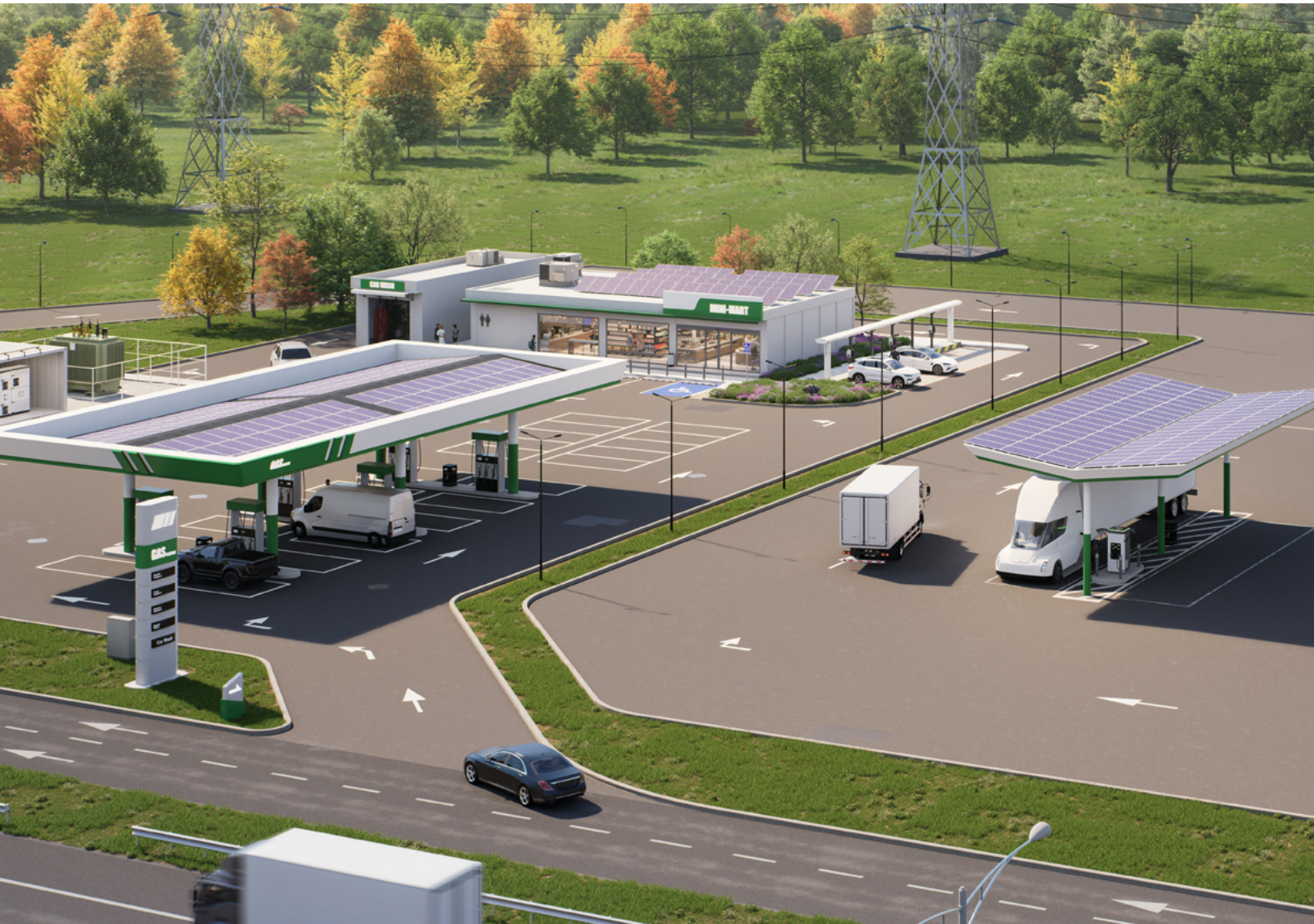
- In buildings, being residential, commercial or industrial buildings, when electrification is combined with rooftop PV, stationary storage and digital controls, savings on energy bills range between 15- 80%. Residential buildings and horizontal commercial assets (e.g. retail centres) generally range above 60%, while more vertically constrained assets (e.g. large office buildings or hospitals) will trail on the lower end.
- In the industry, the same logic applies when combining electrification with local generation, storage and digital controls, effectively making electrification flexible, i.e. able to leverage renewable-based intermittent supply and associated variable retail prices.

The use of flexibility and storage should be encouraged and incentivised by Member States:

- Existing regulatory barriers should be removed and provisions of the Electricity Market Design implemented. Demand-side flexibility is essential to reduce peak demands, reduce system costs and to lower grid expansion.
- Electricity tariffs should be more flexible, in order to ensure the emergence of flexibility incentives that will play a pivotal role in reducing total energy costs for buildings and industry.
- Smart meter deployment: the bottleneck of smart meter deployment must be addressed: EU27 penetration rate is at 58%, behind the 80% target. Roll-out should be prioritised in large commercial buildings, industry, prosumers, EV charging and flexibility-rich households/businesses, with a focus on functionality over volumes, including real-time data access and interoperability with building energy management systems, heat pumps and other flexible assets.

Enable a full-digital grid framework to reduce energy system costs:

- Create practical KPIs tied to system outcomes, moving beyond generic cost-efficiency benchmarks to ensure KPIs capture tools which unlock system value, such as Advanced Distribution Management Systems, Distributed Energy Resource Management Systems, and other digital solutions that increase hosting capacity and provide real flexibility. Grid-enhancing technologies alone could raise network capacity by 20–40% by 2040 and reduce costs by up to 35% versus traditional expansion.
- Updated tariffs should support a TotEx approach, removing the CapEx bias to ensure operators choose the most efficient mix of digitalisation, flexibility and reinforcement. Lowering tariffs for energy-intensive users should be conditional on peak reduction, flexibility and grid-friendly consumption, unlocking benefit-based incentives such as time-of-use or locational signals.



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