Electromobility Stakeholders Manifesto Compilation for 2024–2029

A unique document for policy-makers to tackle challenges ahead of us and make electric mobility transition a success for people, climate and businesses.

PLATFORM FOR electromobility

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More about the Platform for Electromobility

The Platform for Electromobility is a unique alliance of Europe-based producers, infrastructure managers, operators, transport users, cities and environmental civil society organisations from across industries and transport modes. Our overarching goal is to reach a sustainable, multimodal transport system in which people and goods are moved across land, inland waterways, sea and air in Europe using exclusively fossil-free electricity. To reach its vision, the Platform unites all sectors constituting the electromobility ecosystem to pragmatically ensure the conditions for the full electrification of new light-duty vehicles by 2035, and build a sustainable European zero-emission transport system by collectively sharing their expertise, challenges and solutions.

For more information about the platform and its members, please visit:

https://www.platformelectromobility.eu/
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Forewords

Europe's future, decarbonised mobility ecosystem will be composed by a myriad of stakeholders. To make the energy transition a success, they all present both specific and cross-sectoral needs. All presented in this unique document.

Hereby, we present a unique compilation of the political manifestos from X members of the Platform for Electromobility. It stands as a testament to the collective effort and unified vision driving the advancement of electric mobility across all sustainable modes of transportation; but also showcases the diversity of legislative measures and political steps that remain to be taken for each and every sectors.

Within these manifestos lie the cornerstone recommendations crucial for the development and integration of electric mobility into European societies and economies. They stem from a diverse range of entities spanning industries, associations, NGOs, and local authorities, underscoring the breadth and depth of stakeholder involvement in shaping the decarbonised mobility ecosystem.

As we approach the EU elections, this consolidated document serves as an exceptional resource for policymakers and stakeholders alike, providing them with a comprehensive overview of the priorities and aspirations of all the sectors composing the clean mobility system of tomorrow.

Transpiring from all manifestos presented here are cross-sectoral imperatives captured by the triple priority : **Implement, Invest, Industrialise**. Implement the Green Deal's legislative measures. Invest to make the Green Deal a concrete reality. And industrialise to make the Green Deal beneficial for all Europeans, climate, people and businesses alike. These overarching goals gathered in the Platform for Electromobility's manifesto, represent the pillars upon which our collective success rests.

I invite you to delve into this compilation and explore the nuanced perspectives and unique contributions of each sector. Each of them is a milestone on the path towards a sustainable, electrified mobility.

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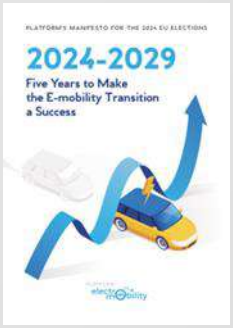
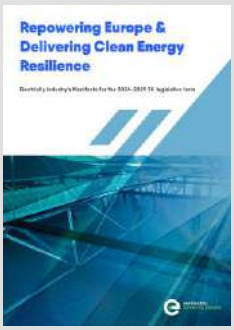
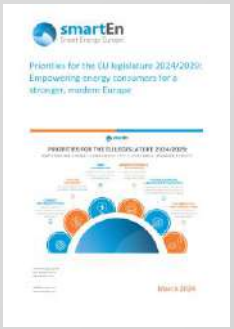






PLATFORM'S MANIFESTO FOR THE 2024 EU ELECTIONS

2024-2029

Five Years to Make the E-mobility Transition a Success

PLATFORM FOR electromobility

The agreement to pursue zero emissions for Europe's new cars and vans by 2035 backed up by strong charging infrastructure and development of alternatives such as rail network, and the sustainable batteries regulation, has set a clear direction and an unequivocal target for sustainable transport measures.

However, in order to make the Green transition a reality, and bring its benefits to people, the planet and business, it is vital that we act now. Making the transition to e-mobility must be a priority, not simply to deliver environmental sustainability but also to reinforce the EU's industrial strength, security and competitiveness.

#RealisingGreenDeal

Now is the time to put the Green Deal into action

The Green Deal, its technologies and fully electric transport modes will significantly reduce Europe's **dependency on fossil fuels**. Recent geopolitical events have shown the importance of ensuring energy security and resource independence.

The Green Deal will also make the EU a global leader in the **sustainable transport industries**. It will position Europe as an expert and legitimate voice on the need for climate change action while bringing welcome economic growth and the creation of high-quality jobs.

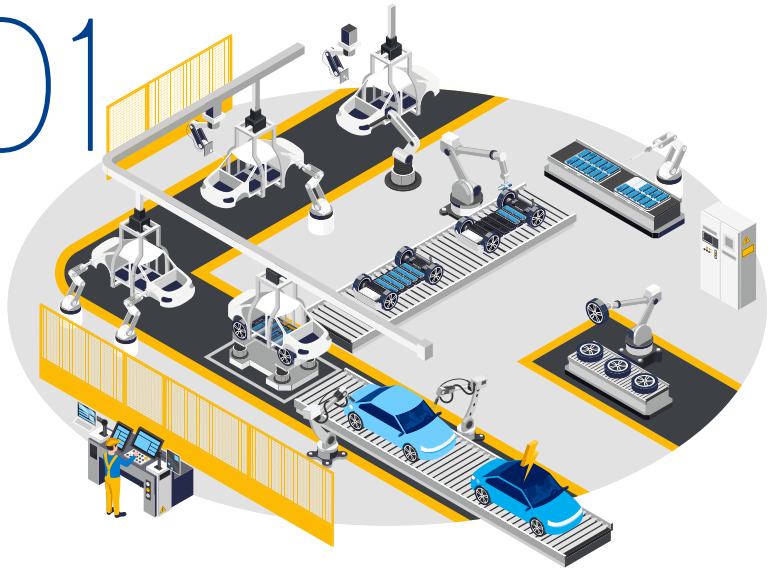
The Green Deal will allow Europe to prioritise the **quality of life of its current and future workforce**. This will see the highest social standards put in place to protect the interests and livelihoods of Europe's workers, both now and as part of a sustainable future.

An effective green industrial policy will bring the benefits of Europe's Green Deal to all

Continuing and rapid decarbonisation is crucial: but it must be done in such a way that preserves Europe's competitiveness. Nowhere is this more important than in transport and mobility. The Platform for electromobility – an alliance of companies, cities and NGOs – brings the knowledge and expertise to make an effective and efficient mobility transition a reality.

To do so, the Platform is calling on future legislators to prioritise the following actions in 2024-2029.

01



A GREEN AND JUST INDUSTRIAL POLICY

One of the richest 'urban mines' available to Europe is the supply of old batteries and other waste materials. By **investing in integrated recycling and repurposing facilities that collect, dismantle, recover or give second-life to valuable metals from batteries,** Europe can secure a great share of the metals needed for batteries by 2040. Such an approach not just reduces waste, it is also scalable, preserving and reusing precious raw materials and keeping a greater proportion of them within Europe, increasing our strategic autonomy.

The overall concept of Europe keeping potentially valuable waste within its borders is one that should be widely adopted. Environmental recycling standards vary; exporting waste for processing to locations without equivalent standards undermines our own attempts to reduce environmental impacts. The EU should encourage recycling by establishing a harmonised approach to the intra-EU shipment of spent batteries. Executed properly, this can make Europe competitive in battery recycling, ensure the highest environmental standards and help create a flourishing recycling industry in the future.

Resilient, affordable renewable energy will be key to a successful industrial policy; however, this demands that the correct grid assets are in place. With a **European Grids Package**, Europe can refresh and upgrade its infrastructure to meet the demand to accommodate higher levels of renewable energy. Although this will require investment, doing so will allow Europe to tap into its future grid asset - electric vehicles. It will accelerate the connection of chargers and other Green Deal enabling technologies and allow Europe to tap into the huge energy storage potential offered by electric vehicles.

Main policy ideas:

- **Creating an integrated recycling industry ecosystem in Europe.**
- **Smartening and upgrading existing grid infrastructure to allow it to support greater levels of renewable energy.**
- **Ensuring strong end-of-life vehicles regulation, focused on low carbon and recycled materials.**

Europe must also go further than simply reducing vehicle engine emissions; it needs a **more-holistic approach to reducing the environmental footprint of all road vehicles**. This means decarbonising manufacturing materials, increasing manufacturing efficiency and maximising the circularity of the materials used. Introducing digital product passports, revamping EU products policy to reduce environmental footprints and committing to deliver a strong end-of-life vehicles regulation based on low carbon and recycled materials, will be the key drivers for such change in the years ahead.

Finally, while a renewed European industrial policy has focused on key components and sub-systems, it is important that it considers the **full scope of the mobility industries' value chains** supporting their global competitiveness as they address the green transitions.

02

INVESTMENT PLAN TO IMPLEMENT THE GREEN DEAL

The 2023 Net Zero Industrial Act and the Critical Raw Materials Act needs an accompanying **European Net-Zero Infrastructure Investment Plan.** A long-term, easy-to-access investment facility - aimed at sectors key to Net Zero - should be a core issue during the European elections.

Freight and logistics infrastructure are a vital component in the movement of goods within Europe. There should be comprehensive investment in developing and deploying sustainable logistics infrastructure. The key elements for decarbonising freight in Europe while remaining competitive are the roll-out of **high-power charging infrastructure** required for deploying electric trucks of all ranges, the completion of a **high quality, interoperable rail network** with very high-speed connections, while ensuring a level playing field with other non-emitting modes of transport of goods.

Europe must also improve support for urban transport. Cities are working to accelerate the modal shift and to increase the electrification of their vehicle fleets. To avoid cities becoming the weakest links **Europe should be providing parallel support to investments in zero-emission public transport networks and to the deployment of smart and efficient charging infrastructure within urban areas.** To support the required local infrastructure investments, the next Connecting Europe Facility (CEF) transport programme should include a dedicated budget for urban nodes, building upon the experience of the Alternative Fuel Infrastructure Facility. Further support from EU research and innovation programmes as well as guidance, will also be needed to overcome challenges such as the constraint of public space, uneven distribution of private investments in EV charging infrastructure in cities or their integration in multimodal hubs, as well as lack of grid capacity.

Main policy ideas:

- **Making it easier for green energy transition sectors to access current EU funding mechanisms.**
- **Deploying infrastructures to support zero-emission passenger and freight transport across Europe.**
- **Introducing a dedicated budget for urban nodes, to avoid cities becoming a weak link.**

Net Zero Sectors include the sustainable mining, processing and recycling of critical minerals and metals, modernising power grids and facilities for industrial material recovery as well as renewable energy production. Although existing European funds could contribute significantly, prioritising access to the current EU funding mechanisms and tailoring them to the specific needs of the sustainable transports value chain participants is essential.

03

PEOPLE AT THE HEART OF THE E-MOBILITY ECOSYSTEM

As Europe shifts to a green economy, the demand for workers in industries such as critical raw materials, batteries and renewable energy industries will grow. Therefore, it will be essential to allocate EU resources and support to help **steer young people into those technical fields essential for the green transition.** There should be communication campaigns aimed at raising the visibility – and value - of these technical fields. It will also be crucial to implement well-funded reskilling programmes that will **attract workers away from existing declining industrial sectors and into emerging sectors** such as renewable energy, grid management, infrastructures and recycling. These programmes will upgrade workers' skills, train future workforces and ensure a just transition for the workers, their employers, and regional authorities.

The wider adoption of electric vehicles and rooftop photovoltaic solutions offer significant opportunity to **unleash 'prosumer potential'** in Europe.

Main policy ideas:

- **Supporting reskilling programmes to attract workers from declining industrial sectors and aiding their transition into these emerging sectors.**
- **Enabling Vehicle-to-Grid (V2G).**
- **Mandating electric vehicle adoption in corporate fleets.**

Restructuring Europe's electricity market will allow us to maximise this potential, specifically through creating opportunities for Vehicle-to-Grid (V2G) where appropriate. This would enable EV drivers to take an active part to the transition by supplying power back to the grid. Allowing them to be rewarded for providing additional grid capacity and thus making the energy system more dynamic and resilient.

It is critical that **zero-emission mobility is affordable to everyone**. To that end, both old and new electric mobility solutions must be scaled up across Europe: Existing solutions include public transports, shared vehicles and e-bikes when individual cars are not necessary. When they are necessary, new solutions include low-cost leasing options, targeted purchase incentives policies, and industrial strategies to support deployment of smaller and more efficient battery models. A rapid adoption of electric vehicles in corporate fleets will similarly accelerate a second-hand market. Implementing the Climate Social Fund should help drive this transition with the least possible impact on lower income families.

In conclusion, the Platform's key policy asks revolve around enhancing autonomy, promoting sustainability, and economic prosperity both for clean transports industries and for their consumers. We believe that by prioritizing these issues, we can pave the way for resilient, global-leading Europe. To learn more about our policy initiatives and hear from our dedicated members, we invite you to get in touch with us. Together, let's create the sustainable transport system of tomorrow. Reach out to us today!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AVERE
The European Association for Electromobility

How the EU can Lead the E-Mobility Industrial Revolution

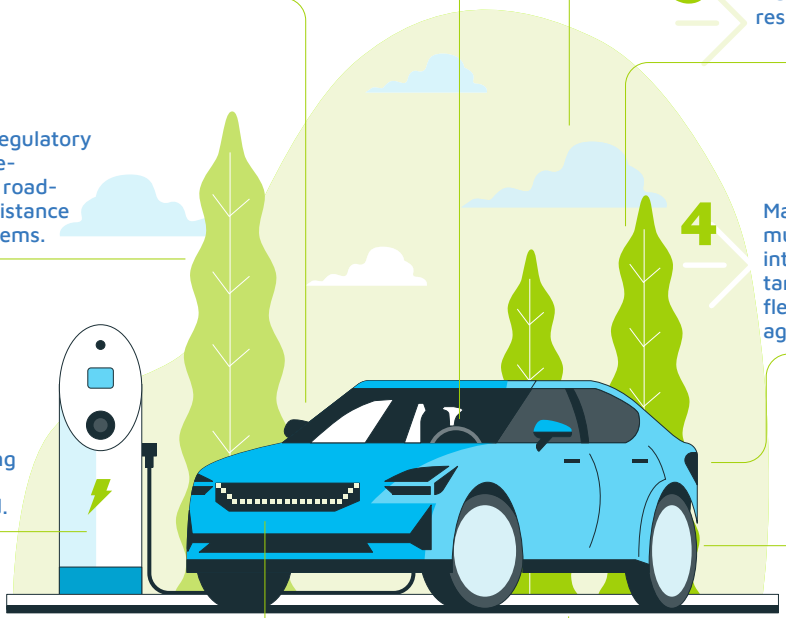
AVERE's Recommendations for the Next European Commission

Executive Summary – Our Recommendations for the Next 2024-2029 EU Mandate

As we near the EU elections, the next European Commission must step on the pedal to accelerate EV uptake ambitions and relentlessly push for a greener future on our roads! The AVERE key recommendations emphasise prioritizing coherent industrial policies, ensuring legislative coherence, swift policy implementation, grid efficiency, accessible and affordable e-mobility, as well as strategic investments in battery technology. These recommendations urge decisive action to propel Europe towards a sustainable, efficient, and competitive e-mobility landscape.

We especially call on the next Commission to:

1. Establish a new Executive Vice-President of the European Commission for Open Strategic Autonomy.
2. Consolidate and implement EU legislation to ensure predictability of investment while achieving climate-neutral road transport by 2050. This should include streamlining and reducing duplication of requirements in different legislations in order to have a harmonised EU-wide approach to measuring the environmental performance of vehicles.
3. Reform state aid by making it dependent on results and performance.
4. Make sure grids are much more efficient by introducing flexible grid tariffs, and introducing flexible connection agreements.
5. Make e-mobility accessible and affordable for all by encouraging zero-emission shared mobility and public transport through infrastructure and fiscal measures as well as a corporate fleet legislation.
6. Set European guidelines for charging infrastructure accessibility, communication protocols and roaming to ensure that e-mobility is user-friendly, including for people with disabilities
7. Set up a Battery Materials Bank in the short-term and a new European Critical Raw Materials Fund in the midterm.
8. Create a dynamic value chain supplying the carbon-neutral components needed.
9. Develop European regulatory frameworks for type-approval and public road-testing of driver assistance and automated systems.
10. Establish a European Road Safety Agency to spearhead the safe deployment of automated systems through a unified regulatory framework.



10 ELEMENTS TO CREATE A DRIVING FORCE FOR E-MOBILITY IN EUROPE

Foreword from our President

Keynote from
Maciej Mazur

The future of e-mobility depends on the next European Commission's enforcing established trajectories and creating an enabling framework. Now is the time to implement far-reaching electrification plans and remove blockers to the deployment of e-mobility. Previous investments in Europe have not only supported e-mobility but also catalyzed employment opportunities, underlining the transition's positive socio-economic impact. To be globally competitive, the EU must set up short- and midterm plans to financially support the battery materials and net zero technologies and industry we need, as is the case in other regions, to ensure sustainability, competitiveness, and jobs.

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Introduction

The European Green Deal has established the regulatory path for making Europe a global leader in climate action. In view of the upcoming European elections, AVERE fully supports the European Commission's past climate policy efforts and urges the EU to accelerate the uptake of electric mobility (e-mobility) to enable the green transition of the EU 27. To do so, AVERE calls on future European legislators to prioritise the following actions for 2024–2029.

1 Seizing the Momentum: Rapid and Coherent Implementation for a Dynamic E-Mobility Future

We call for the appointment of an Executive Vice-President (EVP) of the European Commission for Open Strategic Autonomy to continue the work done on the EU Green Deal and at the same time foster EU competitiveness on the global stage.

Many policies adopted in the current legislative term are supportive of the e-mobility transition. What is currently missing is a coherent and ambitious industrial policy, looking at de-risking all stages of the EV value chain. The portfolio of the new EVP should therefore encompass an ambitious trade policy to secure access to raw materials, environmental and industrial policy to ensure the development of an EU industrial base with high environmental standards, energy policy to secure access to competitive green energy, and R&D focused on the development of new low-carbon solutions. Additionally, it is crucial to recognise the counterproductiveness of protectionist measures like tariffs on EV imports from outside the union. Instead, the EVP should also oversee the development of new ambitious short and midterm funding schemes to scale up EU manufacturing capacity for precursor cathode active material (pCAM/CAM), materials refining, in addition to the EU's current battery cell focus overall supporting the competitiveness of the EV value chain on a global stage, with market incentives for low-carbon and green products. The EU's industrial support should be output-based, cover CAPEX and OPEX, be time-limited, predictable and easy to use.

Coherence of future legislation with existing EU policies is also crucial to provide legal certainty for investors and create an environment conducive to e-mobility investments.

This new EVP would also have an essential role in overseeing the swift implementation of adopted policies such as the cars and trucks CO_2 standards Regulations, Alternative Fuels Infrastructure Regulation, the Renewable Energy Directive, the Energy Performance of Buildings Directive, the Electricity Directive, the Electricity Market Design, Net-Zero Industry Act, the Trans-European Network Regulation and the Critical Raw Materials Act, while maintaining and protecting the targets and trajectories set in these laws. Upcoming initiatives, such as the revision of REACH, should also be seen in conjunction with these adopted measures and targets. Clarity in the technical implementation of existing legislation, consistency with established policies, and a commitment to a supportive business environment are imperative to attract and avoid divestment of investments across the entire EU e-mobility value chain.

We recommend:

- Establishing a new Executive Vice-President of the European Commission for Open Strategic Autonomy to ensure coherence between legislative files and support the uptake of net-zero technology production in Europe.
- Consolidating and implementing – Europe has adopted a plethora of legislation to achieve climate-neutral road transport by 2050. It is now very important to let the dust settle and ensure stability and predictability so that the industry can invest.
- Reforming state aid by making it dependent on results and performance (like the IRA[1] in the USA) rather than project proposals, budgets and so-called „funding gaps", comparing it with counterfactual scenarios. The mid-cycle battery sector is essential, and investment in this part of the value chain is still low in Europe.

1 https://www.whitehouse.gov/cleanenergy/inflation-reduction-act-guidebook/

2 Unlocking the Future: Electrify, Electrify, Electrify!

Electricity is the backbone of our society and also the most efficient energy carrier to decarbonise road transport[1]. Efficiency is what sets e-mobility apart and this must remain the driving force of the next Commission, which has to promote the most efficient energy carriers for the appropriate transport sub-sectors. The electrification of road transport would help the EU become more autonomous by considerably cutting oil imports which represent on a monthly basis 35 billion euros[2].

EVs are more efficient than e-fuels and biofuels, and the EV growth will increase even more as more EU countries implement the RED III-mandated electricity credit trading systems and improve the build-out and modernisation of their power grid.

Grids will be the next frontier for e-mobility as grid connections are taking longer and are becoming more expensive. Therefore, building on the Grid Action plan and our own recommendations[3], we urge lawmakers and the other relevant stakeholders of the electricity market (NRAs and system operators) to implement a regulatory framework that promotes grid flexibility and market-based congestion management solutions, while keeping investments on grid expansion and modernisation.

The slow development of new and modernisation of existing grid infrastructure is causing higher grid reinforcement costs in countries where these costs are transferred to developers of charging infrastructure and fleet operators. In some cases, these costs are killing the business plan for new fast-chargers, ultimately resulting in less charging infrastructure for consumers. Countries that are experiencing this today in the light-duty vehicle sector will face even more serious issues in heavy-duty vehicle (HDV) charging, which has higher power capacity. Therefore, the European Commission should propose the socialisation of grid connection and grid reinforcement costs, which would allow developers to focus on deploying more fast-charging infrastructure.

The next Commission must ensure system operators accelerate and anticipate their investments in electricity grids to enable Charging Points Operators (CPOs) and fleet operators to deploy a dense charging infrastructure network - across major highways, in urban and peri-urban areas as well as at mobility hubs – to allow EV users to travel smoothly across Europe. Additionally, system operators, national regulatory authorities (NRAs) and lawmakers must consider the e-mobility sector as an opportunity to bring greater flexibility, that is the ability of any energy source – consumers and EVs included – to adapt power consumption or production (injection) to a price signal to optimize network reinforcements and operation in a context of increased electrification of society and penetration of renewable energy sources, while ensuring that e-mobility services are of sufficient priority to avoid charging restrictions

1 https://www.transportenvironment.org/wp-content/uploads/2022/02/TE-Briefing-Rewarding-renewable-efficiency.docx.pdf
2 https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_imports_of_energy_products_-_latest_developments
3 https://www.avere.org/blogpages/policy-details/2023/12/15/Position-Paper-Paving-the-way-for-electromobility-grid-integration

2 Unlocking the Future: Electrify, Electrify, Electrify!

/ shutdowns in case of grid overload. Here the Commission must promote the deployment of load management solutions such as battery storage systems which alleviate the grid build-out pressure and provide flexibility. However, the current regulatory framework does not facilitate the uptake of these flexible solutions (i.e., outdated network codes, double taxation issues linked to V2G, etc). In particular, the charging of electric HDVs requires a rapidly increasing availability of scalable charging locations with sufficient grid capacity available (10–30 MW+). Provision for these types of sites requires both the maximum deployment of grid extensions, and also full participation in flexibility markets both with vehicle batteries (fleets) and stationary battery deployment. Given the extreme targets for electrification of fleets (e.g. CO_2 standards), deployment of HDV charging equipment should be supported and incentivised to the fullest extent.

Beyond investments, CPOs and fleet operators need faster connections to the grids and a clear understanding of locations that are ready to welcome charging points and connect them to the grid. We therefore urge lawmakers to implement and build a regulatory framework which streamlines administrative and permit-granting processes of the e-mobility industry and establish grid capacity maps to make investment future-proof.

Furthermore, the dominant role electric vehicles, mainly fleets, could play in bringing flexibility and grid support should be underlined with regulatory frameworks, standardisation and foremost should lead to a free and equal participation in electricity markets based on market-based mechanisms.

We recommend:

Making sure grids are much more efficient by:

- Introducing flexible grid tariffs.
- Introducing flexible connection agreements, but only under the condition that grid users' rights are respected: they need to keep the choice to switch to a regular connection agreement, be paid for flexibility they provide, and be informed transparently about all conditions. In parallel, investments into grid expansion and modernisation need to keep increasing.

3 Providing E-Mobility for All: A Vision for Inclusive and Affordable Transportation in the EU

E-mobility must move away from being perceived as a luxury and be recognised as a practical, mainstream solution available for mass market adoption and therefore be available for every citizen independent from income level and transportation needs.

As such, the Commission should address myths on e-mobility in its EU-wide communication campaigns[1] to tackle disinformation and misinformation on online platforms, social media, and news media.

Policies need to ensure accessibility and affordability for all as well as remove barriers that may otherwise limit access based on socio-economic factors. To this end, we call for European guidelines for charging infrastructure accessibility, communication protocols and roaming. This would not only streamline operations but also foster interoperability, making e-mobility more accessible and user-friendly, including for people with disabilities while ensuring innovation can be a driving force in the EU. These guidelines also provide the necessary harmonisation for stakeholders involved in the recharging segment to have legal certainty when deploying a dense network of recharging infrastructure.

The future also lies in maximising the use of public transport and fostering shared mobility options, which can play a vital factor in making zero-emissions mobility much more widely accessible and affordable in Europe as well as support the conversion to more zero-emission kilometres driven. In this context, zero-emission shared mobility and public transport have to be encouraged through infrastructure and fiscal measures, ensuring sufficient public charging infrastructure at mobility hubs such as train stations and airports. In addition, to encourage the growth of the e-mobility sector, a holistic mix of "push and pull" policy and financing measures will be needed to stimulate EV demand, notably for corporate fleets, to support access to affordable EVs, including in the second-hand market.

1 https://digital-strategy.ec.europa.eu/en/policies/online-disinformation

We recommend:

- Making e-mobility accessible and affordable for all by encouraging zero-emission shared mobility and public transport through infrastructure and fiscal measures as well as adopting a holistic mix of "push and pull" policy and financing measures to stimulate EV demand, notably for corporate fleets, to support access to affordable EVs, including in the second-hand market.
- Setting European guidelines for charging infrastructure accessibility, communication protocols and roaming to ensure that e-mobility is user-friendly, including for people with disabilities.

4 Empowering Europe's Green Future: A Call for Strategic Investment in E-Mobility and Related Materials

The upcoming Commission and legislature must drive the EU toward achieving its climate goals and strategic autonomy, focusing on enhancing industrial capacity for manufacturing and recycling net-zero technologies, especially in e-mobility.

The EU needs to prioritize investments in the midstream battery sector, in particular the processing and refining of battery materials, and the recycling of scrapped batteries to ensure valuable resources can be produced and recovered on the continent.

As a result, the transition to e-mobility will strengthen the EU's position as a leader in sustainable practices and reduce its dependency on external sources. To this end, we call for setting up a Battery Materials Bank in the short term and a new European Critical Raw Materials Fund in the midterm to accelerate the deployment of a dynamic raw material value chain from refining to recycling in Europe.

Becoming more autonomous also means creating a circular value chain including for the automotive segment. However, the automotive segment cannot become more circular without an EU-based recycling value chain providing recycled content that meets the quality requirements for the automotive segment. Without this dynamic industry, OEMs are forced to import recycled materials from other parts of the world, which may contradict the intended environmental policy objectives. The EU should focus on removing blockers to the movement of battery materials across the continent which will accelerate competitiveness across the battery and black mass recycling sectors.

Last but not least, it is essential that the next mandate focuses on removing duplicated regulatory requirements across different legislations. Instead of adding additional duplicated requirements, the European Commission must streamline and harmonise them wherever possible. Scattered requirements (designed as pass/fail) have emerged in the past year to try to address the environmental impact of vehicles and their components. They have led to a compliance-driven approach by OEMs which does not inform consumer choice nor leads to real environmental changes over time. AVERE calls on the EU to develop a new EU-wide holistic framework that would rate the environmental credentials of vehicles, which would be used as the criterion for national EV purchase incentives, and for consumers to compare the sustainability of EVs.

We recommend:

- Setting up a Battery Materials Bank in the short term and a new European Critical Raw Materials Fund in the midterm to support the uptake of a dynamic raw material value chain from refining to recycling in Europe.
- Creating a dynamic value chain supplying the carbon-neutral components needed to ensure a gradual transition to circularity in the e-mobility sector.
- Rationalising and reducing duplication of requirements in different legislations in order to have a harmonised EU approach to measuring vehicle environmental performance to establish legal certainty while stimulating innovation.

5 Facilitating the Development Electric Automatic Driving Solutions: Kick-Starting Europe's Ability to Compete

Automated driving systems and services are seeing rapid development globally and are expected to be primarily battery-electric due to those technologies being deployed on new vehicle designs.

Unfortunately, automated driving solutions have only seen limited success within the European Union. This is primarily due to the complexity for businesses to test and develop their systems at scale on public roads, to approve and commercialize mature technologies, to navigate widely varying rules defining their legality of use and lastly the ability to license services at meaningful scales. Whereas progress is being made on the type-approval of automated driving solutions, insufficient efforts have been put into completing the single market and outlining a clear legal framework in other areas.

Challenges faced with deploying automated driving solutions are making uncomfortable facts very clear: the European single market in terms of transportation remains very fragmented. While we have harmonised type-approval, we have not yet taken steps to ensure the consistency of traffic rules, signs or infrastructure. Not only does this help automated driving, it also improves road safety by improving understandability for human drivers. Improvements to road rules and infrastructure that help humans, generally also aid automated driving solutions.

We therefore call on the Commission to:

1. Develop a European regulatory framework for public road-testing of driver assistance and automated systems;
2. Take brave steps in ensuring member state consistency of traffic rules and infrastructure;
3. Establish a basic framework ensuring that automated driving solutions are legal to use and can be licensed.

We encourage European leaders to establish a European Road Safety Agency to accelerate progress in all of the above-mentioned areas.

We recommend:

- Developing a European regulatory framework for public road-testing of driver assistance and automated systems.
- Taking brave steps in ensuring member state consistency of traffic rules and infrastructure.
- Establishing a basic framework ensuring that automated driving solutions are legal to use and can be licensed.
- Creating a European Road Safety Agency to spearhead the safe deployment of automated driving systems through a unified regulatory framework

Conclusion

In conclusion, the future of e-mobility hinges on the decisive actions of the next European Commission in enforcing established trajectories and creating a conducive framework. Urgent implementation of comprehensive electrification plans and the removal of barriers to e-mobility deployment are imperative. Prior investments have not only bolstered e-mobility but also spurred job creation, underscoring its positive socio-economic impact. To maintain global competitiveness, the EU must swiftly establish short- and midterm plans to financially support critical battery materials, net-zero technologies, and industries, mirroring efforts seen in other regions. This commitment is essential for ensuring sustainability, competitiveness, and job preservation. Additionally, providing predictability and legal certainty is paramount to attract investments in e-mobility, reinforcing the need for a stable regulatory environment.

AVERE – The European Association for Electromobility

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JOIN EUROPE'S ELECTRIC REVOLUTION

Repowering Europe & Delivering Clean Energy Resilience

Electricity industry's Manifesto for the 2024–2029 EU legislative term

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powering people

Repowering Europe & Delivering Clean Energy Resilience

Electricity industry's Manifesto for the 2024-2029 EU legislative term

Our Vision

Europe is currently facing several challenges that will impact tomorrow's energy system and European society overall. Russia's invasion of Ukraine and subsequent energy blackmail have led to an energy crisis on a scale not seen since the 1970s. We have also seen first indications of significant deindustrialisation. Wider geopolitical tensions threaten supply chains for secure energy today and into the future. This is happening as the climate crisis deepens, making the energy trilemma of affordable, secure and sustainable energy a growing challenge that Europe's policymakers will have to address in the next legislative term.

A key part of Europe's answer to this challenge lies in direct electrification supported by a strong, integrated market. Clean and renewable electricity produced in Europe will cut emissions while putting us on track to energy independence. New, directly electrified solutions will empower customers to save energy and make more affordable decisions that decarbonise their transportation and heating needs. Meanwhile, around 3 million European jobs will be created to deliver this energy transformation, as we highlighted with our partners in the Electrification Alliance, leading to new economic opportunities for the next generation.

But this clean, energy independent future depends on delivering decarbonisation, and therefore on accelerating clean and renewable electrification this decade, the electric decade. For the past 15 years, electrification has stagnated at less than ¼ of Europe's energy use. This means we still rely on fossil fuels for a huge majority of our energy needs.

Accelerating electrification with clean and renewable electricity must therefore become a core objective of European climate and energy policy in the next legislative term. To tackle climate change, the energy transition is a no-regret option: it will bring several benefits and is today the least cost option for society. The challenge for the upcoming mandate will be to deliver the needed investments while ensuring affordability for consumers.

Electricity consumption is expected to increase by about 60% between now and 2030. We must not underestimate the industrial and commercial opportunities the transition offers to Europe in terms of industrial capacity, jobs and growth, either. Additionally, widespread electrification of end-uses will contribute to lowering household energy consumption thanks to the enhanced efficiency of electric devices compared to conventional thermal equipment. **Nonetheless, all this can only be done in a strong, cohesive European Union with a functional internal market.**

In the next section, we outline five priority areas which new policymakers should focus on to achieve this.

Our 5 key priorities for the next Commission

1. "Implementation, implementation, implementation": implement what has been agreed in the previous mandates

With numerous targets for decarbonisation having been set over the past five years for 2030, the incoming mandate at the European level will preside over the Union until just before these targets are due. Simply put, we need to double down on the implementation process of the necessary legislation to ensure we reach emissions reductions of 55% by 2030.

While most of the attention is directed at the drafting procedure, the targets agreed in the adopted packages must now be achieved to unleash necessary investments. This involves ensuring that the already agreed directives and regulations to achieve climate neutrality are adopted nationally in a timely manner to facilitate long-term planning certainty. The ambition is clear – a 55% reduction by 2030 – we now need to deliver. There is a clear need for speed.

We ask policymakers to:

- Launch appropriate assessment and adjustment rounds of the implemented policies, in particular the Clean Energy and Fit for 55 Packages, and include them in the State of the Energy Union reports.
- Monitor progress and support Member States to meet their targets through close cooperation in the implementation of national energy and climate plans (NECPs).
- Avoid unnecessary changes of recently adopted energy legislation. If any new proposal should be presented, it should be preceded by a thorough impact assessment and the works must be conducted in line with the principles of better regulation.

2. Electrification for decarbonisation: increase the rate of electrification

Electricity makes up only 23% of all the energy consumed in Europe. This means that while we are working hard to decarbonise electricity, large parts of the economy are still running on fossil fuels. If we are to have any hope of achieving our climate and energy policy, we need to ramp up electrification as quickly as possible. This electrification choice is also a no regret option for energy efficiency. Deploying heat pumps, for instance, could reduce energy demand by 2/3rds.

All modelling shows the rate of electrification will need to reach around 50-70% by 2050 for Europe to reach climate neutrality, according to our Decarbonisation Speedways study. In the medium term, to achieve our REPowerEU ambitions, we need to already reach 35% by 2030. Europe must set both the right milestones and a clear plan to deliver that trajectory.

We ask policymakers to:

- Publish an Electrification Action plan the first 100 days of the coming mandate. This should set an indicative target of 35% electrification of final energy use across the EU by 2030. In addition, an electrification indicator in the National Energy and Climate Plans to monitor and deliver progress should be introduced.

- Continue efforts to relieve the electricity price of taxes and levies to create favourable economic conditions for consumers to switch from more polluting energy carriers.

3. Security of supply: accelerate renewable and clean power supply while addressing challenges of the new energy system

The energy crisis experienced in 2021-2022 materialised in high electricity prices for European consumers. This, together with its related impacts on industrial production have shaped a new political and regulatory landscape whilst raising awareness on the need to foster EU strategic autonomy.

On one side, REPowerEU, and lately EU legislation on electricity market design and the Net-Zero Industry Act (NZIA), have aimed at mitigating these challenges. On the other side, the energy crises also created the opportunity to fast-track the needed homegrown net-zero power supply. Europe's industry and energy system have the opportunity to become more resilient and less exposed to external supply shocks.

We ask policymakers to:

- Revise the energy security strategy, which turns 10 years old in 2024, and map out the key risks and vulnerabilities to the energy supply chains.
- Further strengthen and deepen the internal energy market and provide a favourable, predictable and technology neutral investment environment for all assets needed to achieve the EU's net zero ambition.
- Ensure that clean and renewable energy is properly integrated into the system.

4. A new power infrastructure deal: driving the expansion and digitalisation of electricity grids

There is no green future for Europe without an upgraded power grid. By 2030, over 80% of additional renewable electricity will be connected at the distribution level. Distribution grids are the backbone of the digital and energy transitions, ensuring a continuous and reliable electricity flow. However, Europe's distribution grids today are ageing with low or no capacity reserves. We need to urgently invest in grids to be fit-for-purpose in an increasingly decarbonised, decentralised and digitalised power system.

We ask policymakers to:

- Propose a bold new political project – 'the power infrastructure deal'. The deal should employ innovative regulatory principles reflective of the changing framework and investment conditions and enable anticipatory buildout of electricity infrastructure.

5. Consumers: Empower a transition serving all consumers

70% of the benefits of the energy transition depend on consumer action, yet only 30% are engaged. The energy transition should ensure that all customers, from energy-intensives to domestic consumers, can use and afford sustainable energy. The energy crisis revealed the ability and willingness of these customers to quickly adapt their consumption to be much more efficient. Innovation and flexibility in supply offers made this possible. We need to act now to remove key consumer barriers, engage consumers and transform their experience.

We ask policymakers to:

- Promote consumer participation and protection in the transition through innovation-based competition and digital technologies
- Monitor the distributional effects of carbon pricing and support Member States to enact flanking measures that support consumer uptake of affordable electric solutions.
- Encourage partnerships and cost-competitive collaboration with EU industrialists to enable them to remain globally competitive.

Eurelectric pursues in all its activities the application of the following sustainable development values:

Economic Development

- Growth, added-value, efficiency

Environmental Leadership

- Commitment, innovation, pro-activeness

Social Responsibility

- Transparency, ethics, accountability

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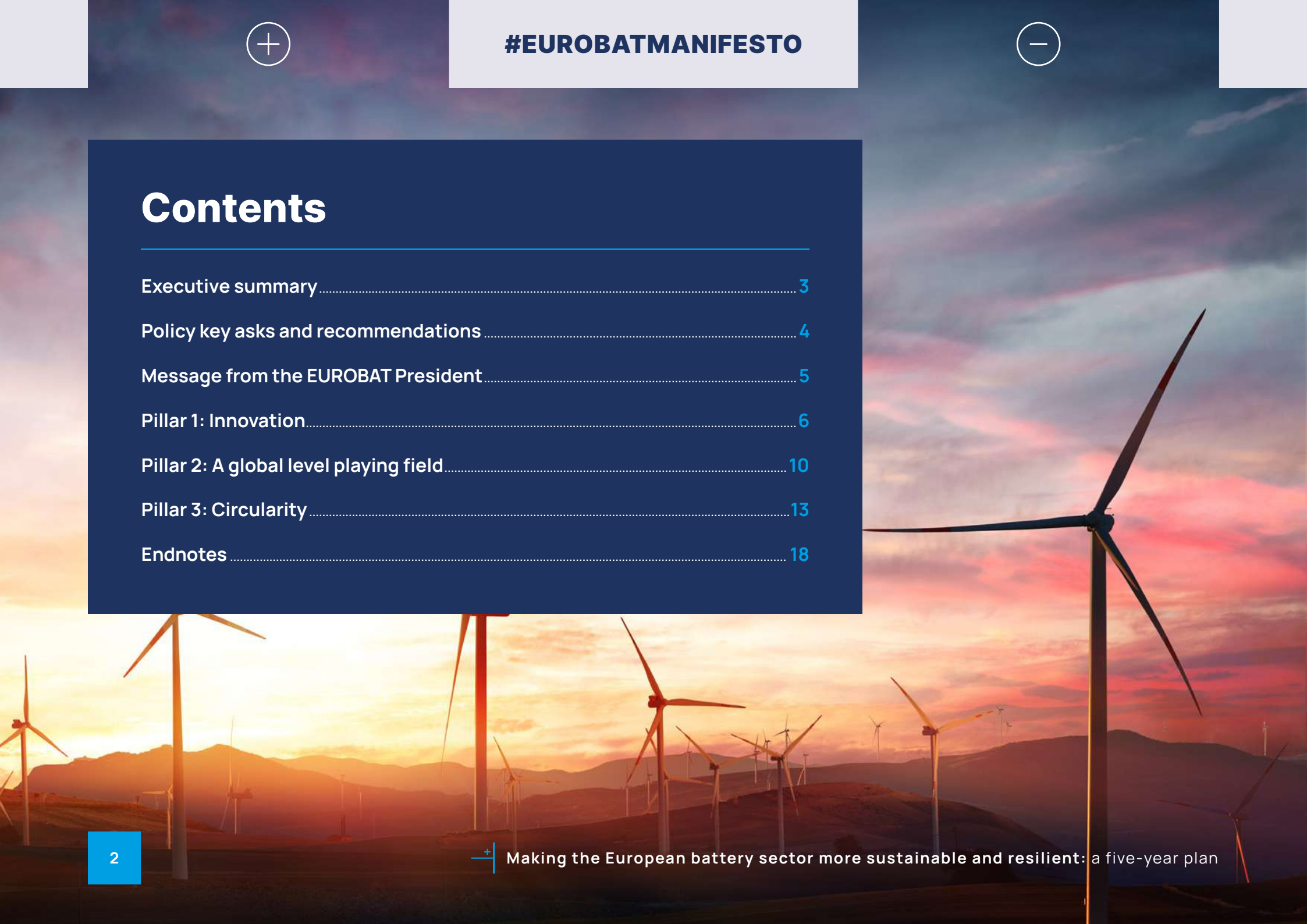
#EUROBATMANIFESTO

Making the European battery sector more sustainable and resilient: a five-year plan

EUROBAT
ASSOCIATION OF EUROPEAN AUTOMOTIVE AND INDUSTRIAL BATTERY MANUFACTURERS

Policy key asks and recommendations:
2024–2029

Contents



Executive summary

The European battery sector **is central to** achieving the EU's decarbonisation goals and delivering on the objectives of the **Green Deal**. Over the past five years, battery manufacturing in Europe has underpinned exponential growth in e-mobility. Electric vehicles have evolved from being a niche product and are now on the verge of becoming mainstream. At the same time, battery technology continues to be vital in supporting the increased integration of renewable energy systems. Batteries also power our daily lives, providing a clean energy source for industrial vehicles and equipment.

It is of critical importance to boost innovation **in all battery technologies** (lead, lithium, nickel, and sodium) to support the transition to a circular economy. The strategy involves providing funding for research and innovation to enhance the circularity of raw and secondary materials in batteries, contributing to Europe's strategic autonomy. Initiatives like the Net-Zero Industry Act and REPowerEU are indispensable to accelerate the adoption of battery technologies in mobility, motive power, and energy storage. Additionally, the use of **standards** is emphasised to implement the **Batteries Regulation** and ensure inclusiveness of mainstream and emerging technologies.

A **thriving European battery sector** offers numerous **advantages** for the EU. As well as **economic opportunities**, which include supporting skilled jobs in a dynamic high-tech sector, there are far-reaching **environmental benefits**. These encompass a significant **reduction in carbon emissions,** improved **air quality**, combined with the storage and distribution of clean, **renewable energy**. The battery sector also has an unwavering commitment to environmental responsibility, in terms of **circularity and sustainability**.

Nonetheless, Europe's battery sector remains **vulnerable** to external influences. The supply chain challenges experienced during the COVID-19 pandemic emphasised the essential requirement for reliable access to critical raw materials, stressing our persistent **dependence** on third countries. Furthermore, in the last five years, competition from non-EU sources has increased, highlighting the importance of establishing **a global level playing field** between batteries produced within the EU and those imported. The distorting impact of subsidies provided to manufacturers in foreign markets is a major concern.

Hence, the appointment of a **commissioner for strategic autonomy** becomes of paramount importance in addressing these challenges. Moreover, to fortify Europe's battery sector, there is a pressing need to provide **financial support** through appropriate funding mechanisms such as the Innovation Fund or new Important Projects of Common European Interest (IPCEIs). Streamlining the process to access these funds will be crucial in expediting research, innovation, and the development of domestic capabilities. This approach ensures the **competitiveness and resilience** of the EU battery industry by fostering a more agile funding infrastructure.

In the past 18 months, the sector has faced a serious challenge with the surge in energy prices, leading to increased manufacturing costs. At the same time, battery technology – which is central to the renewables sector – plays a pivotal role in managing and reducing energy costs over the short, medium, and long-term.

In view of these threats, Europe's battery manufacturers are working to make the sector more **robust,** while recognising the challenges in the legislative landscape.

This manifesto outlines **policies recommendations** to support Europe's battery sector and ensure its maximum contribution to the continent's green transition. The recommendations and key asks to policy-makers are based on the following three pillars: **innovation, a global level playing field, and circularity.**

Policy key asks and recommendations

Pillar 1
Innovation

1. To recognise that further innovation in **all mainstream battery technologies** (lead, lithium, nickel and sodium) is vital to help meet the Green Deal decarbonisation goals and the transition to a circular economy.
2. To expedite **research and innovation** in **all battery technologies**, it is essential to unlock funding channels specifically directed at addressing the existing challenges related to strategic autonomy. This involves a focused effort on **enhancing the circularity of both secondary** and **raw materials** used in batteries.
3. To **strengthen initiatives that boost market uptake of battery technologies** in mobility, motive power and energy storage, such as the Net-Zero Industry Act and REPowerEU for BESS.
4. To focus the EU's industrial policies on measures to further **stimulate electrification in all other sectors to ramp up battery production** in order to strengthen both Europe's energy security and clean energy production.
5. **To maximise the use of standards** to implement the secondary legislation of the **Batteries Regulation** and ensure inclusiveness of all mainstream and upcoming emerging technologies.

Pillar 2
A global level playing field

1. To appoint a **commissioner for strategic autonomy**. This role should play a crucial part in implementing measures to enhance the **European Union's autonomy** in critical aspects of the battery industry, fostering a secure and self-sustaining ecosystem.
2. To **develop** and **strengthen strategic partnerships** encompassing the acquisition, processing, and recycling of minerals that could **reduce dependency** on other markets.
3. To provide **financial support** via appropriate **funding mechanisms,** aiming to cultivate more resilient and independent battery value chains.
4. To ensure there is a **global level playing field,** enabling the European battery sector to meet the expected demand in the coming years.
5. **To provide legal certainty and reduce red tape**
Policy measures that provide legal certainty and reduce red tape are essential for the continued development of the battery value chain in Europe. EUROBAT calls on policymakers to **introduce a coherent and stable legal framework to support the sector**. Specifically, all legislation that affects the EU's green transition ambitions must have policy objectives that are aligned and that are supported by appropriate coordination between the different directorates within the Commission.

Pillar 3
Circularity

1. To provide **consistency across different pieces of legislation**, with the **Batteries Regulation** recognised as the **principal piece of legislation** regulating the complete life-cycle of batteries.
2. To avoid overlaps between different pieces of EU battery legislation, ensuring that restrictions of substances in **automotive** and **industrial batteries** are handled in the **Batteries Regulation** only.
3. Upcoming **secondary legislation** should prudently acknowledge the industry's expertise by endorsing the establishment of a comprehensive, standardised method for calculating the carbon footprint that considers all chemistries. Moreover, it should ensure the protection of confidential information within the **Battery Passport** and streamline administrative processes.
4. To speed up **permitting** for new projects, and closely work with industry in developing of best available techniques for mining and battery manufacturing.
5. To streamline **shipments of waste batteries** establishing a single waste code for waste lithium-ion batteries and another for manufacturing wastes to facilitate recycling supply chains.

Message from the EUROBAT President

Dear Reader,

We need to make electrification a success. Batteries and a competitive and sustainable European battery industry **are indispensable** for the transformation of our mobility and energy systems. The path towards climate neutrality is a long one, and only through dialogue and cooperation can we reach it.

Over the past five years, EU policymakers have reshaped the legislative framework for batteries with the **Batteries Regulation** as the centre piece for our industry. For the first time, our industry has a holistic policy framework that regulates the whole life cycle of a battery. The policy objectives are ambitious, and the battery industry will have to work with all stakeholders to reap the full benefits offered by the sector, hence the importance of three key pillars identified by the industry: **innovation, a global level playing field, and circularity.**

The new-to-be elected European Parliament – supported by the European Commission and Member States – must build on **Green Deal** groundwork already carried out. With the aim of a cohesive and effective approach, the European industry strives for **clarity and consistency** among various legislative initiatives. This is especially crucial for the Batteries Regulation, its implementation through secondary legislation, automotive legislation, and revised chemicals management rules.

The implementation of the Batteries Regulation will be key to supporting a **self-sufficient and resilient European battery industry**. The Battery Passport, in particular, will provide transparency and accountability, while carbon footprint requirements will help create a level playing field between European and global battery producers and, as such, contribute towards a **net-zero society by 2050**.

Achieving all of this in the coming years is only possible through joint efforts. **We, therefore, stand ready to support this work with our expertise and look forward to continued exchange with policymakers.**

Enjoy the read.

Marc Zoellner
EUROBAT President &
CEO Hoppecke Batteries

"Batteries and a competitive and sustainable European battery industry are indispensable for the transformation of our mobility and energy systems."

Pillar 1: Innovation

Batteries are and will remain instrumental in Europe's decarbonisation and net-zero neutrality ambition, thereby touching upon many policy fields, including **mobility and energy**. These policy fields are central to the functioning of our societies, which makes the role of batteries even more important. Additional policy decisions will have to be taken to further shape our mobility and energy systems, notably the decision about the EU's climate target for 2040.

Mobility Systems

Transportation is currently responsible for almost a quarter of total EU greenhouse gas emissions.[1] Decarbonisation of the transport sector will only succeed if we think of transportation in a holistic way. In terms of mobility, batteries play key functions in all of them – **road vehicles, trains, buses, trams, metros, forklift trucks, vessels, airplanes, and others.**

Policy measures need to be further developed in line with the growing market penetration of electrically-powered vehicles.

In addressing road mobility, it is imperative to implement a comprehensive set of measures to accelerate the transition towards electrically-powered vehicles. This includes the necessity for sustained financial and tax incentives aimed at promoting the adoption of electric vehicles (EVs) among consumers and businesses. These **incentives** can take the form of tax credits, subsidies, or other financial benefits that make electric vehicles more economically attractive compared to traditional internal combustion engine vehicles. Furthermore, to overcome the perceived limitations of electric vehicles, a robust and widespread **public charging infrastructure** is essential. The continued rollout

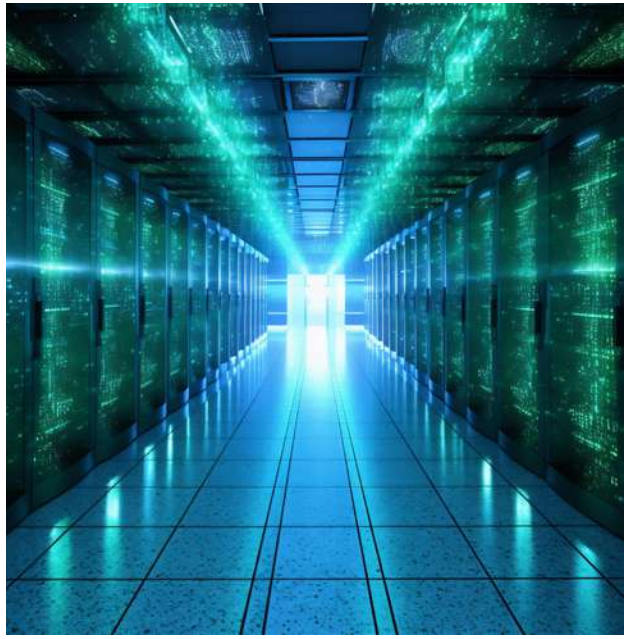
of charging stations across urban and rural areas is vital to alleviate concerns about the availability and accessibility of charging points.

Regarding non-road-mobile machinery, for example forklift trucks, growing electrification is leading to decreased emissions, which further increases the relevance of batteries in this segment. Materials handling and logistics applications are growing by around 5% annually in Europe.[2] The dominant battery chemistry is currently lead, but lithium is expected to overtake this by 2030.

Battery Energy Storage Systems (BESS)

The current geopolitical situation underscores the challenges Europe faces in relying on foreign energy sources. Industry, together with institutions, is advocating for a substantial **increase in renewable energy generation** to contribute to enhancing European energy autonomy and independence.

With the transition to renewable energy, the role and significance of battery energy storage will further increase, and significant growth of energy storage solutions is expected over the next years.



Batteries are reliable and well-established energy storage technologies, providing reliable and clean energy for business, industry, and grid infrastructure. Battery Energy Storage Systems ensure a resilient energy infrastructure by mitigating intermittency challenges, balancing supply and demand, and by enhancing grid resilience. All this facilitates the transition to renewable energy.

In this context, the revised Electricity Market Design Directive (**EMDD**) stands as a significant milestone in this EU political term. Its primary objective is to reduce the dependence of electricity prices on volatile fossil fuel prices. As a result of, the utilisation of battery energy storage systems becomes crucial. In terms of battery technologies, further innovation in Battery energy storage systems, both utility-grid scale and residential/commercial (storage behind the meter) will be crucial.

Stationary Battery systems are also used for **backup power** and Uninterrupted Power Supply (UPS), as well as for Telecom applications (TLC). ESS batteries are also integral to the development of the EV charging infrastructure, which is essential for the widespread adoption of electric vehicles. They help manage the demand for electricity at peak EV charging times, reducing stress on the grid.

To advance these efforts, the new leadership of the European Parliament and Commission, in coordination with Member States, must address any remaining **barriers** hindering the widespread adoption of energy storage. These barriers may include concerns related to energy security, maximising renewable energy

penetration, and ensuring the deployment of longer-duration energy storage, all while maintaining a level playing field. In this regard, legislative initiatives such as the **REPowerEU or the NZIA** regulation are poised to play pivotal roles in boosting these efforts. These strategic pieces of legislation need to provide a comprehensive framework for addressing energy challenges, fostering innovation, and creating an environment conducive to the seamless integration of advanced energy storage solutions across the European Union.

Contribution of Battery Innovation

Innovation along the supply chain is the foundation of a European battery industry that is globally **competitive**.

The EUROBAT stipulates that both lead and lithium have significant innovation potential and will remain in the market beyond 2030, with lithium chemistry (both Lithium Iron Phosphate and Nickel Manganese Cobalt) being used exclusively for traction.[3] Promising emerging technologies include sodium room temperature batteries, which are already entering the market, and lithium solid state, which is expected to be available in the coming two to five years. All these mainstream and future technologies have **significant potential** and will trigger further innovation over the coming years.

To bolster innovation within the European battery industry, prioritising research and development (R&D) **funding** is paramount. Increased financial support for collaborative R&D endeavors between industry stakeholders, research institutions, and academia will drive exploration into novel materials, manufacturing techniques, and emerging technologies. Concurrently, the establishment of a **supportive regulatory framework** is crucial for incentivising the adoption of innovative battery solutions. Clear and streamlined technology agnostic regulations, coupled with market incentives such as subsidies or tax credits, can create an environment conducive to the successful integration of advanced battery technologies.

Role of Battery Standards

Within the NLF (New Legislative Framework) and the EC's new **Standardisation Policy** in particular, standards are acknowledged as a highly effective tool for implementing **secondary legislation**. This recognition underscores the pivotal role that standards play in providing a structured and cohesive framework for the application and enforcement of regulatory measures.

In this regard, developing a strong standardisation base across all main battery technologies is imperative to implement the essential requirements laid down in the new Batteries Regulation.

The harmonised standards developed under the CEN/CENELEC Mandate M/579, providing presumption of conformity with the Regulations, will also give certainty to industry, customers and regulators, enhancing

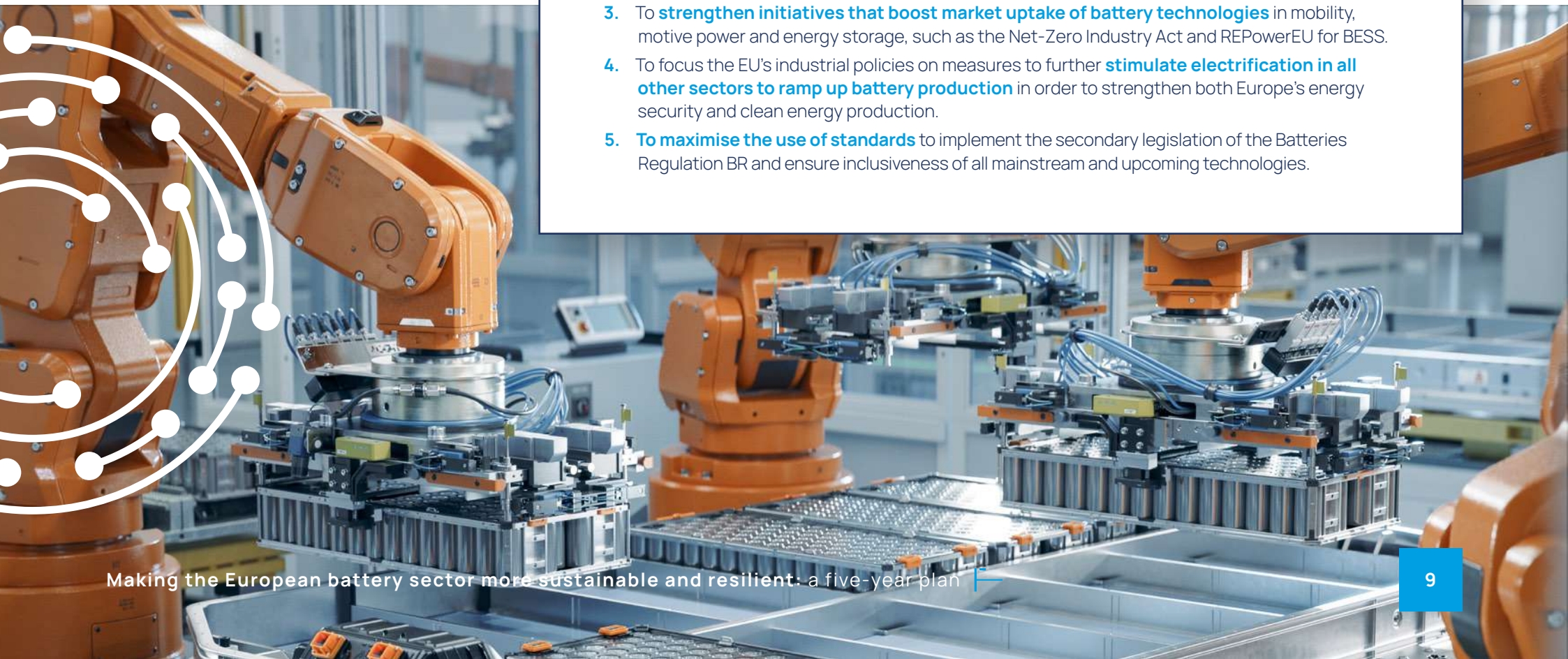
awareness and public acceptance with regards to reliability, safety and sustainability of the products.

While the EC Strategy on Standards aims to better interlink academia in the standardisation processes, we recommend that the EC ensures that these open, transparent and consensus-based standardisation processes continue to be driven by **European industry experts** to take into account the integration aspects and the global view of the developing markets.

INNOVATION

Our requests to policymakers are as follows:

1. To recognise that further innovation in **all mainstream battery technologies** (lead, lithium, nickel, and sodium) is vital to help meet the Green Deal decarbonisation goals and the transition to a circular economy.
2. To expedite **research and innovation** in **all battery technologies**, it is essential to unlock funding channels specifically directed at addressing the existing challenges related to strategic autonomy. This involves a focused effort on **enhancing the circularity of both secondary** and **raw materials** used in batteries.
3. To **strengthen initiatives that boost market uptake of battery technologies** in mobility, motive power and energy storage, such as the Net-Zero Industry Act and REPowerEU for BESS.
4. To focus the EU's industrial policies on measures to further **stimulate electrification in all other sectors to ramp up battery production** in order to strengthen both Europe's energy security and clean energy production.
5. **To maximise the use of standards** to implement the secondary legislation of the Batteries Regulation BR and ensure inclusiveness of all mainstream and upcoming technologies.



Pillar 2: A global level playing field

Establishing **a global level playing field** is vital to ensuring that the European battery industry can maximise its contribution to the EU's climate goals and capitalise on the sector's economic potential. Battery manufacturing in Europe has ramped up considerably in the last five years and will reach an estimated production capacity of close to 9,000 GWh by 2030.[4] Europe will have the strongest growth worldwide and will become the **second-biggest producer** after China (in GWh) by 2030 as a result of electric vehicle demand. Despite that, Europe will still have to import around 15% of the lithium batteries it needs to meet local demand.[5] Faced with this shortfall and recognising the importance of batteries in the green transition, it is essential that European companies are able to **compete on an equal footing** with manufacturers from outside the bloc.

The battery sector has become a key economic and strategic focus for all global regions, with exports identified as a valuable growth area. Consequently, creating a global level playing field is essential.

An evolving global automotive sector

The global market in both batteries and auto manufacturing is in a state of rapid flux, with potentially significant consequences for Europe's indigenous industry. In 2022, China overtook Germany to become the second-biggest auto exporter, and in the first quarter of 2023, it surpassed Japan to take the top spot.[6] Legislating for fair competition will be vital to ensure that EU battery manufacturers can play their full part in delivering the continent's carbon-neutral future.

Competition for raw materials

A central challenge facing European manufacturers is **access to raw materials**, which are critical elements of the battery value chain. Strategic elements for battery production, recognised by Europe, include cobalt, lithium, manganese, nickel, copper, and graphite.[7]

Faced with practical limits on the availability of raw materials, and combined with a recognition that **circularity** is essential for an environmentally sustainable sector, refining and recycling are key elements of European battery production. The EU already has experience with end-of-life value chains for lead- and nickel-based batteries, with over 35 lithium-ion battery recycling projects currently underway or in planning, and multiple projects coming online before 2025.[8] However, Europe must build on its **recycling expertise** to further improve the green credentials of batteries and maximise the recovery of essential minerals, thereby reducing dependency on imports.

Active industrial policies at the global level

Many global regions are pursuing **active industrial policies**. For example, over the past few years, policies have been developed in the US to create a conducive environment for gigafactory projects with the aim of attracting battery companies. These have included targeted government spending and incentives, as well as taxation policies. By creating an inviting fiscal landscape, the US and other jurisdictions have sought to bolster the economic viability of new gigafactories, thereby influencing the decisions of potential investors on where to locate. Lower corporate tax rates are a compelling incentive for manufacturers. Strategic policy measures such as these risk putting the EU at a competitive disadvantage, since companies seeking optimal investment conditions may choose locations with more favorable fiscal environments.

The role of Europe's law-makers

Significant progress has been made by EU lawmakers in recent years, and EUROBAT recognises the importance of what has been achieved. In 2017, we called for a comprehensive battery strategy, and in the autumn of that year, the European Commission launched the European Battery Alliance (EBA). This led to the establishment of a European battery value

chain, along with planned manufacturing capacity of gigafactories, plus planned recycling capacity.[9]

The two major milestones of the 2019–2024 political term have been the adoption of the **Critical Raw Materials Act (CRMA) and the Net-Zero Industry Act (NZIA)**. Together, these pieces of legislation underpin an EU green industry, encompassing the acquisition of raw materials and the engineering and building of renewable assets, such as wind turbines, photovoltaic panels, and batteries. While the two Acts are important and welcome, **access to raw materials** remains subject to considerable global competition. Furthermore, there is a need to retain control of refined and recycled mineral streams, and at the moment, the EU is lagging behind in both these areas. In this context, we applaud the recent introduction of the EBA Strategic Battery Materials Fund, with a target size of €500 million.[10] The fund is aligned with the EU's Critical Raw Materials Act and aims to reduce Europe's reliance on supplies from overseas and address and rectify gaps in the upstream sector. Nonetheless, it remains to be seen whether it will be sufficient to alleviate the significant dependency that the EU currently has on third countries.

The CRMA is an essential component in the EU's attempt to regain ground in the race for access to minerals, but is **insufficient** to compete with other pieces of legislation, such as the USA's Inflation Reduction Act (IRA). This is reflected in the number of battery manufacturers and associated companies that are either choosing to leave Europe or refraining from investing in Europe in the first place.

A GLOBAL LEVEL PLAYING FIELD

What we ask of policymakers

1. To appoint a commissioner for strategic autonomy

In 2023, Europe formulated a strategic approach towards securing raw materials. The challenge over the coming years will be to turn this approach into actions. Achieving this will require a senior political figure operating at the head of the European Commission. We, therefore, call on EU policymakers to create a portfolio and an Executive Vice-Presidency to further develop and implement **Europe's strategic industrial autonomy**, looking at the whole value chain in terms of raw materials and production capacity, as well as energy and key technologies. One of the key roles of such a commissioner would be to ensure policy coherence across the different Directorates-General of the European Commission.

2. To develop strategic partnerships encompassing acquisition, processing, and recycling of minerals

Recognising that the EU has insufficient raw materials resources or processing and recycling capacity to meet the needs of the battery manufacturing sector, **EUROBAT** asks policymakers to:

- **Develop strategic partnerships** with global companies and key mineral-producing countries in order to secure access to critical resources.
- Support projects in those countries to enhance their capacity in aspects of the CRMA. Facilitate access to EU funding for projects, including mines, located outside the EU. A strategic EU approach will be crucial to foster these partnerships, supported by adequate administrative resources.

3. To provide financial support via appropriate funding mechanisms

The development of a lithium battery value chain is capital expenditure-heavy. Significant levels of public and private investment will be required over a sustained period to deliver this value chain. We, therefore, call on EU policymakers to:

- Launch a dedicated direct grant program. A European Sovereignty Fund could be a possible vehicle.
- Allocate a dedicated **financial envelope** for project support to the different segments of the critical raw materials value chain during the next Multiannual Financial Framework review.

4. To provide legal certainty and reduce red tape

Policy measures that **provide legal certainty and reduce red tape** are essential for the continued development of the battery value chain in Europe. EUROBAT calls on policymakers to **introduce a coherent and stable legal framework to support the sector.** Specifically, all legislation that affects the EU's green transition ambitions must have policy objectives that are aligned and that are supported by appropriate coordination between the different directorates within the Commission.

Pillar 3: Circularity

In circular battery supply chains, end-of-life batteries are recycled or re-used in second-life applications, maintaining valuable materials such as cobalt, lead, and lithium in a closed loop, allowing them to perform their role as energy carriers over and over. **This sets batteries apart from other applications** in transport and energy, as these most often rely on non-recoverable resources, primarily fossil fuels. **Without circularity, there is no sustainable green transition.**

Recycling: The key to achieving a sustainable and autonomous battery industry

The European battery sector is actively advancing the creation of products designed for optimal **recyclability**, aligning with the central concept of **circularity**. This involves the repeated recycling of materials to free up resources for reuse, underscoring the **industry's dedication to environmental sustainability.**

Boosting the share of recycled content in batteries is key to reducing Europe's dependence on third-country raw materials. Substituting primary with secondary materials also mitigates the environmental impact of batteries by easing the pressure from extractive activities and curbing the carbon footprint of the overall value chain.

An ambitious set of EU circularity targets

In this context, the **Batteries Regulation** dictates that no batteries should be disposed of, outlining stringent storage and treatment requirements. Combined with horizontal provisions in environmental legislation, the Regulation ensures control over emissions of substances to the air, water, and soil during a battery's end-of-life. **Recycling** is the preferred option for the treatment of waste batteries. Long-established battery types, in particular, lead-based and nickel-based batteries, already achieve strong circularity credentials.[11] Conversely, recycling of batteries from emerging chemistries, such as lithium-ion and sodium-ion batteries, remains a nascent industry with considerable potential for scaling up given the high market value of raw materials such as cobalt, copper, and lithium.

Over the past five years, the Commission has focused on harmonising the circularity and design of batteries across Member States with the EU Batteries Regulation. The Regulation specifies **targets for the share of recycled content** for key materials in batteries. To ensure manufacturers have enough secondary materials to meet the targets, the legislation sets an obligation **to collect all**

automotive and industrial batteries, and provisions to improve the efficiency of recycling processes.

At a higher level, the Critical Raw Materials Regulation sets annual benchmarks for the domestic mining, processing, and recycling of "strategic raw materials", including cobalt, copper, lithium, and manganese.

For all these ambitious targets, the establishment of the infrastructure supporting circularity hinges on a **legislative framework that provides substantial support to the industry.**

Meeting the EU's circularity targets: what we ask policymakers

CIRCULARITY

1. The new Batteries Regulation – setting secondary legislation right

The **Batteries Regulation** and its implementation are poised to play a paramount role in the industry's well-rounded development. Yet, the devil lays in the details. Numerous specifics and requirements in the Batteries Regulation will be addressed through what is known as **secondary legislation**. These legislative acts empower the Commission to supplement or amend non-essential components of EU legislative acts, allowing, for example, the definition of detailed measures, such as the methodology for calculating the recycled content of various batteries.

In this context, the majority of detailed measures will be articulated through legislative acts known as **Delegated and Implementing Acts** and are slated for development and implementation until around 2030. Some of the most pertinent measures, soon to be approved, pertain to the calculation of the **Carbon Footprint Methodology**. In this regard, it is going to be specifically tailored for a group of batteries. This includes EV, LMT (Light Means of Transport) batteries, each adhering to distinct timelines. The requirements will be adopted with a staged approach, initiating with the declaration of the carbon footprint, followed by the establishment of performance classes, and concluding with the determination of maximum thresholds. Here, the European Commission is anticipated to elucidate the intricacies of this methodology in the coming months for these various battery types, and from the industry, we hope for a commitment to ensuring **a level playing field and adopting a technology-agnostic approach.**

Carbon footprint of domestic and imported batteries – Setting a level playing field

The EU is working to ensure that products manufactured in Europe are **safe and sustainable.** Batteries made in Europe have **a lower environmental footprint** than those produced in other jurisdictions. The EU's regulatory framework should leverage the **green credentials of EU-produced** batteries and establish **a level playing field** concerning batteries imported into the EU. This should include developing a clear and standardised method for calculating the carbon footprint for the different types of batteries. EUROBAT has been actively involved in such processes and has represented battery manufacturers in discussions with other segments of the battery value chain.

A balanced governance for data-sharing along supply chains

With the introduction of the **Digital Battery Passport** in 2027, the battery industry will be the **first** sector to fully digitise its supply chains, paving the way for similar systems in sectors such as consumer electronics, textiles, and detergents. By easing data flows between manufacturers, second-life operators, and recyclers, the battery passport **will boost the circularity of batteries**. To ensure the passport plays an enabling role for the green transition, secondary legislation needs to protect confidential business information and mitigate administrative burdens for operators. Information requirements on battery cell composition, in particular, should not exceed what is needed to facilitate the work of recyclers. Battery manufacturers would also benefit from access to dynamic battery management system data. Easing the flow of data generated during battery use up and down the supply chain will help understand product defects, improving performance and design.

Avoiding double-regulation: the Batteries Regulation as the principal legislation for batteries

A **clear regulatory framework** is a prerequisite for companies to continue investing in battery manufacturing in the EU. The Batteries Regulation should be **the sole and only piece of legislation regulating the design and circularity of batteries** and should, as far as possible, have primacy over other EU regulations.

2. ELV: Alignment across EU circularity legislation

One common element of the Green Deal has been the objective to create coherence across policy measures, something we have asked for a long time. One missing nexus for our industry is the link between the new **Batteries Regulation** and the newly proposed **End-of-Life Vehicles Regulation**. **Clarification and alignment** are needed here.

In particular, restrictions on substances in batteries should be entirely removed from the scope of the proposed Regulation on circularity requirements for

vehicle design and on the management of its end-of-life, as these are already addressed in **Article 6 of the Batteries Regulation.**

This also means that the **next exemption review for lead in batteries**, scheduled for 2025 under the End-of-Life Vehicles Directive, should **be paused and incorporated** into the comprehensive report on chemicals in batteries required under Article 6(5) of the **Batteries Regulation.**

3. Predictable and simple chemicals legislation

Regulatory predictability over market access to hazardous battery substances such as lead, cadmium, or lithium is essential to the establishment of circular battery value chains.

The Commission should clarify at the earliest possible stage that the mapping under Article 6(5) of the Batteries Regulation will **not** lead to (a) ban(s) on battery substance(s). **Reinforcement** of OHS legislation, combined with **targeted restrictions**, is the most effective approach to addressing any residual risks from hazardous substances.

Through the REACH revision, policymakers may include circularity and/or criticality as factors in the scoring system for the European Chemicals Agency's Recommendations for the inclusion of substances in REACH Annex XIV. Introducing **authorisation requirements** for lead, lithium salts, manganese compounds, and/or cadmium oxides would **jeopardise** Europe's attractiveness to investors.

In addition, **workplace limit values** for battery metals must **not** be set below what is needed to protect workers. Proper transitional periods for occupational exposure limits are key to **balancing** human health protection with global competitiveness.

4. IED: Simpler, faster permitting

Europe is gradually reducing its reliance on third countries for battery minerals and precursors. Germany, for example, assesses that its reserves of lithium could serve 25% of the EU demand for electric vehicle batteries.[12] It is also estimated that two-thirds of cathode active materials could be sourced domestically by 2027.[13]

To unlock this potential, competent authorities should **speed up permitting** for all activities subject to the **Industrial Emissions Directive**, from the extraction of raw materials and their processing to the manufacture of cathode active materials, battery cells, and second-life materials.

Together with the JRC, the battery industry should lead the developments of best available techniques for mining and battery cells manufacturing.

5. Easing shipments of waste batteries and recycled materials

EUROBAT welcomes the upcoming **harmonisation of waste codes** related to lithium-ion batteries across the EU in the next update of the List of Wastes. Divergent interpretations of lithium-ion battery codes among Member States result in **complex administrative procedures** that impede the functioning of the internal market.

Recycling supply chains involve several actors, often specialised in a particular step, from dismantling and shredding to thermal treatment and the separation of black mass components. To facilitate their work, we propose establishing **a single waste code** for waste lithium-ion batteries and another one for manufacturing wastes of lithium-ion batteries. Access to the intra-EU fast-track procedure under Art. 14 of the new **Waste Shipments Regulation** should also be facilitated.

"For all these ambitious targets, the establishment of the infrastructure supporting circularity hinges on a legislative framework that provides substantial support to the industry."

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9 Rho Motion 2024

Raw Material Demand – pure metal, tonnes

	2023	2030	2040
Li	18,044	72.967	127,160
Ni	90,216	337,084	583,597
Mn	22.192	83,949	238,985
Co	28,757	78,720	115.841
Na	9	5,761	34,129

Raw Material Demand· battery materials, tonnes

	2023	2030	2040
LCE	96,051	388,402	676,870
$NiSO_4$	404.556	1.511.587	2.617.028
$MnSO_4$	61.002	230,756	656,914
$CoSO_4$	89,865	246,000	362,004
$NaOH_4$	15	10.019	59,355

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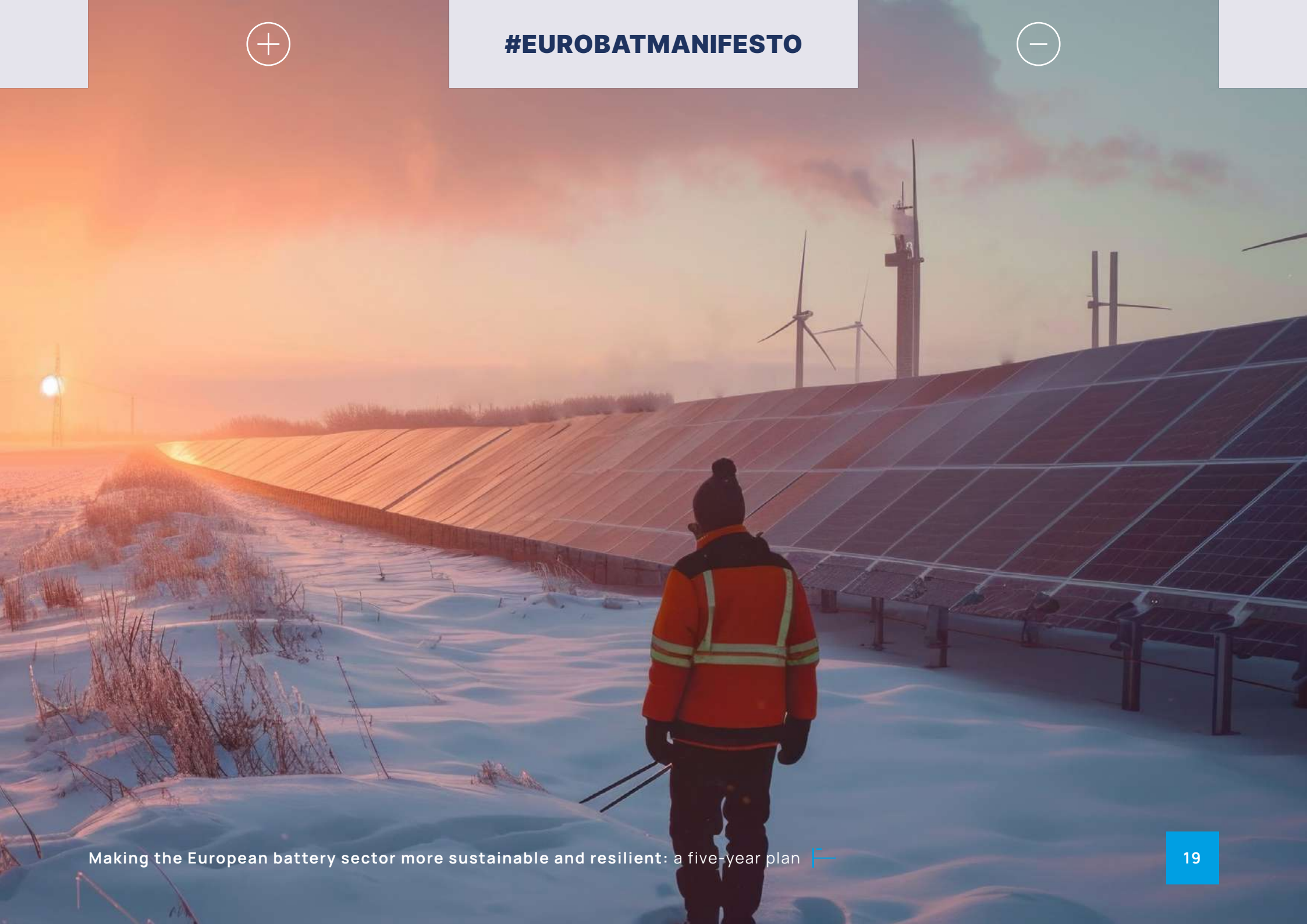

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A better mobility starts in cities

From our streets to Europe

The 2019-2024 EU mandate has been filled with landmark achievements in the sphere of EU urban mobility policy, underpinned by the ambitions of the European Green Deal. The task of the next EU policymakers will revolve around keeping the EU on track to meet its targets for 2030 and beyond in terms of climate, road safety, air quality, noise and other Green Deal objectives.

In five years, zero-emission mobility in cities should become mainstream, aided by the proliferation of zero-emission vehicles and lighter transportation options. Preventive measures to free people from some of the everyday journeys that they are currently compelled to take, will also contribute to aligning with climate mitigation and environmental health goals. Essential to this transition is greater EU and national support for urban and long-distance transport infrastructure investments based on newly available sustainable urban mobility indicators, with increased budget allocations, clarified rules applicable to urban areas and enhanced city involvement in decision-making.

Creating a multimodal, convenient, and reliable mobility system will further encourage reconsideration of travel habits and a modal shift towards public transport, walking and cycling. In line with their Sustainable Urban Mobility Plans, city leaders aim to redesign urban spaces to improve air quality and to make them more welcoming, safer and more inclusive, which in turn promotes economic activity . The EU should support these aims with the corresponding policies and funding tools. In 2030, innovation will continue to drive mobility services, requiring proper calibration of innovation funding, capacity building for cities, and improved data sharing between businesses and governments to optimise infrastructure adaptation and planning.

Building upon the Eurocities manifesto , the following recommendations contribute to achieving this vision and filling in the current EU mobility policy gaps in line with cities' aspirations.

Building Sustainable Urban Connections: Securing Modal Shift within and Beyond Cities

Connecting the dots between long- and short-distance transport

Eurocities recommends that the EU institutions accompany the cities now termed 'urban nodes' in taking full ownership of their new role, acknowledged by the TEN-T regulation, by:

- √ Clarifying the role and responsibilities of urban node authorities while giving them a seat at the decision table of big transport investment plans which directly or indirectly impact their territories.
- √ Setting up a new Connecting Europe Facility (CEF) – Transport programme, including an increased budget for urban areas aligned with local priorities.
- √ Providing guidance for the Sustainable Urban Mobility Plans of urban nodes on how to integrate land-use and infrastructure planning, taking into account the local, regional, and European scale.

Deliver on the EU plan to boost long-distance rail

Cities are fully behind the EU's ambition to double the volume of high-speed rail traffic by 2030 and to revive night train and freight connections across Europe.

To finance the ambitions, EU policy makers should:

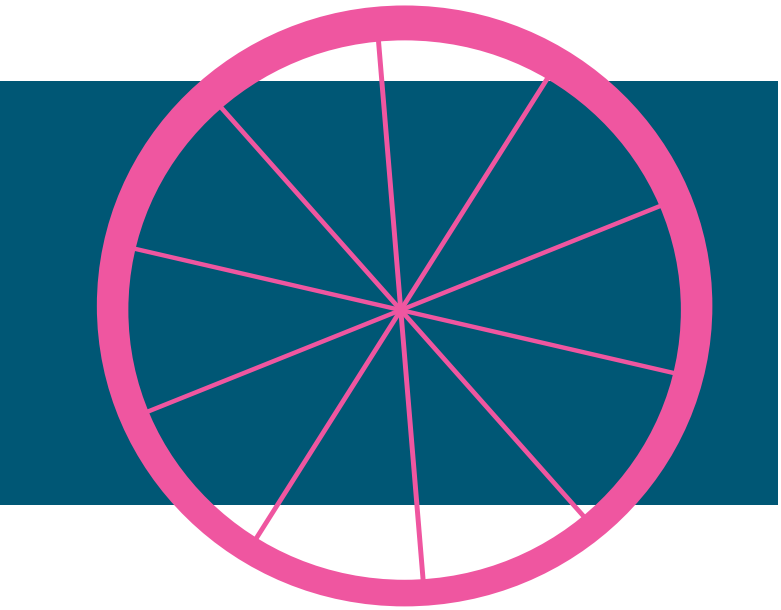
- √ Ensure that existing programmes such as the CEF-Transport programme are aligned with this level of ambition to ensure the development of high performing, sustainable, and efficiently interconnected trans-European transport infrastructure for rail in Europe.
- √ Explore the implementation of cross-mode subsidies and adequate national taxation schemes to promote environmentally friendly modes of transportation, leveraging legislative tools such as the Energy Taxation Directive and the Eurovignette Directive.
- √ Build upon the experience of national discounted fares such as the Austrian KlimaTicket schemes for railway to attract new users.

Prioritising sustainable transport modes

Even though the situation is improving, public transport has recently been through a lot with the Covid-19 crisis and the energy crisis increasing the operational costs. Substantial investments to renew and/or increase public transport networks will therefore be required to cope with the current challenges. Further consideration of active and shared modes of transport in EU transport policies will also be a pre-requisite to make them more

attractive to users. The European institutions should:

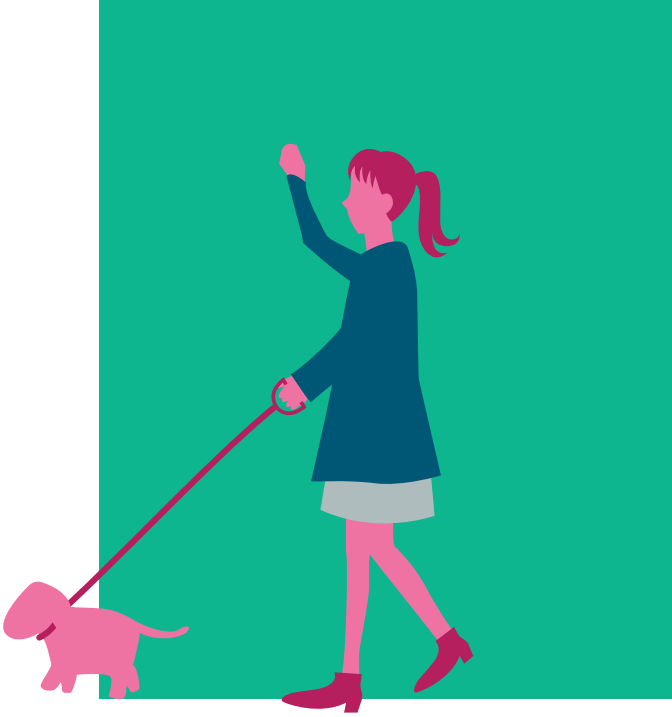
- √ Continue to support the public transport sector's decarbonisation and digital solutions to support its prioritisation and integration with other modes.
- √ Fully recognise the positive impact of public transport to be a credible 24/7 alternative, including by safeguarding the freedom for local and regional authorities to set public service obligations on public transport.
- √ Propose a measurable implementation plan of the EU Cycling Declaration based on cities' recommendations.
- √ Promote guidance and funding for traffic reduction solutions as an enabler for safer, more resilient and liveable cities.



Propose a clear set of actions to put lighter and smaller vehicles on the market

The ever-growing size and weight of private passenger cars have not only been flagged as a risk towards climate change but also on road safety and public space in urban areas, prompting several cities to take action on the matter. Eurocities recommends that the EU institutions:

- √ Address the issue by regulating vehicles' energy efficiency, ensure that imported vehicles comply with EU legislation, set dimension limits and ensure better consumer information.
- √ Complete the applicable regulatory framework for lighter modes of transport, ensuring road safety and limiting their emissions.
- √ Provide continued support in research and innovation for new lighter vehicles for freight and passenger transport.

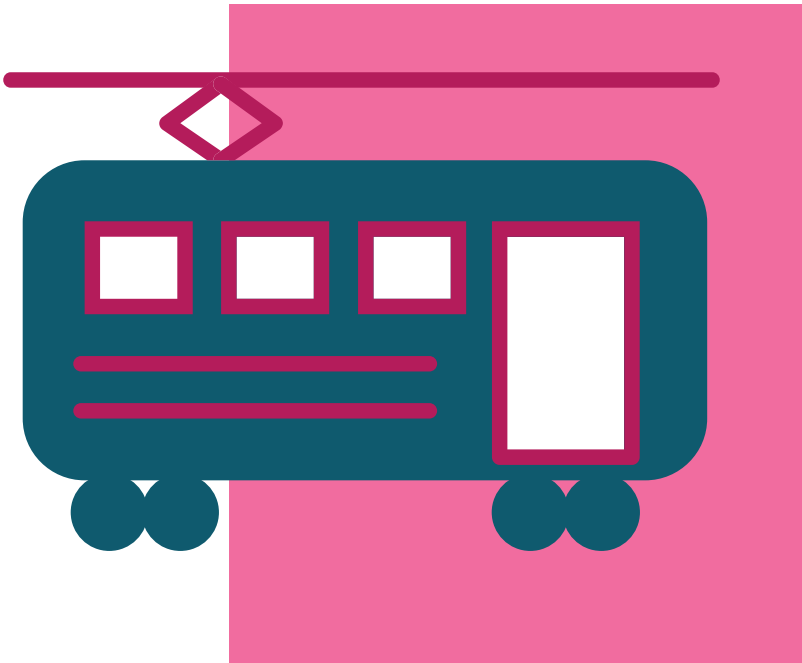


Mainstreaming zero-emission mobility in cities

Secure the transition of the automotive sector towards zero-emissions

To achieve their plans for zero-emission mobility, cities need to ensure that residents and businesses have access to affordable zero-emission transport and to the charging infrastructure needed for all types of vehicles. To provide legal certainty for cities, users and vehicle manufacturers, Eurocities recommends that EU policymakers:

- √ Secure the 2035 phase-out targets for fossil-fuelled vehicles as already agreed at the EU level.
- √ Address vehicle categories in which decarbonisation is lagging, such as Non-Road Mobile Machinery.



Enabling cities' infrastructure for the roll-out of zero-emission vehicles

Massive investments both by the private and public sector are also still expected in the years to come to accompany this transition, such as grid upgrade and public transport fleet conversion.

Eurocities recommends that EU decision makers:

√ Propose new funding programmes as part of the next Multi-Annual Financial Framework to prepare cities for the adaptation of local infrastructure to the roll-out of zero-emission vehicles.

√ Continue to provide EU guidance to better plan zero-emission urban mobility during the implementation of the new EU legislation as well as continuous support for standardisation.

Support cities in dealing with the legacy of the internal combustion engine

Fossil-fuelled vehicles are expected to run on cities' streets until at least 2050, leaving cities no choice but to address the pollution emitted by these vehicles through low or zero-emission zones (LZEZ) or other urban vehicle access regulations (UVAR).

To ensure the success and acceptance of such measures, Eurocities recommends that the EU institutions:

√ Continue to work on enhancing drivers' information on UVARs and cross-border enforcement

√ Encourage member states to set up national UVAR frameworks, including technical and financial support for cities, and encouraging mutual recognition between national schemes.

Support the design of safe, climate resilient and inclusive streets and spaces

Mobility policies are one of the most important levers to make our cities more liveable and equipped to tackle global challenges. The following elements need to be deployed to help cities implement their vision for safer, more inclusive and climate resilient streets and spaces.

Review the EU Road Safety Framework to achieve the 2030 objectives

The European institutions should assess the efficiency of the measures taken under the current framework to reach the objective of halving the number of road fatalities by 2030.

In assessing this framework, the EU institutions should:

√ Continue to push for further implementation of vehicle safety technologies such Intelligent Speed Assistance technology, for the benefits of both vehicle occupants and other road users.

The European institutions and member states should:

- √ Adress the gender dimension by improving security in transport, collecting accurate data on gender differences and modes of transport, as well as placing greater priority on the issue in project calls.
- √ Ensure that EU-funding instruments for transport are used to support accessibility in transport infrastructure and services.
- √ Address transport poverty via the Social Climate Fund, making good use of data and best practices implemented by cities and considering the impact of UVARs on transport users to target funding.

Guiding urban mobility innovation

Urban mobility innovation has been blossoming for a few decades now, bringing new operators and technological solutions to the market but also creating new ways of collaboration between public and private partners to the benefit of improved urban mobility.

Empowering cities to steer value-driven innovation

Financing capacity building activities in cities remains imperative if we want to equip them with the right tools to be able to deal with innovation. Too often, the lack of internal capacity leads to situations where cities cannot steer innovation in a direction that caters to their needs.

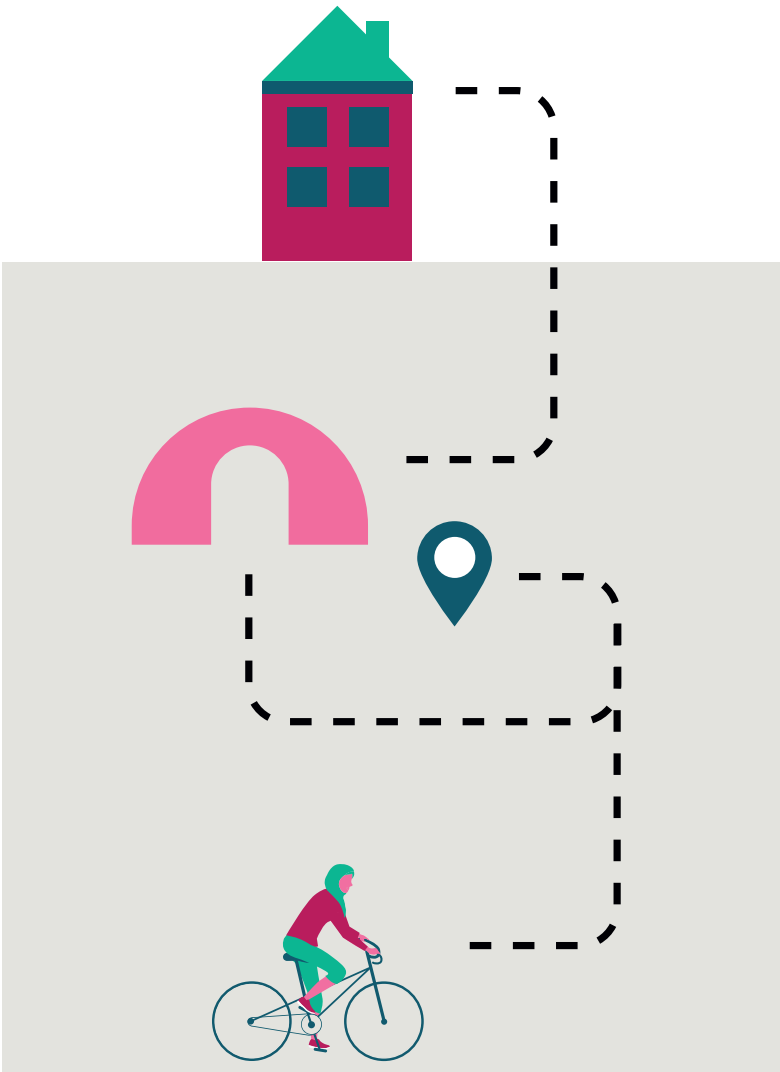
- √ Promote a better use of data, including insurance data for the improvement of road safety.
- √ Deliver on the creation of a Road Safety Agency.
- √ Provide recommendations and KPIs on drivers' dangerous behaviours and suitable reduced speed-limits according to road typology.

Help cities to foster climate-resilient mobility policies

As the impact of climate change is being felt more urgently in cities, the next EU policymakers should establish methods and guide public and private actors to further assess and anticipate the impact of climate change on urban mobility services and infrastructures. They should also highlight the solutions offered by urban mobility planning to create climate-resilient cities as part of the Climate Adaptation Mission.

Promote multi-faceted inclusive mobility

In their activities on urban mobility, EU institutions should bear in mind that well-functioning urban mobility is also about providing equal access to employment and services regardless of people's gender, reduced mobility, ethnic background or social conditions, anticipating the impact of societal changes.



The EU institutions should therefore:

- √ Continue to sustain existing initiatives such as the CIVITAS Initiative to foster knowledge exchange and build-up cities' capacity to develop and demonstrative innovative mobility solutions.
- √ Ensure that funding programmes help cities to better deal with innovation, especially by allowing them to adapt their local strategies, regulatory capacities and organisational structures.
- √ Revise the EU approach regarding innovation funding to ensure that mature solutions can be rolled-out after the pilot phases.
- √ Encourage the creation of local regulatory sandboxes to test innovation in real life and develop innovative solutions for rural-urban connectivity and to improve urban goods distribution.

Unleashing the power of business-to-government ('B2G') data sharing

More data made available to city authorities can help them improve urban mobility and road safety by allowing them to better enforce local regulations or support informed mobility planning. In addition, data sharing should also serve to ensure that services such as routing services comply with local regulations.

Eurocities recommends that the EU institutions:

- √ Adress the lack of availability and quality of mobility data held by private stakeholders and made available for local authorities
- √ Clarify the role of cities as stakeholders in the implementation of the relevant EU initiatives on mobility data such as the ITS directive, the Data Act and European Common Mobility Data Space
- √ Encourage data protection authorities to develop guidance on the handling of personal data by local authorities in the mobility data ecosystem, such as data related to active mobility.

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ELECTRICAL CONTRACTORS ASSOCIATION

Together, we can make Europe stronger, greener, more competitive, & more sovereign

Local electrification & local jobs, making the energy transition happen for all Europeans

Electrical contractors embody the Green Deal's aim to put Europe on track for climate-neutrality while fostering sustainable economic prosperity and sovereignty. With close to **2 million professionals**, electrical contractors strive to expand their workforce to meet the **rising demand for electrified technologies, leading to local, stable and high-quality job creation across Europe's regions**. They are at the forefront of the energy transition, bringing electrification and digitalisation to end-users, in consumers' homes as well as to businesses and industries.

The Green Deal has set Europe on the right course yet is leaving the next EU leaders with a significant responsibility. They'll be tasked with making its ambition **acceptable** to citizens and consumers with increased welfare and local **job opportunities** that leave no one behind, ultimately ensuring the **efficient** implementation of agreed policies.

Over the next legislative cycle, EU policymakers will have the opportunity to devise the policy framework that will enable Europeans to achieve our common ambition. Every day, in every corner of Europe, Electrical contractors are already playing their part, working to phase out fossil fuels, increase the share of homegrown renewables and make our energy consumption more efficient.

However, SMEs increasingly struggle to find enough qualified workers to hire, while consumers face longer waiting periods for clean energy installations. This means there are vacancies to be filled and bottom-up demand for electrification takes longer to be answered.

EuropeOn calls on policymakers to:

1. **Set clear course towards clean electrification.**
2. **Champion technical education and careers for the energy transition by investing in a sufficient and fully skilled workforce.**

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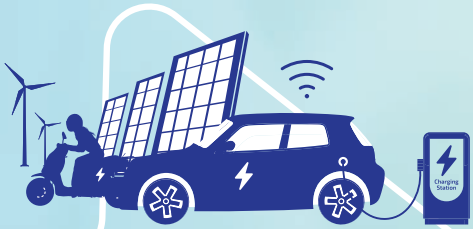

Efficient Implementation

1. **Clean electrification** is the efficient tool to address climate, economy, health, and consumer needs

Acceptable Energy Transition

Local Job Opportunities

Europe cannot be bogged down in hypothetical technological developments. Electrification is already a proven solution and an EU Electrification Action Plan, asserting the role of electrification in the energy transition, would provide the vital predictability European companies and consumers need to reach our adopted objectives. It will enable stakeholders to plan ahead for investments in their business, workforce, or assets, and **make the energy transition more affordable and desirable for all end-users by mainstreaming electrification**.

In addition, a set of **enabling factors** such as (carbon) pricing, taxation, and primary energy factors, especially in buildings, must be geared to facilitate electrification instead of postponing it.

Furthermore, **electrification should go hand in hand with digitalisation**. It will enable a more efficient use of electricity and more consumer value but requires advances on the relevant hardware, infrastructure, software and standards.

Electrification is the **best way forward to implement Green Deal objectives** and stands to bring multiple and far-reaching **benefits to European citizens**:

- A vast amount of local, stable, and high-quality jobs will be created *(see part 2)*.
- Electrification is Europe's homegrown solution to phase out fossil fuels and, in turn, phase out many threats our citizens face: acceleration of climate change, over-reliance on energy imports, high volatility of energy prices, and thousands of premature deaths due to (air) pollution.

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Efficient Implementation

2. Building the right workforce for an efficient, unanimous, and prosperous energy transition

Acceptable Energy Transition

Local Job Opportunities

The energy transition needs makers, professionals who can deploy electrified solutions on the ground and on rooftops. For electrical contractors to fulfil this central role, the top priority is tackling the lack of adequately qualified workers, rooted in the **poor image of technical education and careers**. Incoming policymakers must see to it that the EU's objectives and the Electrification Action Plan address the insufficient availability of the implementing workforce. But this challenge does come with **significant opportunities**.

For electrical contractors alone, the installation of solar panels, electric vehicle charging points and storage batteries could create up to 400,000 jobs by 2030 which **cannot be delocalised** outside the EU and are needed across regions, at the very local level.

Addressing the technical workforce gap can also **alleviate the recent citizen discontent** partly stemming from the energy transition. Citizens must be made aware of the varied job opportunities in electrification and the high demand for technical profiles in all regions. This will frame electrification as a new brand of industrialisation that improves people's daily lives and will, in turn, build trust in a European energy transition.

We urge policymakers to **revive the status of technical education and careers**. This includes investing in **full training curricula**. Indeed, only fully skilled workers can deliver quality installations that abide by safety and efficiency standards all the while providing attractive and long-term careers. Further, more support is needed for currently active workers to upskill and for SMEs to train their workers and take on apprentices. The immediacy of investments in our human resources is paramount in order to avoid any bottlenecks down the line.

400,000 new jobs by 2030*

* Job Potential Study

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ELECTRICAL CONTRACTORS ASSOCIATION

Together, we can make Europe stronger, greener, more competitive, & more sovereign

Policy asks:

Pillar 1: Clean electrification

To harness the benefits of electrification, EU policymakers must:

1. **Release an Electrification Action Plan to assert the way forward for our energy system**

- Adopt an electrification target of **35% of final energy consumption by 2030** and emphasise how buildings can be electrified to meet EU decarbonisation targets, while alleviating energy poverty and increasing consumer benefits.
- Apply an **"Electrification test"** to all EU funding. This will ensure the most appropriate prioritisation of European funds (skills funding, consumer incentives, IPCEIs, ...).

2. **Mobilise enabling factors to foster electrification**

- Ensure pricing, taxation and primary energy factors **incentivise electricity over fossil fuels**.
- Keep incentives stable to provide more **predictability** to consumers and businesses.

3. **Further support the digitalisation of the energy sector**

- Ensure **wider digitalisation** is enabled by the necessary infrastructure, such as smart meters and gigabit infrastructure.
- **Simplify data access**, interoperability of devices, open software, and cyber resilience schemes so as to foster emerging business models for electrification.

Pillar 2: Workforce & skills

The quantity aspect - EU policymakers must first address the lack of clean tech heroes

1. **Address the gap between available and needed workers**

- Make the Net Zero Industry Act's **Net Zero Platform** an assertive and central apparatus of the EU's energy and climate governance, harnessing the involvement of Member State representatives, Commission, EU Parliament, and relevant stakeholders.
- The Platform should, as proposed, **continuously assess the availability of relevant workforces**, building on reporting obligations in the Energy Efficiency Directive.

2. **Attract enough workers to technical professions and education**

- Act on workforce assessments with **corrective measures at EU and national level**.
- **Gear EU funding towards the Net Zero workforce with a focus on technical profiles** and support awareness raising, with due attention to the gender dimension.

The quality aspect - EU policymakers must provide for full and modern skillsets

1. **Secure fully qualified and expert operatives**

- Use EU funding to support **full training curricula, including apprenticeships**, by making it more directly accessible to SMEs and VET schools.

2. **Facilitate training and upskilling of current Net Zero workers**

- Ease access to EU funding for upskilling for **SMEs and independent workers**.
- The Net Zero Platform should **work with local actors** (Public Employment Services) to ensure EU funding actually goes to the workers and SMEs implementing EU targets.

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POLIS

CITIES AND REGIONS FOR TRANSPORT INNOVATION

POLIS Manifesto for the European Elections

Local must lead!

Empowering Cities and Regions for Better Transport

February 2024

POLIS Priorities

1. The local level matters: Empowering cities and regions
2. Urban and regional mobility as the key to connect communities and reduce the carbon footprint
3. Bridging urban and rural divides: Inclusive policies for all territories
4. Standing firm with the Green Deal: Now is the time for implementation
5. A commitment to the Just Transition
6. Focus on industrial policy… but not without local and regional public sector involvement!
7. Protect Europeans who walk and cycle: Deliver on the EU's commitments and strive for zero deaths
8. Clean our air and our fleets, green our streets
9. Trans-European Transport Network: Urban nodes are a driver for competitiveness
10. People make it happen: Skilled workforce, capable cities and regions

Introduction

The next term of the European Parliament will determine whether the EU can make a move to a more **resilient transport system**. Recent and ongoing challenges, ranging from the COVID-19 pandemic to the soaring cost of energy, have taught us that transport systems are at the forefront of crises and must adapt quickly to changing circumstances. No ideology can make the climate crisis magically disappear, and all viable solutions require choices and demand cooperation – across borders, levels of government, and party lines. We need all incoming Members of the European Parliament to contribute, with strategic vision and concrete action, to a sustainable, safe, equitable, and prosperous future for the citizens of Europe.

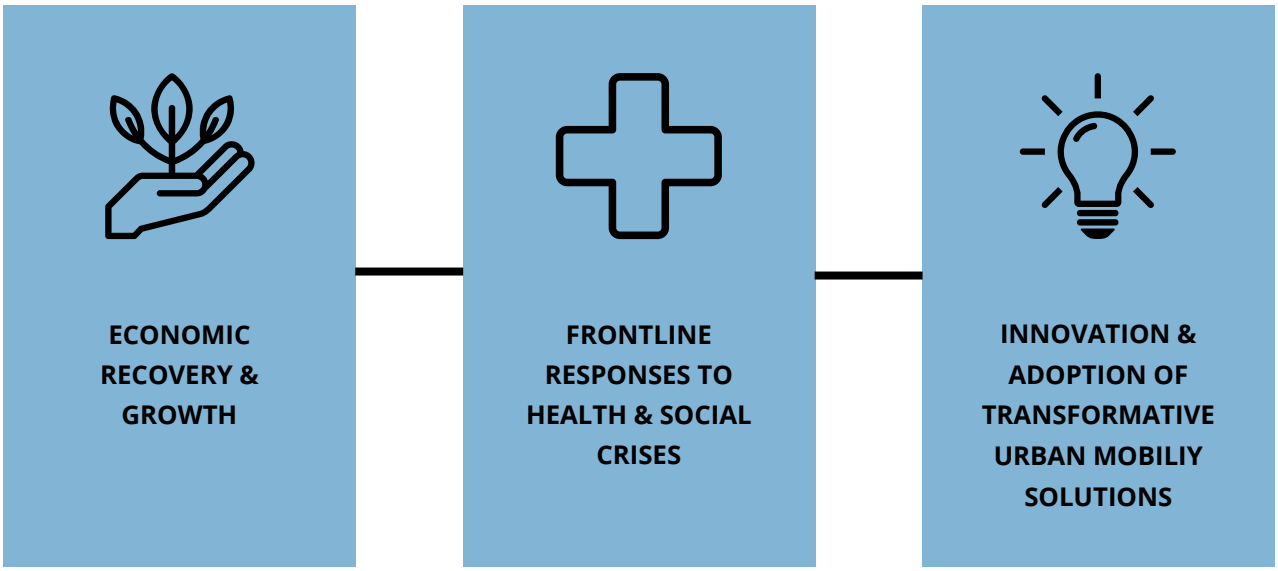
As the leading network of European cities and regions advancing sustainable mobility through transport innovation, POLIS calls on all candidates to take **urban and rural mobility** into account as a key sector for European action. Transport at the local and regional scales, managed by local and regional authorities, has the closest, widest, and deepest impact on the everyday lives of EU citizens. It is also a key building block for Europe's prosperity and competitiveness and must become an essential contributor to a just transition towards climate neutrality and zero pollution.

Many POLIS **member cities and regions** are bravely stepping forward and making their transport systems more resilient, sustainable, safe, and equitable. They are doing so in a quintessentially European way: working for the greater good and actively learning from and cooperating with each other. They are leading the way. Learning from their experience, supporting their efforts, and involving them in EU policy development is the best way to spread their work to the whole Union.

1. The local level matters: Empowering cities and regions

In the face of the climate crisis and the imperative for sustainable **recovery and resilience**, the coming decade will be critical. Local and regional levels of government are key, and it is here that swift and decisive actions will have to be taken. Empowering cities and regions ensures that decisions reflect the diverse needs and aspirations of our citizens.

Local mobility isn't something that can simply be set away from EU policy on the grounds of subsidiarity – there is a critical European dimension to the advancement of sustainable mobility. Our members (small, medium, and large cities, provinces, and regions) see an important role for the EU in enabling:



These require **legal and funding frameworks** tailored to the needs and capacities of cities and regions.

2. Urban and regional mobility as the key to connect communities and reduce the carbon footprint

In order to achieve a 55% reduction in greenhouse gas emissions by 2030, we urge the EU to prioritise **sustainable urban mobility** as a key policy field within its urban, regional, and transport policies. Local and regional mobility is literally 'close to home' and can substantially contribute to European goals with regard to climate, air quality, road safety, and modal shift.

Local and regional authorities are committing to substantial changes in policies, methods, services, fleets, and infrastructure. With the right tailored support, their impact can be further increased. **Efficient and green transportation systems** will connect communities, reduce environmental impacts, and contribute to the success of the European Green Deal.

3. Bridging urban and rural divides: Inclusive policies for all territories

Local and regional governments understand the critical importance of **inclusive policies** in bridging gaps between urban and rural areas. We must ensure that no community is left behind in the pursuit of a greener and more connected Europe.

Urban and rural mobility systems are **interdependent**: rural residents need cities as activity centres, and cities rely on visitors, commuters, and goods from their hinterland. Urban residents need rural space and nature for tranquillity and recreation. A lack of mutual consideration and understanding will hamper economic, social, and environmental sustainability and progress on both sides.

4. Standing firm with the Green Deal: Now is the time for implementation

POLIS has been actively helping shape the European Green Deal's mobility actions by introducing the **views and capacities** of local and regional governments to the EU policy sphere while also raising awareness among cities and regions of Europe's ambitions and their role in bringing about change.

We stand firm with our commitment to making the Green Deal a success. We lead by example, capitalising on our networks for peer support and fast adoption of best practices. Now that the Green Deal policies have been defined and their implementation has become the next frontier, **tailored financial and technical support mechanisms** must be put in place.

5. A commitment to the Just Transition

POLIS has established a Just Transition Agenda for Urban Mobility that supports local leaders as they reconcile the environmental, economic, and social dimensions of the mobility transformation. This Agenda can be of inspiration at the EU level. We emphasise **affordability, safety, and inclusivity** in our sustainable modes of transport, ensuring a fair transition for all citizens.

This requires a **new European approach** to tackling transition pathways, with a focus on 'phasing in' and 'reconversion' of local and regional economies. This approach can be achieved by an agile Just Transition Fund and an appropriate Social Climate Fund that respond to the needs of local and regional authorities and the mobility solutions required.

6. Focus on industrial policy... but not without local and regional public sector involvement!

POLIS understands and welcomes the renewed interest in an Industrial Policy for Europe. We emphasise that a Green Deal **Industrial Plan** will require co-creation and coordination with the local and regional public sector. For many industrial products and services, local and regional authorities can make a real difference through their own procurement approach. There are plenty of opportunities in automotive, infrastructure, and energy applications for transport.

We are committed to developing agile regulatory frameworks that enhance policy-responsive innovation, establish substantial and innovative public procurement mechanisms, and enable private sector innovation. A European **urban mobility funding facility** with a one-stop shop access for investment is needed. Clean buses, active-travel infrastructure, and EV charging infrastructure are priority investment areas.

7. Protect Europeans who walk and cycle: Deliver on the EU's commitments and strive for zero deaths

To be sustainable, mobility must be safe. We need Europeans to walk and cycle much more, and we cannot achieve this if we do not improve the safety of the EU's roads and streets. A growing number of EU cities have adopted (and some have already achieved) the goal of **zero deaths** in their road networks, proving that we must prioritise action over underlying structural factors (rules, roads, and vehicles), and stop blaming victims. Europe's Road Safety Policy Framework should be updated, taking speed reduction schemes into account, and should fund local action and capacity building.

The European Cycling Declaration is an important step in the right direction. Now, the EU must deliver on its political commitments, and the European Commission should prepare an implementation plan detailing how it will more **systematically integrate cycling** policies into other relevant EU policies. Such an implementation plan should build on the experience of cities in promoting and advancing cycling and be developed in collaboration with national and regional authorities.

8. Clean our air and fleets, green our streets

Understanding the profound negative effects of traffic-generated **air pollution** on the health of our citizens, we urge the EU institutional stakeholders not to fall short on the policies and regulatory and financial instruments we need to make local mobility cleaner, healthier, and greener.

The EU must establish the instruments necessary to phase-out **internal combustion engines** by 2035 and encourage vehicle owners and operators to transition to electric or less fuel-dependent options. The World Health Organisation's air quality standards must form the basis for EU policies in this field. The EU should install mechanisms to properly internalise external costs of transport and should enable local and regional authorities to regulate vehicle access to their territories.

9. Trans-European Transport Network: Urban nodes are a driver for competitiveness

Europeans have the right to barrier-free, safe, and sustainable **movement of people and goods** across the Union. Acknowledging the need to think globally and act locally, we call upon the EU to continue its efforts to fully include the urban level in making the Trans-European Transport Network (TEN-T) a driver for the improvement of European mobility.

The importance of **urban nodes** has become clear. Making the most of their role requires sufficient funding and technical support, but also the necessary governance frameworks to fully build on local and regional initiatives, as well as structures to complete and improve the interface between trans-European and local mobility systems.

10. People make it happen: Skilled workforce, capable cities and regions

The urban mobility transition that cities and regions have put in motion requires **new skills** and high numbers of informed and trained staff. The war on talent rages in the public and private sector. The EU has the instruments to make a difference and bring about change: ERASMUS+, Horizon Europe, Cohesion Funds, and European Social Funds. There are great examples of how people working in 'old' industries find a future in new mobility industries. Local and regional authorities are close to people, companies, schools, and universities: they can act as a crucial agent of change.

Your actions matter, your contributions count – we urge the incoming Members of the European Parliament to provide the EU's local and regional leaders with the right tools and support to implement necessary changes and help achieve the goals of the European Green Deal.

About POLIS

POLIS is a registered international non-profit association under Belgian law with its secretariat based in Brussels.

POLIS is the leading network of European cities and regions advancing transport innovation and sustainable mobility. We cooperate to develop sustainable urban mobility solutions for the city of today and tomorrow. POLIS draws its expertise from a network of decision-makers, researchers, managers, and practitioners, working at the local and regional level across the European Union and beyond.

Building on the results of EU-funded projects and the input of thematic Working Groups that address key transport challenges, we link innovation and public policy guidance on urban and regional mobility with European policy development.

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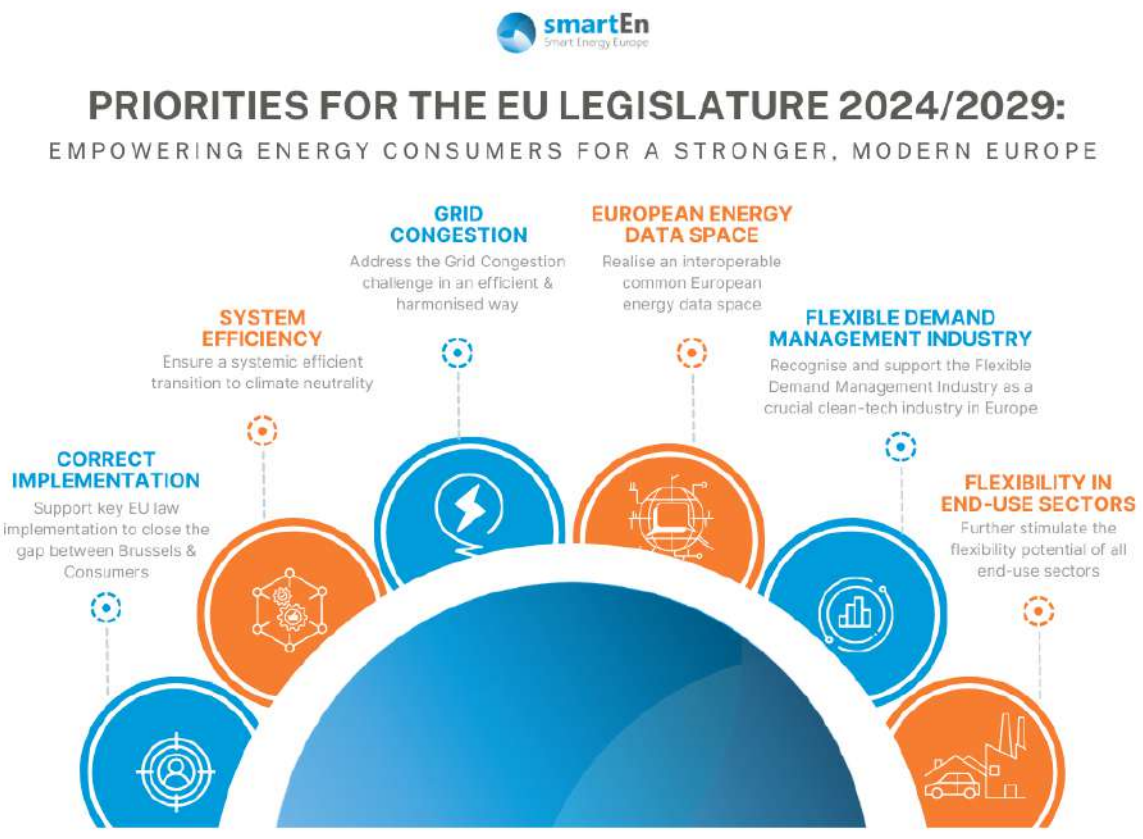
Priorities for the EU legislature 2024/2029: Empowering energy consumers for a stronger, modern Europe



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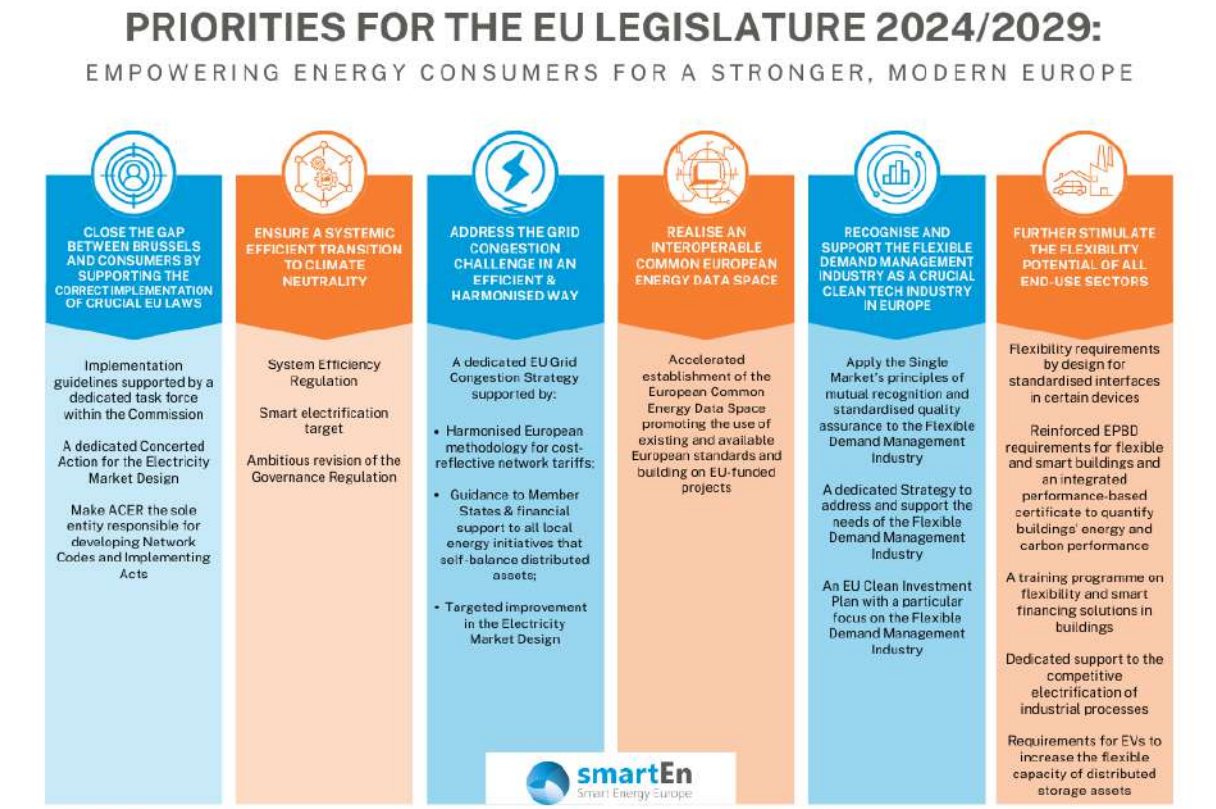
March 2024

Over the past two legislatures, EU policymakers were able to shape one of the best regulatory framework for demand-side flexibility in the world, opening opportunities for all energy consumers to be empowered and contribute to a clean, secure and efficient energy system.

Yet, many restrictions still hinder the activation of flexible demand across Europe. In many Member States a proper legal framework to facilitate and enable business models for consumers' flexibility is still missing, as confirmed in a recent report by ACER[1].

As price spikes and negative prices are increasingly frequent, sending clear signals on when and where there is a need to shift or cut energy demand or consume locally produced renewable energy is an urgent priority. This will benefit both the cost-effective systemic transition to climate neutrality and the reduction of all consumers' energy bills, from households to large industries.

To contribute to an impactful legislature 2024/2029 that would strengthen the EU competitiveness, security and sustainability with efficient and flexible consumers as the driving force, smartEn has identified the following 6 top priorities:



[1] www.acer.europa.eu/sites/default/files/documents/Publications/ACER_MMR_2023_Barriers_to_demand_response.pdf

1. CLOSE THE GAP BETWEEN BRUSSELS AND CONSUMERS BY SUPPORTING THE CORRECT IMPLEMENTATION OF CRUCIAL EU LAWS

Relevant provisions included in the 2019 Electricity Market Design and its more recent update, the revisions of the Energy Performance of Buildings Directive, the Energy Efficiency and Renewables Directives and the Alternative Fuels Infrastructure Regulation can help tackle the immediate challenges facing Europe's energy system marked by highly fluctuating energy prices and grid congestions. These EU laws must be implemented in all Member States to unleash the full demand-side flexibility potential in 2030[2].

smartEn calls for:

- the European Commission to prioritise the implementation of all relevant EU rules for demand-side flexibility, engage in regular bilateral discussions with all EU27 capitals and **develop Implementation Guidelines** to support Member States for a correct implementation , highlighting interactions between different EU laws. A dedicated task force with officials from different Directorates and Units within the European Commission should be set up to support this effort;
- the establishment of a **dedicated Concerted Action for the Electricity Market Design**, building on the experience of the existing Concerted Actions[3] to encourage dialogue between Member States on implementation.
- the accelerated and impartial **development of future Network Codes and Implementing Acts with ACER** as the entity responsible for both the drafting and implementation, following transparent and regular consultations with all relevant stakeholders. To support harmonised implementation and interoperability, ACER should consider the use of European standards and open API.

2. ENSURE A SYSTEMIC EFFICIENT TRANSITION TO CLIMATE NEUTRALITY

Energy efficient and flexible consumers hold the key for a cost-effective transition to climate neutrality.
If consumers are not enabled to play an active role by reducing their consumption, shifting it when necessary, storing and generating renewable energy on-site, the clean energy transition will require many more investments than the estimated 1.3 trillion Euro/year to support the EU decarbonisation pathway.
Grid congestion costs, expensive curtailments of renewables and unnecessary investments in peak generation capacity will increase the total costs of the clean energy transition that will be ultimately borne by consumers. The EU political system cannot allow it. Resources and funds must be wisely allocated.

smartEn calls for:

- a **System Efficiency Regulation** to define key features of an efficient, increasingly electrified, consumer-centric energy system. It should set a European harmonised methodology to track progress in a quantifiable manner to achieve the 2040 target cost-effectively;
- the Regulation should be supported by a **smart electrification target** that would cover all end-use sectors. While we know that the electrification rate must reach between 58% and 71% by 2050, for the decarbonisation pathway to be efficient, electrification must be smart and consumer-centric. Electrification in buildings, vehicles, and industries should be coupled with flexible adjustments of efficient consumption in a time-dependent way, to fully deliver on its potential and mitigate the costs for all;
- an **ambitious revision of the Governance Regulation** to require a "national collaborative governance" to avoid a silo approach between Ministries and Divisions in each Member States, and foster national cooperative reflections among policymakers and stakeholders to improve the efficiency of the national energy systems, to be reported in solid National Energy and Climate Plans.

[2] In September 2022, smartEn published a major study carried out with the independent consultants from DNV. The report quantifies the benefits of demand-side flexibility (DSF) in the EU in 2030 https://smarten.eu/wp-content/uploads/2022/09/SmartEN-DSF-benefits-2030-Report_DIGITAL.pdf

[3] On the Energy Performance of Buildings Directive, the Energy Efficiency and Renewable Directives

3. ADDRESS THE GRID CONGESTION CHALLENGE IN AN EFFICIENT AND HARMONISED WAY

The grid congestion challenge will soon become an urgent issue across Europe, not limited to The Netherlands, if EU 2030 renewables targets are met and the electrification rate is rapidly increasing.
Several solutions to tackle grid congestions currently contemplated are inefficient, expensive and would ultimately increase costs to be borne by consumers – a scenario which is politically unacceptable.

The smart operation of networks thanks to the activation of non-wire alternatives is an efficient approach to tackle grid congestions. In fact, experience shows that new cables are long to deploy, taking typically between 5 to 10 years. And while we need to advance these investments in wires, we must use in the best way the existing network and the connected consumers, if we want to achieve cost-effectively our 2030 European Green Deal (EGD) objectives. The next EU legislature should help deliver, not delay the EGD.

smartEn calls for:
A dedicated **EU Grid Congestion Strategy** to foster harmonised approaches to tackle grid congestion issues across the EU by unleashing the contribution of connected, flexible consumers, building on existing EU requirements for the efficient operational use of networks.
This Strategy should be supported by:

- a **harmonised European methodology for cost-reflective network tariffs**;
- a **dedicated guidance to Member States and financial support to all local energy initiatives that self-balance distributed assets part of local schemes**. Citizens Energy Communities, Renewable Energy Communities and Energy Sharing Schemes should not increase local congestions, but help solve them. This is possible if all these local energy initiatives self-balance the use of behind the meter loads, distributed generation and storage assets participating in these schemes;
- a **targeted improvement in the Electricity Market Design** to ensure coordination among the different electricity markets and services to system operators to allow value stacking for optimal use of flexibility from decentralised energy resources and avoid lock-in of flexibility solutions only for system services.

4. REALISE AN INTEROPERABLE COMMON EUROPEAN ENERGY DATA SPACE

Demand-side flexibility is inherently data-driven. Consumers must receive signals to adjust their consumption and generation patterns.
There is currently no common EU energy data space to facilitate energy data sharing across the energy sector, in a harmonised way across Europe. At the moment, confusion is dominating. The implications of the Data Act to the Flexible Demand Management Industry and the interactions with sector specific legislation remain unclear and the draft Implementing Regulation on data interoperability for Demand Response is still in development.

smartEn calls for:

- **the accelerated establishment of the European Common Energy Data Space**, with interoperability at its core, covering roles and responsibilities from all concerned parties, data governance rules and compensation as well as all the necessary data flows to activate flexible demand providers based on their consent: from behind-the-meter assets to flexibility service providers, system operators and electricity markets. The European Common Data Space should **promote the use of existing and available European standards** and **build on EU-funded projects** that are advancing business innovation for a pan-European energy data infrastructure.

5. RECOGNISE AND SUPPORT THE FLEXIBLE DEMAND MANAGEMENT INDUSTRY AS A CRUCIAL CLEAN TECH INDUSTRY IN EUROPE

As a strategic sector for a stronger Europe, the Flexible Demand Management Industry should be specifically supported.
There is a need to increase market offers, ensure the development of viable business models for demand-side flexibility and allow all consumers – from households to large companies - to be remunerated for increasing the efficiency of the overall energy system, directly or through the support of aggregators.

smartEn calls for:

- the application of the **Single Market's principles of mutual recognition and standardised quality assurance to the Flexible Demand Management Industry**, as already applied in other sectors (e.g. food and pharmaceutical industry). These principles should be applied to *both flexibility services and flexible assets* to boost their economic attractiveness and ensure a harmonised European market for the activation of flexible demand, without hindering innovation in the sector;
- a dedicated **Strategy to address and support the needs of the Flexible Demand Management Industry**, as part of the Industrial Decarbonisation Deal, to recognise it as a strategic clean tech industry capable of providing a large variety of solutions to address the short and long-term challenges of the clean energy transition such as grid congestions and price volatility;
- an **EU Clean Investment Plan with a particular focus on the Flexible Demand Management Industry,** geared towards clean tech manufacturing and data-driven services developed in Europe, supported by the next EU Multi-Annual Financial Framework and financing opportunities from the European Investment Bank.

6. FURTHER STIMULATE THE FLEXIBILITY POTENTIAL OF ALL END-USE SECTORS

The Fit for 55 package introduced some measures to unleash the flexibility potential of some end-use sectors, notably for electric vehicles with clear smart charging requirements. To activate the flexibility potential of buildings and industry the current EU rules must be complemented.

smartEn calls for:

- the definition of **flexibility requirements by design for standardised interfaces in certain devices** to ensure the market availability of flex-ready devices;
- **a strengthening of EPBD requirements for flexible and smart buildings** and an **integrated performance-based certificate to quantify the actual energy and carbon performance of a building**, to merge and improve existing tools and provide valuable information for occupants, market players and system operators;
- a targeted **training programme for building managers, social housing agencies and other advisory services as one-stop shops to ensure they are fully aware of available flexibility solutions and smart financing options**. Households might rely on the advice of intermediaries and if these third parties are not aware about the flexibility options for buildings, the potential will remain untapped;
- a **dedicated support for the competitive electrification of industrial processes**, by offering incentives for energy-intensive industries to **invest in and adopt flexible solutions**, eventually through a specific Energy Performance of Industry Directive if the carbon price does not spur industrial flexibility;
- **clear regulatory requirements for bidirectional charging for electric vehicles**, the **activation of flexibility from heavy-duty vehicles, public and private EV fleets**, and the **removal of double taxation of stored electricity** through a serious revision of the Energy Taxation Directive. These measures will increase the available flexible capacity of distributed storage assets.

About smartEn - Smart Energy Europe

smartEn is the European business association integrating the consumer-driven solutions of the clean energy transition. We create opportunities for every company, building and car to support an increasingly renewable energy system. Our membership consists of the following companies:

The positions expressed in this document represent the views of smartEn as an association, but not necessarily the opinion of each specific smartEn member.
For further information about smartEn, please visit www.smarten.eu

Solar for Europe Manifesto

The ultimate action plan for the next five years

SolarPower Europe

solarpowereurope.org

Executive summary

Dear EU Policymakers,

- → **Solar power is the energy of the future.** Solar PV is booming and will soon be the largest source of electricity in the European Union. In 2022 the EU installed more than 40 GW of solar power - equivalent to the needs of 12 million homes, making solar the fastest growing renewable energy source in the EU also in the next years.
- → **With the solar boom come benefits for all.** From energy security to industrial competitiveness and lower household bills to nature protection – the green and prosperous future of Europe revolves around solar.
- → **Solar is your tool to energise homes** in your constituency and empower the businesses of your electorate. To support your campaign, we've set out 10 key actions to guide your workplan for the next five years.

Charged up by this executive summary?
Read our full paper here.

1.
Solar for the climate

In 2022, solar generated 203 TWh of electricity across the EU, saving 45 MtCO2eq of emissions, and 300 MtCO2eq in total in the last ten years. By 2030, solar could reduce Europe's emissions by180 Mt-CO2eq per year,[1] the equivalent of the current emissions of the Netherlands.[2]

2.
Solar for competitiveness

The world's clean technology value chains will be worth over €600 billion by 2030.[3]

3.
Solar for the people

A solar PV system could save households up to €1250 annually, and up to €1800 with a heat pump,[4] on an average household electricity bill. The European solar sector could employ 1 million workers in 2025.

4.
Solar for our energy security:

Solar saved Europe almost €9 billion in fossil fuel imports in summer 2022.[5] Under EU targets, by 2030, 55 million solar PV panels are set to be manufactured in Europe each year, creating enough capacity to power 9 million more homes annually.[6]

5.
Solar for Nature

Nature-positive solar power plants are boosting biodiversity by up to 250%.[7] In the face of growing drought, solar supports farmers in reducing evaporation and water needs by up to 30%.[8] Floating solar protects European reservoirs – it can reduce evaporation by 42%. [9]

1 Source: SolarPower Europe, based on EMO Medium Scenario
2 Source: EUROSTAT, env_air_gge, 2021
3 Source: IEA (2023), Energy Technology Perspectives 2023
4 Resp. from 1100€ in Germany to 1250€ in Italy, and from 1650€ in Spain to 1800 € in Italy. SolarPower Europe, Solar Powers Heat Study, 2023
5 Source: based on EMBER analysis, 2022
6 Source: SolarPower Europe
7 Source: SolarPower Europe, Solar, Biodiversity, Land Use: Best Practice Guidelines, 2022
8 Source: SolarPower Europe, AgriPV Best Practices Gudelines vol.2, 2023
9 Source: Farrar et al, Floating solar PV to reduce water evaporation in water stressed regions and powering water pumping: 2022

10 Actions to Empower Solar

Accelerate solar PV deployment

1. Deliver 2030 targets, in particular by aligning EU financial instruments with climate and energy goals, including a new Green Investment Plan as part of the next EU budget post-2027.
2. Set 2040 targets as soon as possible to give visibility and confidence to investors.

Improve solar PV integration in highly electrified energy systems

3. Propose a new EU Electrification Action Plan, including legislative action on grids, hybrid renewables, prosumers and cybersecurity.
4. Propose a new EU Skills for the Energy Transition Strategy

Promote solar solutions in harmony with the environment

5. Land an urban renewables strategy with cities and communities.
6. Land a rural renewables strategy for ground-mounted and agri-PV with landowners and agriculture constituencies.
7. Embark on an EU-wide renewables communications campaign to ensure public support for the energy transition.

Build up diverse and sustainable solar PV supply chains

8. Substantially increase support for reshoring solar supply chains to Europe.
9. Embark on multiple international partnerships on solar supply chains and raw materials, leveraging the Global Gateway Initiative.

Secure EU's leadership on solar PV innovation by expanding R&I funding

10. Double R&I funding for innovation in PV, via programmes including Horizon Europe and the European Innovation Council.

Introduction

The European Green Deal has set Europe on a path to sustainable growth and has proven to be robust and convincing in challenging times. The continuing Russian aggression in Ukraine, the resulting fossil fuel crisis, as well as the increasingly dire impacts from climate change in Europe, have confirmed the energy transition as essential to the EU's competitiveness, security, and social welfare objectives.

The fossil fuel crisis catapulted Europe into a new paradigm. The well-known energy 'trilemma' between sustainability, affordability, and security of supply is now pointing unambiguously in the same direction: accelerating solar PV in highly electrified energy systems – replacing fossil fuels as swiftly as possible.

Solar PV is also the prime technology to connect and engage European citizens in the energy transition, especially via rooftop PV. Transforming European citizens from energy consumer to energy prosumers strengthens public engagement in the transition and deepens Europe's democratic values.

A rapid energy transition, powered by solar PV, is therefore crucial for a more prosperous, secure, and democratic European Union.

The contribution from solar PV to Europe's prosperity cannot be overestimated. With the right policy action, solar PV can reach, even outperform, REPowerEU ambitions for 2025 and 2030, creating over a million new jobs for Europeans in the process.

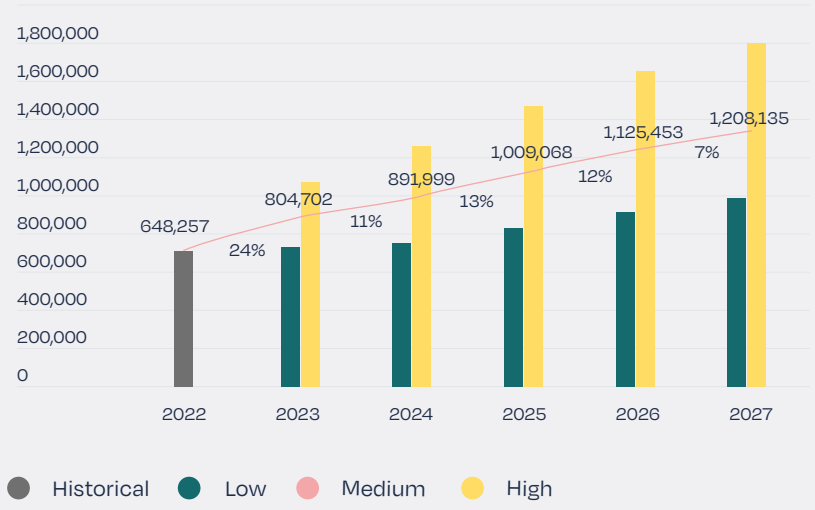
The last years have seen impressive growth in solar PV deployment across Europe with more than 40 GW newly installed solar PV in 2022 (a 100% increase compared to 2020). Jobs and employment in the solar sector have been rising accordingly. SolarPower Europe's latest EU Solar Jobs Report 2023 reveals that the solar workforce grew by 39% in one year to 648,000 by the end of 2022. Most of this employment is linked to the installation phase of solar PV, leading to a faster deployment pace.

Strong growth is set to continue in the next years, with around 54 GW of new installations expected in 2023 and an annual market of almost 100 GW by 2027 in the Medium Scenario. This means solar PV could reach, even outperform, the REPowerEU interim goal of 400 GWdc (320 GWac) by 2025.

This exciting trajectory is, however, entirely dependent on the solving or easing of several bottlenecks and policy shortcomings. We, therefore, draw your attention to five priorities for the European Union energy agenda in the next five years

Figure 1: EU27 annual solar PV market scenarios 2023-2027

Figure 2: EU27 solar PV jobs scenarios 2022-2026



"Governments in Belgium, Europe and everywhere, should provide more incentives to invest in solar panels"

Stefanie,
Beveren, Belgaium

1. Accelerate solar pv deployment

What solar PV investors need, first and foremost, is a stable regulatory environment with policymakers' full focus on delivering and implementing the 2030 policy packages on the ground. The short time available to 2030 means the European Commission should signal this as a priority in its institutional set-up. We, therefore, call on EU leaders to create a new function of a High Representative for the Energy Transition responsible for driving implementation dialogues with Member States.

We call on EU leaders to:

- → **Align all EU funds and financial instruments with the delivery of the 2030 national climate and energy plans and targets, in particular Cohesion Policy, the European Social Fund (ESF+), the Recovery and Resilience Facility, the Just Transition Fund and the Social Climate Fund.**
- → **Make use of the upcoming debate on the next Multi-year Financial Framework (2027-2034) to reform funding objectives and governance where needed and establish new EU Green Investment Plan to at least sustain current levels of on the energy transition as the Next Generation EU and Resilience and Recovery funds dry up;**
- → **Adopt ambitious 2040 targets early-on to provide a stable and investable longer-term pathway. The 2040 targets should comprise of an at least 90% economy-wide GHG reduction target, and at least 80% RES target as part of virtually fossil-free energy system supported by 3-4 TWdc of solar PV capacity in 2040.**

2. Improve solar pv integration in highly electrified systems

Integrating renewables in energy systems means adapting energy systems to renewables. Today, we risk wasting solar generation energy due to lack of electricity grids and system flexibility, leading to solar curtailment and negative prices. The latter, in turn, weakens the investment case for new solar PV assets. The situation requires a step change in promoting build-out of electricity grids and flexibility resources, incentivising hybridisation of renewables projects (solar + wind + batteries), as well as accelerating smart electrification of end-uses in particular in-home heating (heat pumps), road transport (electric vehicles) and lower temperature industrial processes. A higher share of self-consumed electricity driven by sector coupling

will boost prosumers and energy security in the EU. Most of these trends require action on the mid and low voltage grid level.

We call on EU leaders to:

→ **Upgrade the European Commission Energy System Integration strategy into a legislative EU Electrification Action Plan, including:**

- An early reform of the EU Infrastructure Regulations, aligning priority energy infrastructure with the EU's energy and climate objectives as well as with the reality of accelerating solar uptake in a decentralised and electrified energy system and the opportunity of hybridisation of renewables projects (solar + wind + batteries). Concretely, the European Commission should (1) set up an independent, integrated infrastructure centre (3IC) bringing in transmission and distribution system perspectives, (2) require all TSOs and DSOs to provide transparency on their investment plans and available grid capacities, including mandatory reporting on a regular basis, and (3) require all TSOs and DSOs to publish grid development scenarios reflecting a 100% renewables grid by 2040, (4) require DSOs to invest in grid digitalisation including mandatory obligations for DSOs to take Advanced Grid Features and remote control into account for grid planning.
- Step up on cybersecurity. As the energy system electrifies, more attention is needed on the risk profile of remote-controllable assets on electricity grids. These assets include solar inverters, wind converters, grid infrastructure and centralised power plants. Ensuring the reliable and safe operation of electrical grids is critical for the EU economy, the security of Member States.

→ **Power up the workforce for solar PV and electrification with a dedicated EU Skills For The Energy Transition strategy. The strategy should increase the profile of solar installers and electricians as top priority skills and jobs in the EU Talent Pool and should be developed in close alignment with the EU's approach to migration from third countries. The strategy should be complemented with improved access to EU funding for companies launching solar academies, including training of students and transferring professionals and other innovative ways of skilling, re-skilling and up-skilling the solar workforce.**

"For society as a whole, it's important that we get as many solar panels installed as possible around Ireland and Europe so that we lessen our dependence on fossil fuels."

John Murphy,
A farmer from Dripsey, Co. Cork, Ireland

"Solar energy, or renewable energy in general, is no longer a story of the future, but a transition that should have happened yesterday, if not today."

Birgit Coninx,
Secretary-General at ASTER, Belgium

3. Promote solar solutions in harmony with the environment

A sustainable use of available land is a key and growing challenge for Europe, both for the energy transition as well as for food security, affordable housing and nature restoration purposes. Solar PV is uniquely placed to provide solutions and build bridges between all these goals and constituencies, and can play a key role in nature restoration and climate adaptation strategies.

We call on EU leaders to:

- → **Land a new urban renewables strategy, fully exploring and promoting the potential of rooftop, carpark, sealed urban areas and building-integrated solar with cities, citizens and local authorities with a focus spreading best practices on energy sharing, energy communities, sector coupling, prosumers and other innovative business models;**
- → **Land a new rural renewables strategy, including guidance on environmental integration of solar PV, exploring and promoting the potential of agri-, floating- and biodiversity-solar with farming and environmental constituencies, already sealed rural areas, as well as guidance on implementing acceleration areas for utility-scale solar in Member States;**
- → **Launch an EU-wide communications campaign, together with Member States and industry stakeholders, on solar PV and renewables in general in order to ensure public engagement and support for the energy transition among European citizens.**

4. Build up a diverse and sustainable solar pv supply chain

Solar PV supply chains are currently highly concentrated in China (95% at the start of the supply chain and around 70-80% for other segments in 2021[10]). The EU should take next steps in its Green Deal Industry Plan, in particular in stepping up on building resilient and sustainable solar supply chains. This is essential for Europe's position in the changing map of energy geo-politics.

We call on EU leaders to:

→ **Substantially increase support for reshoring solar supply chains to Europe and strengthen the already existing EU production capacities, reaching at least the 30GW by 2030 ambition across the supply chain, including inverters, and with the view of scaling up further beyond that. The strategy should be based on (1) improved and extended State Aid rules for solar manufacturing under the TCTF (Temporary Crisis and Transition Framework), (2) a new Sovereignty Fund, as part of the next MFF discussions, that includes a dedicated instrument for scaling up solar PV manufacturing capacity in Europe, and (3) a steady and managed uptake of a limited but growing segment of resilience auctions and procurement for domestically produced solar systems across Member States;**

Double down on international diversification and supply chain de-risking by expanding engagement with EU external partners in strategic solar supply chain and raw material partnerships; including by leveraging the Global Gateway Initiative for EU's open strategic autonomy strategy and driving international standardisation effort.

5. Secure EU's leadership on solar pv innovation and market uptake

Innovation in PV is critical to the success of the energy transition, and the EU can rely on a robust expertise and a strong capacity to innovate in that sector. Global competition on R&I is, however, challenging Europe's leadership position, especially given the absence of a robust solar PV manufacturing industrial basis. The EU invested an estimated EUR 500 million towards R&I PV projects in the 2014-2020 period, with an additional estimated EUR 250 million/year from national R&I support to PV. Meanwhile leading private PV manufacturing companies (China) report own R&I budgets that can range from EUR 300 to 700 million per company per year (equivalent to total public support provided to PV in Europe, or to the estimated EUR 750 million total private R&I budget for PV in the EU).

We call on EU leaders to expand R&I funding for innovation in PV, via programmes including Horizon Europe and the European Innovation Council. R&I investments – at all Technology Readiness Levels – need to grow with the industry and with deployment rate. EU funding priorities should also be defined in close cooperation with the PV R&I community and industry.

Do you have any questions about this report?

Jonathan Bonadio
Senior Policy Advisor

j.bonadio@solarpowereurope.org

10 See IEA's Special report on Solar PV Global Supply Chain

January 2024

EU Elections: A Guide to Transport 2024 - 2029

From sketching a blueprint for transport to implementing a greenprint for the EU's economy

As Europe approaches the 2024 EU elections for the 720 member European Parliament, the EU faces a stark choice. The European Green Deal (EGD) was the regulatory kick off for Europe's transition to a green economy. But the job is far from done. Putting on paper and into law a long-term vision is not the same as delivering it. Looking ahead at the next 5 years, from 2024-2029, EU lawmakers need to help make this transition a reality for people and businesses alike. Some would like to slow down or reverse the green deal, but it is EU citizens, not corporate lobbies, who will have the last word.

Transport is the only sector where emissions are still growing. By 2030 transport will account for 44% of all EU carbon pollution. Cleaning it up very rapidly will be complex. But as the electric vehicle (EV) revolution has proven, it is fertile ground for innovative greentech solutions and technologies, creating industries and creating good jobs.

To see this journey continued, future policy-making must build on European industrial leadership, using the synergies between industrial strategy and urgency to comply with climate targets, as other regions in the world have started to do. The rapid roll-out of Europe's EV fleet, the world's first mandated provision of clean fuels for the aviation and shipping sectors, and the rapid scaling up of renewable energy powering transport and heating homes, will be markers of success.

The next 5 years have to build on the foundation of the EGD, to move beyond the fossil age, and address tomorrow's challenges: to rebuild large parts of our economy and make them fit for a climate constrained world. Geopolitical changes put strains on supply chains, challenging Europe to become more independent in its energy production, as well as securing the supply of critical materials for the transition within and outside of Europe, and using the resources we have more wisely. International competition, especially in the automotive sector, challenges European industries on a rapid scale up of green and cleantech technologies that can get us to net-zero economies.

We are entering the decisive decade. The next European Parliament must decide if it is full speed ahead for the Green Deal, or full stop. This is the critical period to not only cement Europe's leadership in addressing the climate crisis, but to transform the Green Deal into an industrial strategy that ensures Europe will lead the cleantech revolution and secure good, well paid jobs in the green economy of the future.

Europe has a race to win and it's the most urgent one for us and future generations; the climate crises cannot be paused. The next five years are our racing car, so we better make sure it drives full speed. Smooth running of the engine via a just implementation of the EGD, ensuring the seat belt is put on by filling in current regulatory gaps, tightening screws to get to the right speed and start the race by putting things into action across Europe.

Will Europe go full speed or full stop?

T&E's Guide on Transport looks back at the last 5 years as well as ahead at the next 5 and what needs to be done. It identifies the 10 key transport areas the EU needs to prioritize, and provides recommendations that, within the next five years, will be critical to Europe winning the race for the green economy and green jobs of the future.

T&E's top 10 new ideas for transport for the next EU policy cycle can be found here.

Contact: Nadine Mingers, EU Election Coordinator (nadine.mingers@transportenvironment.org)

2.1 Only continued ambition gets us there

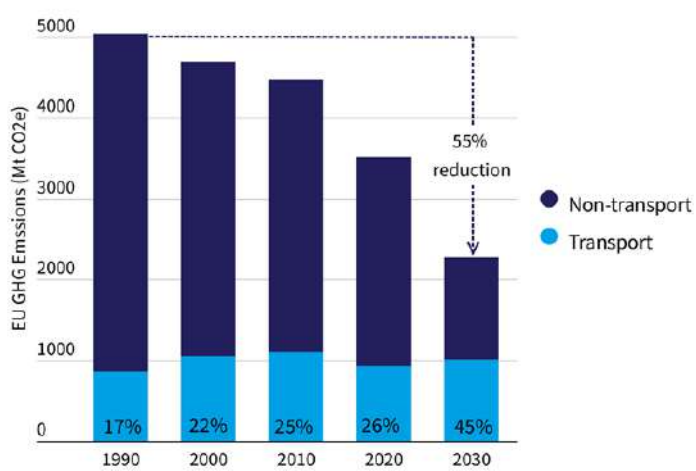
Climate

Transport is the climate delinquent of the EU economy. It is the only sector that grew its emissions since 1990. The European Green Deal has laid the groundwork for a trend break, with for example the agreement to end diesel car sales in 2035. Still, as other sectors decarbonise faster, transport will make up 45% of total EU emissions by 2030. That makes additional transport policies essential to the EU's ability to achieve net-zero emissions by 2050.

Facts & Figures

The EU has committed to reduce its whole-economy emissions by 55% by 2030 (compared to 1990). This will be achieved through increased ambition under the two main pillars of the EU's climate policy "architecture".

The EU's carbon market, or Emission Trading System (ETS), will for example from 2026 also start including shipping emissions. More effort is also expected of each member state, thanks to national target increases under the so-called Effort Sharing Regulation (ESR). Together, EU countries are now required to reduce emissions across their transport, buildings, small industries, agriculture and waste sectors by 40% by 2030 (compared to 2005). Because emissions will go down faster in other parts of the economy, transport is set to rise to nearly half of our emissions by 2030.



From 2027, drivers will pay a 13-14 cents per litre carbon price when they refuel, due the so-called ETS2 for transport and heating fuels. The Social Climate Fund (SCF) was created to ensure people in energy and transport poverty can adapt to this carbon price. Starting 1 year before payments are due, member states will receive a budget to enable their vulnerable citizens to switch to sustainable energy and mobility consumption, or to support them through financial compensation (lump sum climate dividend).

How can Europe deliver on climate neutrality?

- Create long term clarity and investment certainty for European companies and citizens by adopting a climate target of **at least -90% for 2040** (compared to 1990). Define separate goals for mitigation and carbon removals. Transport should contribute to this effort by reducing its emissions by at least 70% by 2040. This will entail a combination of new laws for technological change, as well as behavioral change policies.
- Set a **2035 intermediate climate target**, and start policy cycles of 5 years in order to ensure more frequent assessment and review of policies. Maintain accountability and shared responsibility by member states through economy-wide national climate targets.
- **Bolster the Social Climate Fund** budget with additional resources, so as to create a solid social pillar for a just transition as part of a new EU climate investment plan. Ensure member states invest in a just mobility transition well before the carbon price kicks-in, by setting up a lending facility under the European Investment Bank, allowing countries to borrow against their future ETS2 revenues.
- Adopt **additional measures** to ensure the EU delivers on its **existing 2030 target of -55%**. For example, a measure to ensure all large business fleets shift to electric by 2030 would deliver large additional savings without reopening the Fit for 55 package.

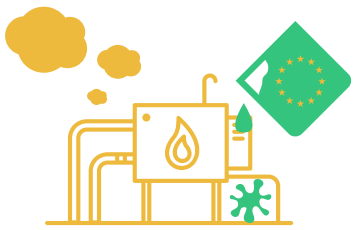
Contact: Sofie Defour, Freight and Climate Director (sofie.defour@transportenvironment.org)

2.2 Supported by a finance for people and industry

Finance

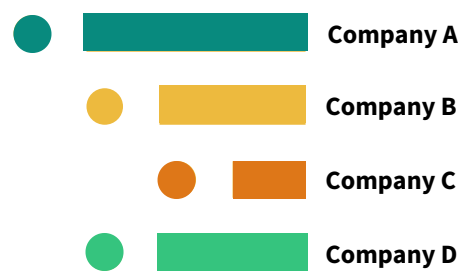
With the EGD as groundwork the EU has made wide and far-reaching regulatory efforts to decarbonise the economy underpinned by its climate targets and leading to a net zero-emission continent mid-century. A long-term financial framework is needed as a logical next step, addressing increasing competition in core cleantech sectors from China and the US as well as massive tax benefits challenge the business case for cleantech production ‘Made in Europe’. Investing into cleantech and sustainable industries such as battery value chains, renewable hydrogen, renewables, and grids in the next years with complementary sectoral policies allows Europe to accelerate its path to climate neutrality and boost its economy.

Facts & Figures



The European taxonomy creates for the first time a single binding definition of what is considered environmentally sustainable based on the latest available science. Despite its initial promises, it has largely become a greenwashing exercise. In 2022, it misleadingly classified fossil gas as ‘sustainable’, and in 2023 similarly labelled fossil-powered ships as 'best in class' on environmental grounds. It is now urgent to remedy these flaws, and then expand the taxonomy to define business activities that are harmful, those that contribute to the transition, and those that are socially sustainable.

The EU is currently discussing the scoring system for companies' performance on 'Environmental, Social and Governance' matters, short ESG ratings. The objective to guide investors to steer their money into future-fit and fair businesses is however still out of sight. Main reason being that high ESG scores today are no guarantee of true sustainability and are deeply opaque. This holds true especially for the transport sector where automotive giants, polluting truck makers and airlines obtain generous ratings, portraying themselves as green companies despite their problematic climate credentials.



For financial flows to be steered towards sustainable investments , new standards under the Corporate Sustainability Reporting Directive need to make it compulsory for companies to fully disclose information about their alignment with a 1.5°C climate pathway and international labor and human rights standards. The transparent sharing of information not just on the financial performance of companies, but also their social and environmental impacts, is often referred to as the principle of double materiality. Citizens and investors alike need a crystal clear picture - still missing to date - of the climate risks and impacts of companies before taking investment decisions.

How can Europe finance a sustainable and fair transport transition?

- A major **climate investment plan worth €1 trillion by 2030** within the Commission's first 100 days in office, creating a successor of the NextGeneration EU fund.
- The future **European green industrial strategy** should be backed by significant and focused investments aligned **with the objectives of the Paris Agreement** and supporting the battery value chain, renewable hydrogen for off-take in aviation and shipping, renewables and grids.
- The EU needs to put in place a stronger system of economic governance and environmental safeguards. A strong **EU regulatory framework for sustainable finance** will consolidate the shift of capital allocation towards green activities. This is instrumental for the green transition to happen.
- The **EU's Sustainable Finance Agenda** should be **revived**, delivering on sustainability disclosures for the financial sector and corporates (CSRD, Sustainable Finance Disclosure Regulation), regulating ESG ratings so that they better portray the impacts of transport investments, and steering investments away from carbon-heavy assets.

Contact: Xavier Sol, Sustainable Finance Director (xavier.sol@transportenvironment.org)

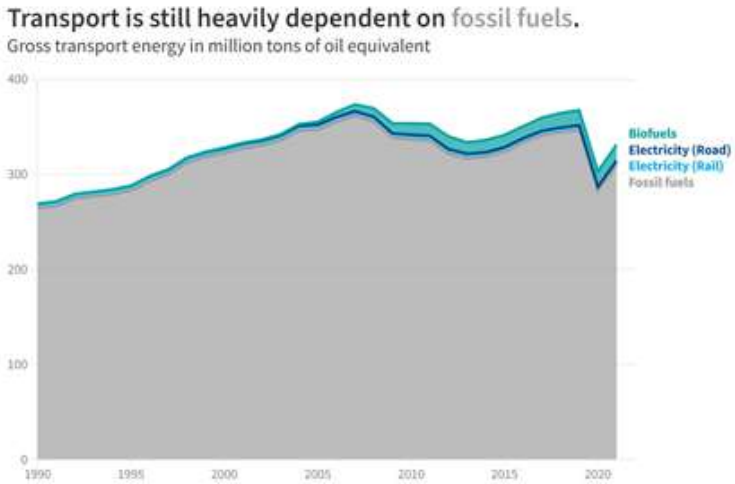
2.3 Powered by truly sustainable energy

Energy

For the transport sector to fully decarbonise and slash oil demand, significant amounts of renewables will be needed, especially renewable electricity for direct electrification of cars, trucks or ferries as well as for the production of hydrogen and e-fuels in ships and planes. Electricity grids need to be upgraded and reinforced, while hydrogen and e-fuel production ramped up with additional wind and solar. Europe's energy mix will need careful fine-tuning, using first the most energy-efficient form of powering transport - direct electrification - as the leading solution and renewable fuels like e-fuels to be used where electrification is not yet an option.

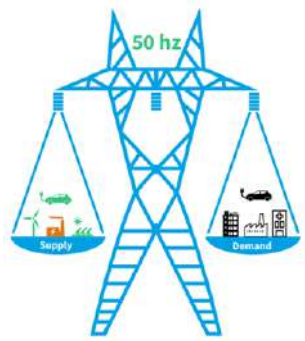
Facts & Figures

2023 has seen a massive regulatory push for replacing oil in cars and trucks by electricity via the CO2 standards, for using hydrogen and e-fuels in aviation and shipping (A&S) and for limiting the support to unsustainable biofuels. 93% of energy used to power road transport, aviation and shipping still came from fossil sources in 2021.2022 has been a good year for electricity with 41% of electricity consumed in the EU coming from renewables - but more is needed.



The third revision of the RED levels up the overall share of EU's renewables to 42,5% 2030. But the latest changes still promote false solutions such as palm and soybean oil, advertised as sustainable but increasing deforestation and putting pressure on food prices. Around 60% of rapeseed oil and around 50% of palm oil consumed in the EU are used for biodiesel, which leads to drastically increasing emissions Europe is transitioning to 'waste'-based biofuels such as Used Cooking Oil (UCO) but that comes with high risk of fraud and a heavy reliance on the 80% imported UCO for biofuels.

Renewable hydrogen,often seen as a silver bullet to decarbonise almost all sectors, needsa reality check and used only where more efficient and cheaper options are not possible. For transport, it means steering hydrogen and e-fuels to ships and planes. EU laws have created the world's first regulated and most important lead markets for the production of e-fuels in aviation and maritime, with measures to ensure the fuels deliver real climate benefits. If EU lawmakers can avoid the temptation to apply the hydrogen miracle to everything, they have a chance of decarbonising hard-to-abate sectors.



The total electricity demand in the EU is expected to at least double by 2050, additional demand from road transport could account for more than 12% in. Demand side flexibility options, such as bidirectional EVs, will play a major role in maximising the existing grid capacities and integrate an ever growing share of renewables, by storing energy when generation is high and releasing it when it is low. The EU has started to address these issues in its grid action plan, promising to address the shortening and harmonising of grid connection procedures to not slow down the energy transition.

How can Europe power up the transition?

- Create a **European Grid Act** to strengthen grids and make them more efficient and smarter. This means more flexibility and ability to control/reduce demand, as well as strengthening grids to enable faster build-up of renewables and electrification of buildings and transport.
- **Remove barriers for EVs to play their energy storage** role as 'batteries on wheels' by means of smart charging and Vehicle-to-Grid/Home/X connections.
- Target **policy and financial support for renewable hydrogen and e-fuels for sectors where direct electrification is not possible** - to ships and planes for transport. In parallel, reward the use of renewable electricity in transport through a dedicated support system.
- **End** the use of **biofuels produced from crops like palm oil or soy by 2030** and limit the use of problematic 'waste' based biofuels such as imported Used Cooking Oil, to incentivize only truly sustainable solutions.

Contact: Laura Buffet, Energy Director (laura.buffet@transportenvironment.org)

2.4 Cities serving as transport solution incubators

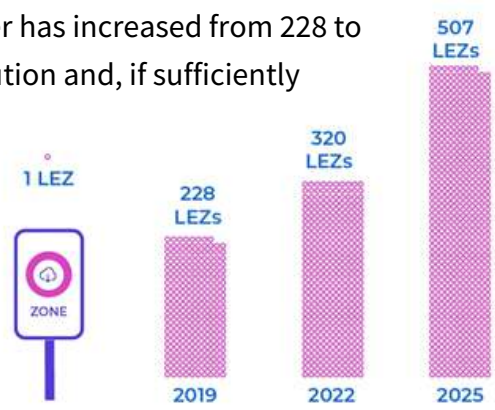
Cities

Cities are at the heart of the transition to zero-emission transport: Almost 3 in 4 Europeans live in urban areas and urban mobility is responsible for 23% of EU transport emissions. Motorised vehicles remain dominant in most cities, occupying public space, causing toxic air pollution, and increasing the risk of collisions. However, European cities also serve as incubators for transport solutions: High population density means most trips are short, making walking, cycling, public and shared transport more attractive. Many local leaders have embarked on the path to liveable, healthy and climate-friendly cities by, for example, adopting low- and zero-emission zones or joining the EU 'Mission for 100 Climate-Neutral Cities by 2030'.

Facts & Figures

Under the impetus of EU clean air laws, cities have stepped up efforts to tackle polluting transport, especially by introducing new and stricter low-emission zones. Since 2019, their total number has increased from 228 to 320. More zones are planned. These policies can significantly reduce toxic air pollution and, if sufficiently stringent, also curb motorised transport.

At the EU level, a new 'Urban Mobility Framework' was adopted in 2021. It signalled a paradigm shift, acknowledging the important role of cities and the need for EU support. For the first time, the strategy set a goal of 'zero-emission urban mobility'. It highlighted the need for better data collection as well as for better urban planning.



Source: Clean Cities, 2022

Source: European Commission, 2022

As part of a new 'Zero Pollution Action Plan', stricter air pollution limits were proposed and are currently being negotiated between Parliament and Council. The outcome will determine how clean the air in European cities will be after 2030.

Translating the 'Urban Mobility Framework' into legislation, the revised Trans-European Transport Networks (TEN-T) agreed in December 2023 will require 430 major cities to adopt 'Sustainable Urban Mobility Plans' by 2027 and to collect urgently needed data on urban transport.

The EU has also started to support frontrunner cities by setting up the EU 'Mission for 100 Climate-Neutral and Smart Cities by 2030'. The initiative requires participating cities to adopt 'Climate City Contracts' and to act as experimentation hubs. In return, the mission provides funding, expertise and opportunities to connect with like-minded cities.

How all Europeans can live and move in clean cities?

- **Enforce** the new rules for the **Trans-European Transport Networks**, which require all major cities to adopt Sustainable Urban Mobility Plans (SUMPs) by 2027. This will also accelerate the roll-out of low- and zero-emission zones.
- Earmark **new and additional EU funding** to deliver on the ambition of the **EU 'Mission for 100 climate-neutral and smart cities by 2030'.** This should include setting binding targets on zero-emission transport.
- Adopt **binding requirements for child-friendly urban mobility.** As part of the mid-term review of the EU Road Safety Policy Framework, measures such as 'school streets', lower speed limits and better walking and cycling infrastructure should be made a priority with regard to investment and enforcement.

Contact: Barbara Stoll, Senior Director, Clean Cities Campaign (barbara.stoll@transportenvironment.org)

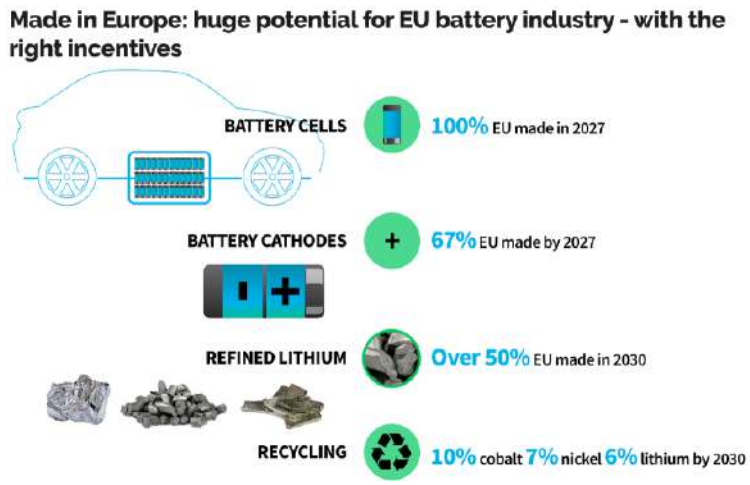
2.5 Racing to secure sustainable critical minerals

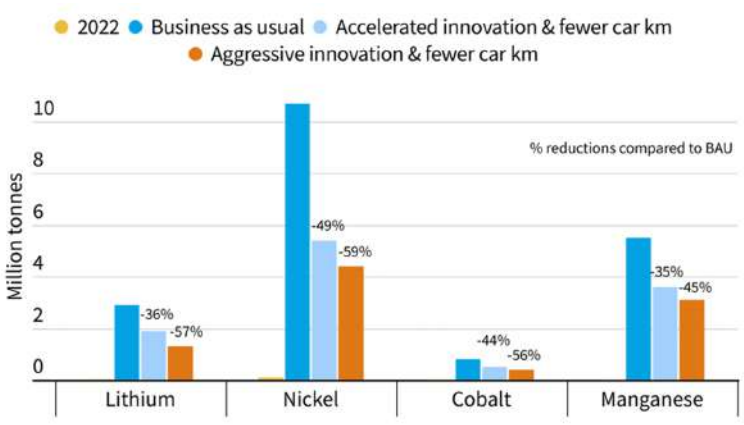
Raw materials & batteries

Europe's green transition, including the automotive shift to electrification, will require many critical minerals, the responsible supply of which is instrumental for Europe to address the climate emergency on time. Securing sustainable supply and a diversified market to avoid supply bottlenecks are challenges in the coming years. Delays and competition for batteries, steel or minerals can hamper decarbonisation, notably the EV value chain in Europe, while environmental scandals risk damaging consumer acceptance. EU policy and companies play a big part in doing things better, be it environmental stewardship in sourcing raw materials or commercialising green steel and aluminium to reduce vehicle GHG footprint.

Facts & Figures

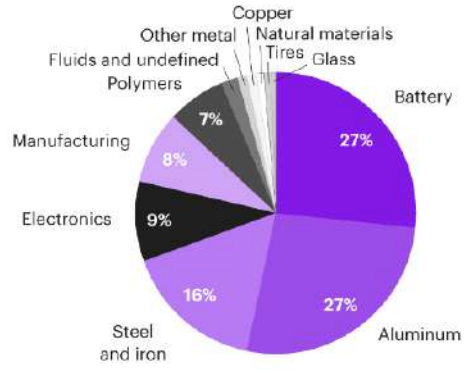
Key EU laws have been passed in the last few years to both improve sustainability and resilience of supply chains. The EU Battery Regulation is a first- ever global law to mandate circularity, lower carbon footprint and sustainable sourcing of batteries, whilst the EU Critical Raw Materials Act is designed as a response to Chinese and US policies and accelerates best-in-class extraction, refining, processing and recycling projects. Much potential to source minerals and produce batteries exists in Europe, including up to a tenth of battery materials, that can come from recycling this decade already.





As Europe is catching up in the race to secure critical minerals, it can leverage its strengths in innovation and product design. Demand for lithium, nickel, cobalt and manganese can be reduced significantly through policies such as compact cars and smaller batteries, resource-light battery chemistries (e.g. sodium-ion) and fewer private cars in favour of public, shared & active transport modes. Going for more compact EVs alone - that are also more affordable and key to the EV mass market in Europe - can reduce the demand for minerals by up to a quarter.

Europe has a unique opportunity to become a global green steel hub leveraging its premium automakers as a launch pad. Requiring carmakers to produce cars with green steel will increase the purchase cost by less than 1%. As steel and aluminium together make up the biggest part of a vehicle's production emissions, setting a solid threshold for low carbon steel and aluminium can kick off the market and its supply. Increased and better quality recycling is another lever to decarbonise cars' footprint effectively, while reducing a big chunk of heavy industry's own GHG emissions.



Source: Kearney, 2023

How to make key supply chains resilient and sustainable?

- Launch a **European Green Industry Fund** to support scaling of best in class battery and critical minerals projects, including recycling. This should build on the current Battery Fund announcement under the EU Innovation Fund.
- Scale **European recycling** capacity for battery materials, notably **lithium**, as part of the EU Critical Minerals agenda beyond 2030, as well as introducing **green aluminium and steel mandates** in automotive sectors of at least 10% by 2030.
- Review the EU Extractive Waste Directive to **update Europe's outdated provisions on mining waste** and bring it in line with global best practice of filtered tailings.

Contact: Julia Poliscanova, Senior Director, Vehicles & Emobility Supply Chains (julia.poliscanova@transportenvironment.org)

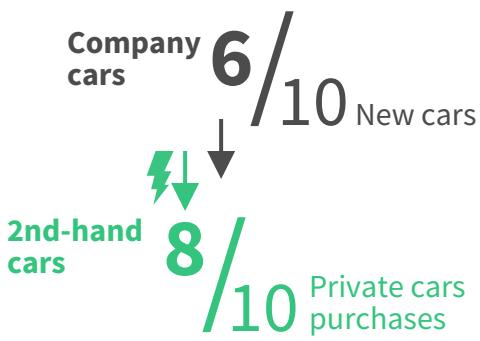
2.6.1 Clearing the air for the EV transition

Passenger road transport

In 2023 the EU made the historic decision that by 2035 all new cars will have to be emissions free. New EU law will ensure a worldclass EU fast charging network that grows in line with the number of electric cars on our roads. What's left to do? Ramping up production of affordable compact EV models in Europe, and cleaning up the production of those. The EU should finally take action on corporate fleets to accelerate electrification and promote social leasing to make EVs available to low income people. Now is the time to accelerate electric car uptake and build green leadership in the automotive industry.

Facts & Figures

The last few years have seen a rapid uptake of electric car sales in the EU: from less than 2% in 2019 to around 15% in 2023. The EU is considering creating a loophole which would allow expensive, scarce and polluting efuels in cars registered after 2035, whilst these fuels are urgently needed in hard-to-abate sectors such as shipping aviation. As the purchase price of EVs is still higher than their combustion counterparts, continuous efforts are needed to ramp up the production of affordable electric cars 'Made in Europe'. One way to do it is by expanding the second-hand market for electric vehicles as 80% of Europeans buy used cars.



With 6 out of 10 new cars sold in the EU being company cars, companies are currently lagging behind for electrification but can expand the used EV-market rapidly by electrifying their corporate fleets, which will flow into the private second hand market after their leasing period is over. Corporate giants have not just a bigger responsibility but also a stronger shoulder to carry the higher upfront costs, benefitting EU citizens via the used car market. Today 58% of new cars in the EU are corporate, accounting (due to their high mileage) for 74% of CO2 emissions from new cars.

A small electric car 'Made in Europe' for €25k is the clean equivalent to flagship models like the Volkswagen Beetle or Fiat Punto, yet currently European carmakers are slow to bring these to market. Whilst electrification is gaining ground, the trend towards polluting big SUVs is a risk to the climate and a barrier for clean and affordable models. Large SUVs emit 2x as much CO2 than the average new car and cancel part of the emission savings from moving to electric. We have to reverse the trend - the smaller, the better. We need an EU strategy for affordable, compact EVs. Carmakers' current efforts put low cost EVs at risk to competition with increasing imports from China. Finally, EVs can reduce their environmental impact and lifecycle emission by using resources and critical minerals more efficiently, reducing overall energy footprints as well.

How to get Europe ready for the race to electric cars?

- Maintain the **2035 100% zero emission sales target** and do not reopen the car CO2 standards in 2026.
- Propose an **EU regulation to electrify all new sales of corporate fleet cars by 2030** at the very latest and set earlier targets for big fleets.
- Secure **small, affordable EVs** for the EU market by supporting **social leasing via the EU's Social Climate Fund.**
- Introduce **new environmental standards for EVs** to minimise the climate, energy and resource impact from the production of EVs.
- **Regulate or tax the size and weight of new car and SUV** sales to ensure market delivery of small and medium EVs, and stop the over-sizing of new cars. EU lawmakers should support examining the maximum width of light duty vehicles in revising the Weights and Dimensions Directive.
- The EU should propose additional frameworks and policies to ensure that CO2 emissions from cars reach at least -80% in 2040 (vs. 2015) and zero emission in 2050. This includes **support for low income drivers** (e.g. via scrappage schemes and e-retrofits), increased BEV production and avoiding car activity growth.

Contact: Lucien Mathieu, Cars director (lucien.mathieu@transportenvironment.org)

2.6.2 A Delivering the goods

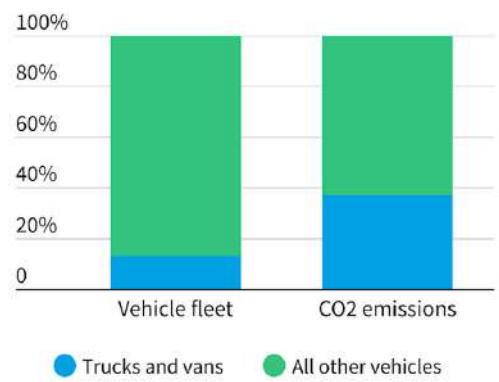
Commercial road transport

Did you know that we rely on trucks and vans for many of our basic daily needs? They carry over 77% of the EU's inland freight. While representing 13% of vehicles on our roads, trucks and vans are responsible for 37% of CO2 emissions from road transport in Europe. With freight activity projected to increase by 27% between 2025 and 2050, this scenario risks persisting for many years to come. To reach climate neutrality by 2050, trucks and vans need to be entirely decarbonised.

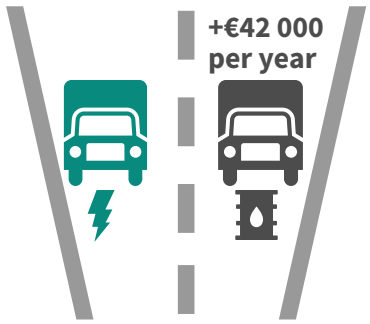
Facts & Figures

Battery electric (BEVs), and for trucks also fuel cell vehicles running on green hydrogen (FCEVs), emit zero climate emissions and cause no air pollution, making these the only truly zero-emission technologies available to decarbonise the vehicles carrying our goods.

EU law requires truckmakers to reduce the CO2 emissions of their new sales by -15% by 2025, -45% by 2030, -65% by 2035 and -90% by 2040. This near phase-out will make it uneconomical for vehicle manufacturers to still produce a diesel truck in 2040. However, given that it is only a near phase-out, emissions will only decrease by 56% by 2050, which is still far away from a full decarbonisation of the sector. Van makers have to decarbonise more quickly, with targets of -50% by 2030 and no more diesel sales by 2035.



Who runs on less (money)? in



The EU's charging law requires EU member states to install a charging point for electric trucks every 60km along their main highways, and every 100km along their secondary motorways.

Electric trucks are more expensive to buy, but much cheaper than diesel trucks to own and operate. Thanks to the EU's road tolling law, the total cost of ownership will further tilt in favour of electric trucks. For example, in Germany, a 40t diesel truck driving 120,650 km/year on tolled roads would pay €42,000 more per year than its electric counterpart.

Electric bus sale in the in 2022

City buses are the poster child of the heavy-duty transition in Europe: Already one year ago, in 2022, already 30% of new sales were electric.

How to transport us into the future?

- **Introduce a zero-emission fleet mandate for big freight buyers and transporters**, requiring them to own or use an increasing share of zero-emission trucks and vans until they reach 100%.
- Introduce **zero-emission targets for** currently unregulated construction vehicles such as forklifts, cranes, excavators, port tractors, bulldozers, etc. (so-called non-road mobile machinery or **NRMM**).
- **Zero-emission zones for freight and deliveries** in cities, and a fixed **contribution from large online shops** for the sale of physical goods involving delivery to a location other than a relay point or shop.
- Ensure all trucks and buses become subject to CO2 targets under the **revision of Europe's CO2 standards** for heavy-duty vehicles in 2027, increase the intermediate target for 2035 and set a 100% target for the sector to become fully zero-emission.
- Bring forward total cost of ownership (TCO) parity between electric and diesel trucks through **cross-EU tolling systems that fully internalise the pollution caused by diesel rigs**, as Germany already introduced in 2023.

Contact: Sofie Defour, Freight and Climate Director (sofie.defour@transportenvironment.org)

2.7 Clear skies ahead

Aviation

Flying is the most carbon-intensive mode of transport. The CO2 and non-CO2 emissions continue to increase, whilst solutions to address this - technological or demand- management- are not expected to reach scale in the short-term without action. Recent EU laws have given an additional push to use and further invest into decarbonization solutions by incentivizing the development and production of clean fuels as well as by putting a price tag on some of the climate emissions for at least inner-EU flights.

Facts & Figures

CO2 emissions from aviation are a significant contributor to climate change by emitting more than a third of Europe's transport emissions. Non- CO2 emissions were responsible for two-thirds of aviation's climate impact in 2018. In 2023 demand for aviation is back to pre-covid times, avoiding unnecessary frequent business travel can reduce 15-20% of global air travel.

2/3 of aviation's climate-warming impact caused by non-CO2 emissions

2023 demand
(= 2019 levels)

2020 and 2021 demand

Zero emission planes are not expected in the short-term future, requiring focus on increasing the efficiency of traditional aircrafts and switching to clean fuels. As the world's first green fuel mandate for planes has been adopted by the EU, production and supply need to rapidly increase as well as financing the R&D for large-scale zero emission aircraft deployment in the mid-term future. Companies have started to change their business travels, but policy action is needed to ensure lower levels of emissions in this decade.

EU governments lost out on €34.2 billion in 2022 without an adequate carbon price for all flights departing and arriving in the EU, a fuel tax on kerosene and ticket taxation. A rapidly growing sector that also has been largely and notoriously untaxed poses a massive threat to our climate and societal well-being.

€34.2 billion of tax loss = **Budget of the SK government**

How to fly Europe sustainably into the future

- Implement **jet fuel quality standards** at the EU level to reduce non-CO2 warming effects and reduce air pollution for citizens.
- Put an **end to aviation's taxation privileges**, by finally imposing a fuel tax on polluting jet fuel kerosene, and expanding the EU's carbon market to cover aviation's largest climate problem: all flights departing from Europe and non-CO2 effects.
- **Strengthen the clean fuel mandate** for synthetic and power-to-liquid fuels to incentivize the uptake of e-kerosene and renewable hydrogen for aviation.
- **Complement fuel taxation with national ticket taxes** to counter the lack of VAT applied on most flights, differentiated per passenger class and distance covered
- **Ban the use of fossil powered private jets by 2030**, the super polluting elite should only be allowed to fly if powered by renewable fuels (such as hydrogen or electricity).
- **Phase in zero-emission aircraft mandates** for short distance ranges including on Public Service Obligations (PSO) routes as well as zero emission fleet targets for aircraft leasing companies.
- **Stop airport expansions and limit traffic growth** at airports by considering caps on CO2 emissions, banning short flights with a rail alternative below 5 hours, in order to put an end to exponential growth in aviation emissions. Set a mandate for businesses to halve travel emissions by 2030, to eliminate unnecessary and high-polluting frequent flying in a shift to purposeful travel.

Contact: Jo Dardenne, Aviation Director (jo.dardenne@transportenvironment.org)

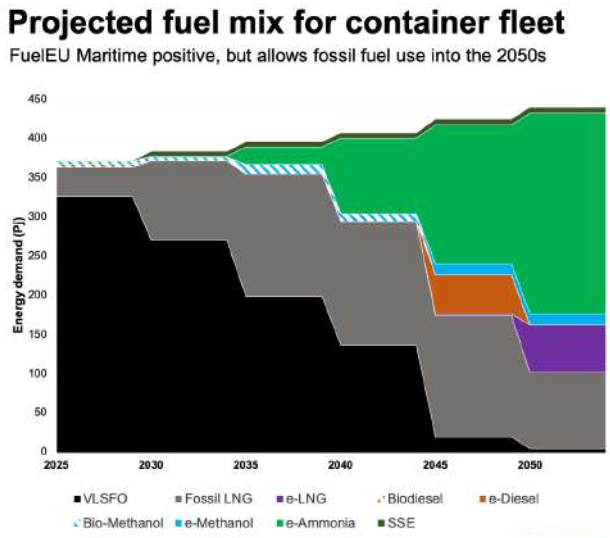
2.8 Set sail for sustainable waters

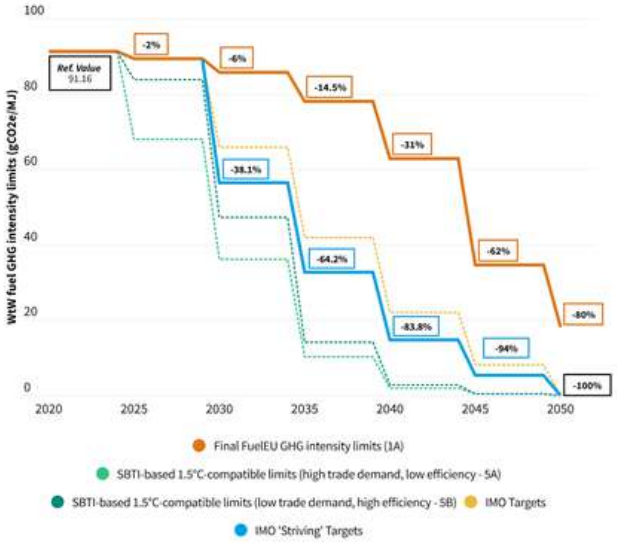
Shipping

European shipping emits about 15% of Europe's transport CO2 emissions and this share is forecasted to reach above 30% by 2050 despite the implementation of the FF55 package. While the International Maritime Organisation (IMO) has recently adopted indicative/aspiration global targets for shipping, binding global regulatory measures are still lacking to deliver sectoral decarbonisation. EU shipping emits about 160 Mt of CO2 every year, of which about 40% is not covered by FF55. After a small dip in during the COVID-19 pandemic, shipping emissions in 2022 quickly overtook the pre-pandemic levels and are currently on the rise.

Facts & Figures

If shipping were a country, it would be Europe's 8th largest emitter of CO2. European shipping represents about 15-20% of global shipping emissions. To address the sector's growing climate impact, Europe included emissions from large ships in the EU ETS from 2024 onwards. The EU also mandates ships under the FuelEU Maritime law to use sustainable fuels from 2025 onwards. These decisions coincide with an increasing shipping activity in Europe, resulting in an almost 6% increase in large cargo and passenger vessels emissions when compared to pre-pandemic 2018 levels. Container ships rank at the top of the polluter list, and are increasingly powered by climate-warming LNG.





Green fuels produced from renewable hydrogen (such as e-ammonia, e-methanol), battery-electric technology, as well as wind power can help clean up shipping. While recent laws encourage ships to switch to alternative fuels, it is projected that false solutions, such as fossil LNG will be making up most of the alternative fuel demand till 2030. This will considerably slow down the sectoral energy transition and risks leading to considerable stranded assets. The FuelEU goes some way to provide demand certainty for green (H2-based) fuels with a mandate to use at least 2% RFNBOs from 2034 onwards and reducing overall GHG intensity of fuel use every 5 years. Currently, the law's weak overall targets do not deliver full decarbonisation of European shipping by 2050 and, should be urgently aligned with science-based climate targets compatible with IPCC recommendations.

Operational and technical efficiency options exist in order to reduce shipping's fuel consumption. Optimising vessel speeds and using wind-assisted technologies can help the transition to green fuels less disruptive.

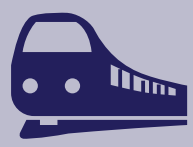
Smooth sailing for the EU's green shipping fleet

- **Align FuelEU Maritime's** decarbonisation trajectory with the science-based targets (SBTi) and the **EU Climate Law.** Set dedicated additional green hydrogen (RFNBO) sub-targets under FuelEU Maritime for the post-2030 period, rapidly increasing to 70-100% by 2050.
- **Extend the scope of FuelEU Maritime Regulation and ETS directive** to cover all the vessels below 5000 gross tonnage and therefore, address all shipping emissions.
- Develop and implement **a new energy efficiency standard** to reduce fuel consumption for all ships calling at European ports to increase the uptake of wind-assist technologies. This can be achieved by allowing only A and B energy-efficiency rated ships (using IMO's CII labeling) to call at European ports.
- Develop and **deploy green hydrogen (-based fuel) refuelling hubs** in key EU ports for rapid clean fuel deployment.

Contact: Faig Abassov, Shipping director (faig.abbasov@transportenvironment.org)

2.9 Making European rail great again

Rail

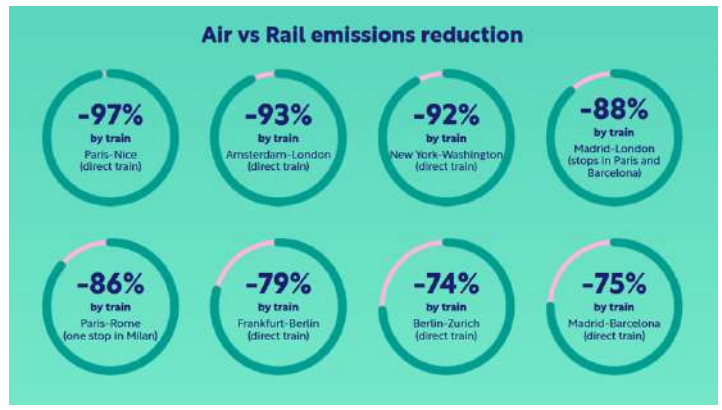


Rail in Europe can replace an important percentage of passenger flights and car journeys, making it a complementary approach to electrification and e-fuels to reduce the climate impact from aviation and road transport. The sector suffers from high pricing, system inefficiencies, stark infrastructures and regulatory differences between EU countries and complex cross-border ticketing. It also suffers from being dominated by historic monopolies lagging in ambition to make the sector more attractive. For rail to be a competitive alternative for people, the EU needs to double down on incentivising a modal shift to rail.

Facts & Figures

The rail sector in the EU has been notoriously underfunded for decades, resulting not only in higher prices but inefficiencies and delays in rail transport. This resulted in insufficient means to simply maintain and upgrade the existing rail network. 22,238 km of rail lines have been temporarily or permanently closed since 1995.

The benefits of rail journeys are striking, being the cleanest passenger transport. According to the EEA, on average in Europe rail emits 33g CO2eq per passenger-km whereas passenger flights emit 160g CO2eq and passenger cars 143g CO2eq (excluding non-CO2 emissions from contrails). On some specific journeys, the emissions savings by shifting to rail are considerable: -93% between Amsterdam and London or -86% between Paris and Rome Yet tickets for cross border connections are on average twice as expensive as their aviation pendant, making it a significant barrier for citizens to shift to rail.



The last EU cycle has resulted in little action for the sector even though a financial and regulatory push can bring out the benefits of a clean, reliable, and affordable transport mode. The 2021 European Year of Rail and Action Plan were small steps to improve rail and haven't led to the major changes to increase the modal share of rail. Planning the development of the trans-European rail network (TEN-T) has been in the centre in recent EU policy-making to ensure higher capacity, with an objective to have trains running at least 160 km/h by 2040 on major corridors connecting urban centres in Europe. An opportunity to increase accessibility of cross-border rail tickets was awaited in vain: the MDMS law. The failure to propose came to the detriment of European citizens not benefitting from easier multi-modal and cross-border ticket bookings.

How to get the European rail sector up to speed

- **Increase rail infrastructure investments** in the next EU budget (MFF) to improve rail efficiency by renovating, upgrading and finally extending the rail network across Europe. The EU budget should fully exclude funding for new roads and airports.
- Improve governance at EU level to **fast-track the roll-out of rail infrastructures and rolling stocks** and empower the European Railway Agency with more resources.
- Require rail operators to **fairly communicate their train offer inventory** to enable booking platforms to sell rail journeys and single multi-modal tickets (MDMS Regulation), ending monopolistic behavior in the distribution of tickets.
- **Reduce rail tolls** (called track access charges) **for international trains and exempt them from VAT** to kick-off the offer and reduce the price of the train tickets, particularly for night trains. Direct support via (cross-border) Public Service Obligations should also be accelerated in lower population-density areas.

Contact: Victor Thévenet, Rail Coordinator (victor.thevenet@transportenvironment.org)

Local public transport in the EU

PUBLIC TRANSPORT SECTOR PRIORITIES FOR THE LEGISLATIVE TERM 2024-2029

FEBRUARY 2024

With the Green Deal, the European Union is fighting climate change and various environmental-related challenges, transforming the European economy, and striving to become the first net zero-emission continent by 2050 with intermediary targets for 2030 and 2040. This gives hope to the next generation and provides a clear strategic and regulatory direction to Europe's industry and businesses. In parallel the EU has fostered digitalisation, the exchange and re-use of data, as well as new technologies. **A lot of new legislation affecting the public transport sector has been passed in 2019-2024 and its implementation requires appropriate funding. The Sustainable and Smart Mobility Strategy (SSMS) and the EU's Urban Mobility Framework call for modal shift and more sustainable daily mobility. Now it is time for implementation!**

Let's make high-quality public transport a symbol of modern Europe!

EUROPE NEEDS MORE HIGH-QUALITY PUBLIC TRANSPORT

Developing public transport is an opportunity to provide mobility for all while working towards many other European objectives, such as economic development, jobs, health, environmental protection, societal coherence, etc. **Hardly any sector has so many positive externalities**. If citizens are offered sustainable, efficient, modern, comfortable and reliable mobility options, they will prefer cities filled with life instead of cities filled with cars. Public transport keeps cities and towns moving in an efficient, environmental-friendly way, allowing people to reach their jobs, education, health appointments or leisure activities. Clean buses can reach any destination in a city and region. Complemented by a network of multimodal hubs to facilitate first and last mile connections, regional and suburban rail, metro, tram and urban rail systems and bus rapid transit (BRT) systems are recognised for their high capacity and contribution to land-use development. Automated rail-based systems – and in the future autonomous buses – are not only fast and efficient, but also benefit from a high level of resilience, e.g. during the COVID crisis. New mobility services should be provided as part of the public transport offer and be regulated by local transport authorities to ensure they contribute the city's or region's mobility objectives.

In modern societies, people will use shared mass transit options, because they are fast and efficient, as well as good for the environment. While all mobility modes have their merits, **future daily mobility will have public transport as its backbone**, complemented by active mobility and personalised shared mobility options. This vision is already reflected in the EU's Sustainable and Smart Mobility Strategy and the Urban Mobility Framework. New legislation passed in 2019-2024 is setting out a clear path for the public transport sector to become even cleaner, more digital, and more modern. **Now it is time for us to make these ambitions a reality and provide more and better public transport across the EU!**

- *Modal shift to public transport and active mobility must become a clear and non-disputable objective of the European Union, as it is supporting many public policy goals such as social cohesion, economic development, sustainability, healthy citizens, etc.*
- *A Declaration in support of public transport should recognize the multiple benefits of the public transport sector and assemble different levels of governance behind the common goal to promote and strengthen the use of public transport across the EU.*
- *Each new legislation in the EU should be assessed as to whether it supports the provision of public transport or makes it more cumbersome, costly or bureaucratic.*
- *Regulatory stability for the public transport sector must be ensured, as well as coherence of the regulatory framework for all modes, avoiding in particular counteracting policies.*

PUBLIC TRANSPORT IN EUROPE

GREEN PUBLIC TRANSPORT FOR ZERO-EMISSION MOBILITY

The Green Deal, Europe's sustainable growth strategy, sets out a transformation pathway for the whole European economy – and it must now be implemented. The European public transport operators and authorities stand firmly behind the EU's climate targets, as UITP members committed to become net carbon-neutral themselves by 2050 at the latest. **Several studies recently stated that modal shift towards public transport is needed to reduce Green House Gas (GHG) emissions and pollutant emissions stemming from daily mobility**.[1]

As climate mitigation depends on action not only at the global scale, but also at the level of cities[2], **public transport is a key lever to help decarbonise cities** and achieve climate-neutral mobility of citizens by offering an energy-efficient, fast, accessible and affordable alternative to the private car. By increasing the offer of public transport and supporting the development of fast and attractive services (e.g. high-capacity regional and urban rail or bus rapid transit systems), emissions related to daily mobility of citizens can be reduced further. Meanwhile, public transport companies in cities and regions are working towards the **decarbonisation of their fleets;**[3] however, without sufficient funding for zero-emission buses, charging stations, the transformation of depots and maintenance shops and newly skilled staff, the process risks getting delayed.

- *To implement and accellerate the energy transition in public transport, the European Union should provide co-funding for zero-emission vehicles and the installation of infrastructure for both road and rail based systems.*
- *The adaptation of transport infrastructure to new hazards and climate change will become necessary. The EU should support adaptation measures with funding.*
- *The external costs of transport should be calculated for each mode according to the Commission's Handbook on external costs of transport[4] and included in the price of transport. Cities should be empowered to apply the internatisation of external costs locally.*

PUBLIC TRANSPORT – FOR PEOPLE, BY PEOPLE!

SERVICE EXCELLENCE FOR PASSENGERS

Passengers are at the centre of public transport operations. Aiming to provide an excellent and affordable service to all customers, in 2019, UITP and the European Passenger Federation (EPF) published a Passenger Charter[5], laying down fundamental basic rights of public transport users. In the EU, passengers benefit from harmonised **passenger rights** as well as other measures to

[1] ITF Transport Outlook (2023); EIT Urban Mobility – Study on costs and benefits of the sustainable urban mobility transition (2021)
[2] Around 74,8% of the European population lives in a city, town or suburb. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Urban-rural_Europe_-_introduction#Introduction_to_territorial_typologies
[3] The newly adopted CO2 emission standards stipulate that, as of 2035, any urban bus placed in the EU market as of 2035 must be zero-emission.
[4] https://op.europa.eu/en/publication-detail/-/publication/9781f65f-8448-11ea-bf12-01aa75ed71a1
[5] See UITP-EPF Passenger Charter

improve their comfort (e.g. the possibility to receive multimodal travel information before, during and after their journey, based on EU legislation). The EU's passenger rights legislation is divided by (long-distance) transport mode; **local public transport** is covered by several of these regulations but **is in fact a mode per se**: multimodal by essence, and mostly running under public service obligations, so local public authorities also exercise some quality control over the service. This set-up should be taken into account, and care should be taken **to avoid any requirement putting the economic equilibrium of PSO services at risk**. When legislation is made, it is important that the new **legal obligations are made to fit to the specific context of public transport services**.

Concerning persons with reduced mobility (PRM), public transport operators strive to improve the accessibility of their service, while continuing to move millions of passengers every day in the fastest and most reliable way possible. The **modernisation of infrastructure to meet today's accessibility standards** can be technically difficult and costly, in which case transport operators may offer alternative tailor-made solutions for certain passenger groups.

- *To ensure a continuity of high-quality mass transit services and to avoid putting too much burden on local public transport operators, any forthcoming EU legislation must be "fit for public transport services", appropriate, and reasonable.*
- *Any discussion regarding passenger rights on public transport shall involve all relevant stakeholders and be mindful of local conditions and local solutions.*

PUBLIC TRANSPORT STAFF

The European public transport sector employs directly 1.3 million people.[6] In many cities, public transport operators are amongst the **largest employers**. About two thirds of the public transport staff are drivers. In recent years the sector is experiencing a serious shortage of staff, for example concerning engineering and technical professions, maintenance staff, but also drivers. The **drivers' shortage is already leading to cancellations of bus and/or rail services** – at a time when shared mass transit should be expanded to become the preferred choice of citizens![7] The need for qualified personnel is set to deteriorate further due to the expected retirement wave of the "baby boomer" generation over the next years and the difficulty to attract young people to the public transport sector. **UITP expects this shortage to become a major obstacle for the sector in the coming years – in all Member States**.

- *The EU should review the rules for the accession to the bus and train driving profession so the sector is able to attract more young people and people looking for a career change.*

[6] Indirect employment includes 650.000 jobs in the European Rail Supply Industry.
[7] Germany, the Netherlands, and the Scandinavian countries are amongst those countries where this trend is particularly strong. In cities like Amsterdam, the public transport company is preparing to replace over 40% of its staff due to retirement over the next 5-10 years.

PUBLIC TRANSPORT NEEDS SUFFICIENT FUNDING!

Conventional public transport services rely heavily on well-maintained infrastructure and assets (rail and roads, vehicles, stations, etc.) and are characterised by a large number of staff and a high consumption of energy. **All these expenses are on the rise, while revenues have been negatively affected** e.g. by the pandemic, the increase in working from home, and political pressure on fares. This leads to an **economic imbalance** of the sector.

While significant financial contributions are already made from the EU's budget and the European Investment Bank (EIB) to the transport sector as a whole, to implement a push for public transport, as outlined above, and to have *more* public transport in the future, Member States and European policymakers must **unlock more European investments into urban and local public transport** assets, infrastructure, and services.

- *UITP asks for the EU to keep supporting the development of local public transport throughout the next post-2027 Multi-annual Financial Framework (MFF) with increased funding and simplified access requirements.*
- *Set up a new EU grant scheme for local public transport to accelerate the greening of the vehicle fleet (bus, tram, metro, suburban and regional rail) and related infrastructure, the extension of networks and improvement of the offer (higher capacity, new services, etc.), while enabling local and regional authorities to access this fund directly.*
- *The polluter-pays and beneficiary-pays principles should be fully implemented in the EU for all transport modes, including the aviation sector which competes with railways.*
- *Whenever possible, new revenue (e.g. from road charges, polluter pays mechanisms, the Emission Trading System (ETS), etc.) should be earmarked fully or partially for the development of the public transport offer.*

PUBLIC TRANSPORT IN THE DIGITAL ERA

The public transport sector will become increasingly digitalised – just like its customers. However, this brings new challenges (e.g. cybersecurity) and requires investments which not all transport companies are able to make. The digitalisation of some areas (e.g. of tariffs to participate in Mobility as a Service (MaaS) platforms) is desired but does not bring any direct return to the provider. The European Union can accelerate the digitalisation of societally desired aspects of public transport services by providing funding or co-funding in these areas.

Public transport operators and authorities participate actively in **data-sharing** with third parties, both voluntarily and based on European legislation (for instance, the ITS Directive and the delegated regulation on MMTIS, or the Open Data Directive). Data has a value to any data holder, and data management comes with a cost. Therefore, the public transport companies and authorities should be able to manage the data they hold **based on fair principles**, including **reciprocity and compensation**, and should not be required to provide their data to third parties for free. When it comes to the **data automatically generated in vehicles (incl. buses)**, this data must be accessible to the operators/owners of the vehicle.

- *The EU can accelerate the digitalisation of the public transport sector by providing funding or co-funding opportunities for desired outcomes.*
- *The exchange of data in the transport sector should be based on fair common principles and should not require any operator to provide data to third parties for free. Any future legislation and the European Mobility Data Space (EMDS) shall respect these principles.*
- *The forthcoming legislation on in-vehicle data should ensure that the legitimate interests of bus operators/fleet owners are respected, e.g. when it comes to data needed to improve the operation and/or maintenance of these vehicles.*

FUTURE TICKETING – WHY PLATFORMISATION IS NOT THE SOLUTION

The **integration of public transport services and fares** must always happen under the responsibility of a competent local or regional public authority, which ensures that public policy goals are met. Many public transport systems already provide citizens access to all services with one pass or ticket. If this is the case, cities and regions usually adopt an integrated fare policy. **Digital ticketing** (a smart card, a mobile ticket, etc.) can be a facilitator, making the acquisition of tickets easier. A variety of ticketing solutions exist, and companies will choose what is best suited to their local situation. A stronger European focus on **enabling ticket sales via digital platforms (MDMS)** will certainly bring benefits to persons travelling to unfamiliar places (e.g. on a business trip or during holidays), but less to daily commuters who know where to go and how to get their tickets.

- *When regulating ticket sales via platforms (MDMS), the EU should adopt a stepwise approach and start with the integration of single and touristic tickets, focusing on long-distance and cross-border transport, where such harmonization has most benefits.*
- *Any legislation should respect the role of local and regional public authorities to manage mobility in their area, including through pricing and the provision of local MaaS services.*

PUBLIC TRANSPORT BENEFITS AT A GLANCE

1. BUSTLING CITIES

Public transport keeps cities moving. Up to 2020, the sector counted almost 60 billion passenger journeys per year in Europe, with numbers on the rise. Imagine the traffic if all those trips were made in cars! Congestion already costs the European economy 1% of its GDP, €100 billion per year. Public transport is essential to reduce congestion and as such, it benefits those not using public transport, as their roads are emptier.

Once autonomous vehicles (AV) will be widely available, traffic will likely increase. On the other hand, if AVs become part of the public transport offer and complement mass transit in the city, it will be possible to take every citizen to their destination while getting rid of 80% of cars!

2. CLEAN AIR

Air pollution affects people's health and can lead to decreased respiratory health, pneumonia, cancer, and other diseases. According to the World Health Organisation (WHO), some 40 million people in the 115 largest cities in the EU are exposed to air exceeding WHO air quality guideline values.

Thanks to public transport, air quality can be improved, as it produces far fewer quantities of air pollutant per passenger kilometre than individual motorised mobility. As buses become increasingly zero-emission, this will further improve air quality in European cities.

It is in everyone's interest to promote public transport: the cleaner air resulting from a stronger use of public transport would benefit every single person in the entire region, not just those who use it.

3. SAVING THE PLANET

Public transport is the most climate-friendly way of traveling besides walking and cycling, as it uses less energy and emits less CO2 per passenger-kilometre than private vehicles. According to the European Environmental Agency, public transport by bus is twice as efficient and by rail four times more efficient than cars*. It is not enough to decarbonise cars, as technological change takes time. For citizens' daily mobility, a modal shift to collective public transport and active mobility is needed and can be achieved over a shorter period. The objectives of the European Green Deal for transport will not be met without more public transport.

4. BOOSTING THE ECONOMY

Public transport entails economic benefits that are around five times higher than the money invested in it. Every €1 of value created from public transport is linked to a further value creation of €4 in the total economy. How? For example, by connecting people to their jobs, training and leisure activities, enabling the clustering of activities and business development, supporting tourism, increasing land and property value, stabilising property values, and helping to regenerate cities or deprived areas through transport connections. Investment in public transport creates 25% more jobs in the wider economy than the same level of investment in roads or highways would produce.

Annual public investment in local public transport accounts for €40 billion. And public transport companies make huge investments themselves! Urban and local public transport services in Europe contribute between €130-150 billion per year to the economy. This equals 1.0-1.2 percent of GDP.

*EEA, 2021, comparison made in terms of CO2 emissions per passenger-kilometre

Many sectors such as the construction industry, the supply industry, manufacturing, and IT services are recipients of these investments.

Very often, public transport investments benefit local or regional companies, including SMEs, hence boosting economic development in the region.

5. LOCAL JOBS

The public transport sector is amongst the largest employers at local level, employing in total 1.3 million people in the EU. Importantly, public transport provides secure local jobs, which cannot be delocalised abroad. Moreover, every direct job in public transport is linked to four jobs in other sectors of the economy.

Diversity is key: public transport companies provide many different types of jobs, from less qualified to highly qualified profiles, and employ staff with very diverse backgrounds. Most companies offer vocational training positions to huge numbers of young people.

6. ACCESSIBILITY AND AFFORDABILITY

Public transport offers equal opportunities to all citizens, independent of their social standing. It provides access to the most essential functions of the city (schools, hospitals, offices, shops, etc.) and costs 1/16 of what people pay for owning a personal car. A good territorial coverage and the long-term availability of the service is guaranteed by the public authority; there is no risk that the service stops operating from one week to the next. Politically determined fares and social tariffs ensure affordability for all groups of the society.

Public transport, particularly networks reaching out to suburbs and rural areas, contributes to territorial cohesion, while also reducing traffic congestion by commuters. For rural areas, a basic public transport offer – including transport on demand – can ensure access to economic and social opportunities for the region's inhabitants and local businesses.

7. QUALITY OF URBAN LIFE

Public transport systems are much more efficient than individual motorised mobility in terms of using public space efficiently. At the normal 1.3 persons occupancy rates of cars, a full standard bus can take more than 40 cars off the road, a full metro 600 cars and highspeed metro (like RER in Paris) can replace 1,500 cars. Take this in, while considering that you can see up to 30 metros per hour going one way.

Have you ever dreamt of more green spaces in the city, more safe places for people to meet and kids to play? During the Covid-19 lockdown, some European cities experimented with shutting down road lanes and increasing space for pedestrians and cyclists. More public transport and fewer cars would free up public space that is currently dedicated to cars (driving and parking) and could be returned to citizens. Imagine what cities could be like!

8. HEALTHY, ACTIVE LIFESTYLE

Public transport encourages an active lifestyle, as most journeys involve walking or cycling to, from and within public transport stations. The health benefits associated with active travel include positive impacts on diabetes, mental health, dementia, obesity and a decreased risk of cardiovascular disease and different types of cancers. Promoting the combination of walking, cycling and public transport can be a useful tool for public health services and positively impact citizens' health!

9. NUMBER ONE IN SAFETY

Public transport is the safest way to travel the city and the continent. Europe still registers 120,000 seriously injured people due to road accidents and more than 20,000 road fatalities every year, around 47% of which occur in cars and taxis, 17% on motorcycles and mopeds, and 8% on bicycles, compared to around 0% in buses and coaches. Railways are even safer and appear as the safest mode of land transport in the EU. So if you want to achieve "vision zero": support public transport!

10. INNOVATION

Few sectors have developed and applied as many new technologies as public transport did over the years! Public transport companies provided e-mobility long before we discussed electric cars, and fully autonomous metros have been operating in European cities for over 35 years. For the customers, digitalisation and the use of smart phones makes the planning of journeys and the use of collective transport easier and more fun. Currently, the sector is engaged in new research and development, including the use of hydrogen, artificial intelligence, cross-border digital ticketing, and autonomous road vehicles.

… And since you don't need to drive, you can use your time spent on public transport to come up with the new inventions of tomorrow. Are you ready?

11. NOISE REDUCTION

Road traffic remains the biggest source of noise pollution in Europe, which can lead to sleep disturbances, hypertension, and premature death. If more people took public transport, traffic volumes would decrease, and so would citizens' exposure to noise. People living in city centres that have been turned into pedestrian areas accessible only for buses or trams, notice the difference. Good news is that electric buses will reduce noise emissions even further!

12. CONNECTING PEOPLE

At times of increasing inequality and social division, it is ever more important to strengthen the social fabric across Europe, and public transport can contribute. Public transport is a place of encounter. It is a place for people with different backgrounds to meet and interact with each other through a smile, a helping gesture, or a discussion. At major events like concerts or soccer games, it's part of the fun to travel together with other fans. Some people have even made new friends or found the love of their life on public transport!

This is an official policy paper prepared by UITP EU Committee. UITP is the international association representing public transport stakeholders. In the European Union, UITP brings together more than 450 urban, suburban and regional public transport operators and authorities from all Member States. We represent the perspective of short distance passenger transport services by all sustainable modes: bus, regional and suburban rail, metro, light rail, tram and waterborne. Visit our website: uitp.eu

On the move to a net-zero EU:

The European Rail Supply Industry priorities for 2024-2029

March 2024

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We are the European Rail Supply Industry
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About UNIFE

Operating in Brussels since 1992, UNIFE, the *European Rail Supply Industry Association*, represents European train builders and rail equipment suppliers. The association advocates for more than 110 of Europe's leading rail supply companies – from SMEs to major industrial champions – active in designing, manufacturing, maintaining and refurbishing rail transport systems (trains, metros, trams, freight wagons), subsystems and related equipment. UNIFE also brings together national rail industry associations from 12 European countries. UNIFE members have an 84% market share in Europe and supply 46% of the worldwide rail production, representing more than 400,000 jobs in Europe.

A strong economic footprint

- UNIFE full members account for **45,8 billion euros**[1] of sales.
- The European Rail Supply Industry in total represents **more than 650.000 jobs**[2].
- The rail sector represents **1 million persons directly and 1.3 million persons indirectly**, and one job in railway transport creates more than one other job in indirectly dependent economic activities[3].

A vibrant rail supply market (UNIFE *World Rail Market Study* 2022)

- **Growth rate:** 3.0% CAGR (Compound Annual Growth Rate), i.e. total market volume of €211 bn p.a. (years 2025-2027) – Solid growth driven by climate change, urbanisation and social cohesion needs.
- **Europe**[4]: €60.8 bn per annum (2021) – *The biggest market in the world.*
- **Worldwide:** €176.5 bn per annum (2021) – *The European Rail Supply Industry is export-oriented.*
- **Accessibility rate:** only 61% of the total market, representing almost €69 billion of lost opportunities every year

An innovative industry

- The European Rail Supply Industry invests **3.6% of its turnover in R&I activities**.
- **Cutting-edge technologies** such as automated trains or high-speed trains have been invented and developed by the European Rail Supply Industry.
- European Rail Traffic Management System (ERTMS), a proven system successful worldwide, is **deployed in 53 countries with 90.000km (contracted) of tracks.**

[1] Aggregate turnover of rail activities, 2021.
[2] Including construction – Perspectives for the rolling stock supply in the EU, 2023.
[3] CER, 2022.
[4] Including UK, Switzerland, Norway, Turkey.

The future of a net-zero EU is with rail transport!

Still a low modal share…

- In 2020, **rail performed 5.1% of intra-EU passenger transport and 11.5% of intra-EU freight transport[5].**
- There are still huge opportunities to be unleashed in order to reap the full decarbonisation potential of rail transport.

…but a key role to tackle climate change…

- Rail is responsible for **only 0.4% of GHG emissions from transport at EU level** (European Commission, 2022).
- This can be explained by the **energy efficiency of rail transport, which accounts for only 1.5% of the energy consumed by all transport activities.**
- **In 2021, approximately 56% of the EU railway network was electrified, accommodating 80% of the traffic (IRG-Rail, 2021; European Commission, 2021).** Electrification is vital, but there is also a need for alternative fuel traction systems for those lines that cannot be electrified.

…and a significant need for rail to achieve the ambitious goals of the *Sustainable and Smart Mobility Strategy* (2020):

Main rail objectives:

- High-speed rail traffic will double by 2030 and triple by 2050.
- Rail freight traffic will increase by 50% by 2030 and double by 2050.

Current rolling stock market in Europe[6]:

- (Very) high-speed rolling stock: 16 632 units (2021).
- Freight cars: 596 000 units (2021).

In the European Commission's communication on a recommended 2040 emissions reduction target to set the path to climate neutrality in 2050[7], **all envisaged scenarios require achieving these goals**.

Achieving these ambitious goals, which are interlinked with the completion of the EU TEN-T rail network and the EU 2040 emissions reduction target, will require a considerable increase in the EU's production capacity of (very) high-speed and freight rolling stock by 2050.

Rail financing needs are estimated at:
- €47 billion per year for the full completion of the TEN-T Core rail network by 2030[8];
- €46 billion per year for the phase out of internal combustion engine rolling stock in favour of electric and hydrogen ones and to achieve the EU 2040 emissions reduction target.

This demonstrates the significant investment gap to reap the full decarbonisation potential of rail transport.

The full political and financial support of regional, national and EU authorities are key to making that vision a reality.

[5] *Perspectives for the rolling stock supply in the EU* – July 2023.
[6] Including UK, Switzerland, Norway, Turkey.
[7] *Securing our future Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society*, February 2024.
[8] *European Climate Investment Deficit report An investment pathway for Europe's future*, Institute for Climate Economics, February 2024.

Introduction

No climate neutrality without a strong European Rail Supply Industry

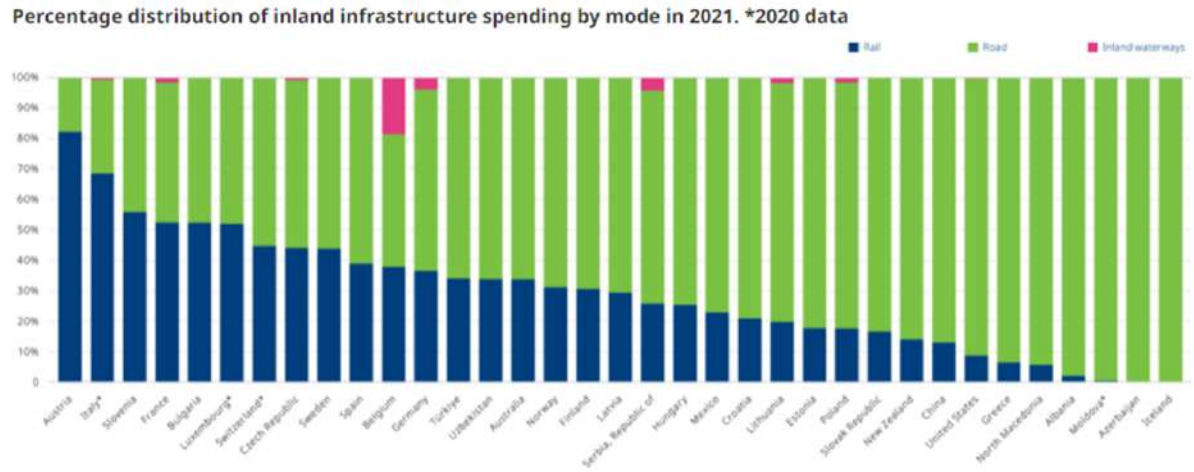
Time is running out to meet the Paris Agreement's overarching goal to limit "the increase in the global average temperature to well below 2°C above pre-industrial levels". Despite efforts by certain countries and regions to decarbonise their economy, transport emissions will not fall fast enough to respond to the massive challenge, as transport demand grows. According to the *International Transport Forum Transport Outlook* (2023), **transport demand will grow in the coming years**, with an increase of 65 to 79% of passenger-kilometre demand by 2050, depending on the scenario.

Against this background, it is essential to highlight that **rail – whether for main lines, urban/regional or freight transport – is the greenest mode of mass transportation**. Rail relies very little on imported fossil fuels, with almost two-thirds of total energy consumed in railways coming from renewable sources. Still, it also clearly stands out for its high energy efficiency and low CO_2 emissions. Rail and domestic navigation are the only modes that decreased GHG emissions since 1990. Regarding sustainability as a whole, rail – as part of public transport solutions – brings 12 tangible benefits to all of society (people, planet, progress), each linked to one or multiple *UN Sustainable Development Goals*[9].

This role should be confirmed by the ambitious climate objectives set by the European Union, in particular reaching climate neutrality by 2050 and achieving the rail high-speed and freight targets of the *Sustainable and Smart Mobility*. In February 2024, the European confirmed a science-based 2040 climate target proposal of at least 90% net greenhouse gas (GHG) emission reductions compared to 1990[10]. For this vision to happen, **rail solutions in and between cities will need to be scaled up for both passenger and freight transport[11].**

With its capacity to move millions of people and tons of goods worldwide safely and cleanly, rail is the solution to meet the climate, social and resilience challenges our planet faces. It has a significant role in capturing most of the future growth in transport demand.

Despite this increasing awareness, the ITF states that "the continued dominance of road infrastructure in national investment priorities is not in line with the need to decarbonise the transport sector" [12].



[9] *Why public transport is key to achieve the SDGs*, UITP, 2023.

[10] *Securing our future – Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society*, Communication of the European Commission, February 2024.

[11] https://www.itf-oecd.org/compare-transport-infrastructure-investment

[12] Statistics Brief, July 2023.

Therefore, infrastructure spending in EU Member States and beyond needs to be shifted towards rail, and the EU budget dedicated to rail should be increased in the future. By doing so, a long-term investment environment will be provided to European rail suppliers, which can be even closer contributors to the fight against climate change by upscaling their industrial capacity.

The European Rail Supply Industry is a diverse, geographically widespread industry that includes thousands of companies – from SMEs to major industrial champions – striving to export worldwide. **Some of its specificities** include:

- Long life-cycle of rail products – more than 30 years for rolling stock such as trains, metros and tramways for trains;
- Predominance of public procurement – in the vast majority of cases, and especially in Europe, customers are most of the time public authorities whose projects are launched through public procurement procedures;
- Business is conducted through business to business (B2B).

European train builders and rail equipment suppliers have been key contributors to Europe's sustainable development, and in recent years, its strategic nature has been increasingly recognised. Nevertheless, the European Rail Supply Industry also faces **a number of industrial challenges**, such as inflation, supply chain disruptions, high-interest rates, scarce public resources, and increasing international – and sometimes unfair – competition.

Furthermore, **the increasing administrative burden** could also be an important disruptor, in particular for SMEs, due to many new European sectoral and transversal regulations. As emphasised *in The Transition pathway for the EU Mobility Industrial Ecosystem* (European Commission, January 2024): "As regards predictability, [mobility] stakeholders emphasised in particular the need for a more effective implementation of legislation, better targeted upcoming secondary legislation, and a sufficient lead time for the industry to adapt to the changes."

Climate neutrality cannot be achieved without a strong European Rail Supply Industry as the world leader in providing net-zero and ground-breaking solutions.
In view of the next institutional cycle (2024-2029), and to help the European Rail Supply Industry maintain its global leadership and maximise its contribution to a decarbonised, resilient and vibrant economy, UNIFE calls on European institutions to implement three key recommendations, as well as a series of measures described in the following strategic sections/chapters.

Three Recommendations for the new legislative cycle

1. Foster a vibrant rail sector and an upscaled, competitive European Rail Supply Industry to ensure the success of EU net-zero policies.

2. Enact an ambitious EU budget and increased private financing for rail during the next Multiannual Financial Framework to achieve the objectives defined, secure major priorities (ERTMS, DAC, FRMCS deployment), and finance new rolling stock.

3. Highlight legislative efforts on carbon neutrality, avoid the pitfalls of horizontal legislation, acknowledging the specificities of the European Rail Supply Industry and Sector, whileachieving a simplified and more predictable regulatory framework for rail.

A pre-requisite: Rail supply as a strategic net-zero industry for Europe

Over the past decades, the European Rail Supply Industry has built **a world leadership**. This is notably due to an ever-growing world rail market and its capacity to stay at the forefront of innovation to develop and export groundbreaking solutions.

There has been **an increased interest in the rail supply industry during the 2019-2024 legislative mandate**, particularly due to the "rail renaissance" and the acknowledged strategic nature of rail (Russia's war of aggression against Ukraine, risk of third country interference). However, when it comes to achieving a decarbonised and net-zero economy, **rail solutions are still rarely at the centre of the discussions.**

Furthermore, the European Rail Supply Industry faces **a number of industrial challenges:**

- **Significant inflation and supply chain disruptions**. While other industries are also concerned, the European Rail Supply Industry works most predominantly in the framework of public contracts (rail operators, municipalities). This considerably limits companies' possibilities to be flexible and to adapt prices to actual production costs. High-interest rates and a general context of scarce public resources worsen the situation. Furthermore, the limited size of the rail market compared to other sectors makes it a "non-priority" for producers of specific yet strategic components (e.g. microelectronics).
- **Tensions between policy objectives.** The rail industry is working hard to deliver products and contribute to achieving a net-zero economy, which will require upscaling its production in the next years. At the same time, it needs to be ensured that proper funding will be secured for rail projects despite inflation and that the regulatory framework is stable enough to reduce costs for the industry. Furthermore, the increasing sustainability measurement should be managed in a transparent way and should not be limited to a single certification body or private entity. Last but not least, some specific and crucial per- and polyfluoroalkyl substances (PFAS), with widespread uses in the rail sector, remain – as of today – crucial to ensure the EU green transition.
- **Industrial competition from Asia, and especially from China.** This competition has become extremely fierce in the last few years – a cause for serious concern in third-country markets and even Europe. All existing legal instruments, including trade autonomous tools, the Carbon Border Adjustment Mechanism (CBAM) and the EU Global Gateway initiative, must be mobilised to ensure a level playing field between European and non-European suppliers in the EU as well as in third countries.

Key ask:

Prioritise net-zero industry in the 5-year programme of the European Commission and boost rail supply competitiveness and manufacturing while reducing the administrative burden for companies.

More specifically, UNIFE:

- **Urges EU institutions to consider the European Rail Supply Industry as strategic** not only to achieve ambitious EU and worldwide climate objectives, but also for Europe's overall competitiveness, autonomy and security.
- **Calls on the European Commission to ensure that each new initiative in EU industrial policy delivers concrete and tangible results** for European companies, and that **key issues such as inflation in the specific context of public procurement can be effectively tackled.**
- **Calls on the European Commission to address chemical pollution, while considering its potential negative impact on climate objectives**. UNIFE supports tackling the challenge of toxic chemicals like

PFAS. Still, more time is needed to phase out PFAS in the rail sector, as the proposed ban by 2027 would make it challenging for rail manufacturers to keep delivering their much-needed products.

- **Calls on the European Commission and Member States to extend the mandate of the European Commission's Expert Group on the Competitiveness of the Rail Supply Industry beyond 2025**, with more resources dedicated to it and clear deliverables in key jointly identified topics.

Transport decarbonisation & climate policies: *Making rail a cornerstone of a carbon-neutral and energy-efficient economy*

The rail sector's environmental assets and energy efficiency are vital to transitioning to a low-carbon economy and reducing the EU's dependency on imported fossil fuels. For instance, rail freight emits 80% less CO_2 and consumes six times less energy than road freight, thereby reducing the carbon footprint and increasing energy sovereignty.

Against this background, the European Commission's EU *Sustainable and Smart Mobility Strategy* aims to shape a transport sector capable of tackling the climate emergency. The Strategy grants a prominent role to rail in transitioning towards zero-emission mobility and achieving climate neutrality by 2050.

Yet, **making the objectives of the EU *Sustainable and Smart Mobility Strategy* a reality will require a number of pre-conditions**, including the completion of the Trans-European Transport Network (TEN-T), accompanied by a framework to enable smart and seamless mobility. Furthermore, achieving a level playing field between all modes of transport remains an important objective, not only by completely internalising external costs to achieve a fair transition to net-zero mobility, but also by reaping the full benefits of sustainable financing.

Key ask:

Align European transport trends with the objectives of the *Sustainable and Smart Mobility Strategy* and intensify public policies to trigger a modal shift for passenger and freight transport.

More specifically, UNIFE:

- **Calls on the European Parliament to create an intergroup on sustainable public transport** that will request and monitor the alignment of promises with concrete initiatives and funding.
- **Calls on the European Commission to channel sustainable finance towards the rail sector.** The EU Taxonomy must consider all rail-related economic activities compliant with the minimum criteria to be considered environmentally sustainable. It should be based on climate objectives, incentivising zero or low-emission transport modes like rail. The regulatory framework must ensure fair comparability between different economic activities and modes of transport.
- **Calls on the European Commission to support a level playing field in sustainable mobility.** The *Energy Taxation Directive* (ETD) revision should be concluded and promote the rail sector because of the "energy efficiency first principle" in EU transport policy. The revenues from the EU Emissions Trading System (EU ETS) on road transport should be invested in developing direct zero or low emissions modes of transportation.
- **Calls on the European Commission and Member States to leverage the impact of the *Alternative Fuels Infrastructure Regulation* (AFIR) on the rail network.** Since AFIR also includes rail in its scope, alternative fuel technologies and propulsion systems – such as hydrogen or battery-powered trains and their refueling and recharging infrastructure – should be deployed on rail sections that cannot be fully electrified. In this respect, it will be key to monitor National Policy Frameworks.
- **Calls on the European institutions to consider rail sector specificities when defining requirements on Ecodesign for Sustainable Product Regulation** and plan for a robust stakeholders involvement to prepare the Digital Product Passport.

EU funding and public procurement:
Creating EU jobs in a thriving EU rail market

European citizens, Member States and their regions have benefited from **investing in the deployment of modern rail systems across Europe, thanks to the support of EU funding and financing tools**. To deliver on the *EU Green Deal*, for which the completion of the Trans-European Transport Network (TEN-T) network is a fundamental element, there is a pressing need to further leverage public and private climate finance to further invest in rail as the backbone of sustainable mobility in Europe.

In the next EU Multi-annual Financial Framework (MFF), it will therefore be **crucial to count on solid EU funding programmes** such as the Connecting Europe Facility (CEF) to continue investing in TEN-T cross-border infrastructure, but also the digitalisation of rail through the European Rail Traffic Management System (ERTMS), Digital Automatic Coupling (DAC) and Future Railway Mobile Communication System (FRMCS). Structural Funds must continue to support Member States' regions in investing in decarbonised urban rail systems. Assisting EU Member States' managing authorities in improving their absorption capacity is also needed to increase the effectiveness of funds.

Given the importance of public procurement in the rail sector, it can be used as a lever to foster European value and maintain industrial jobs within Europe, including for SMEs. Therefore, it is imperative that Member States use the already existing legal mechanisms (*EU Public Procurement Directives*) to create a more competitive industrial base in the EU, which is increasingly hampered by unfair practices from non-EU players. According to the OECD report *Measuring distortions in international markets – the Rolling Stock Value Chain* (2023), China Railway Rolling Stock Corporation (CRRC) indeed obtained as much as 72% of all absolute government support over 2016-2020. As the largest rolling stock manufacturer worldwide, this poses serious competition challenges in the EU procurement market.

In that context, the European Rail Supply Industry welcomes the **expected synergies between civilian and military use of the rail infrastructure**. The 2022 Military Mobility Action Plan suggests to increase the possible dual use of the rail network which will positively impact the overall capacity and quality of the infrastructure, as well as increase the efficiency of cross border operations. Longer and heavier trains are not only required for the transport of military equipment but also for regular rail freight. However, an overlap between civilian and military infrastructure might require additional precaution in the context of Foreign Direct Investments and strengthen EU screening mechanisms.

Key ask:

In a context of high-interest rates and scarce public resources, **pursuing and increasing financial support to rail as part of strategic investments to meet climate challenges, with a true level-playing field on the EU procurement market.**

More specifically, UNIFE:

- **Calls the European Commission to propose a significant increase of climate funding earmarking in the next MFF 2028-2034 and a substantial increase of CEF funds** to continue supporting key interoperable technologies such as ERTMS, but also to accommodate emerging ones such as FRMCS and DAC. CEF funding support for rolling stock must also be considered.
- **Calls on the European Commission and Member States to further leverage and facilitate private financing in the rail sector** by making use of tools such as the EU Taxonomy and Green Bonds to boost investments in order to accomplish the TEN-T targets, and to consider how PPP contractual arrangements

could promote investments in a context of rising interest rates, high public debt and potential public investment cuts.

- **Calls on the European Investment Bank (EIB) to continue and increase its support** through its Green Rail Investment Platform in the areas of infrastructure, rolling stock, signalling, while also supporting urban rail solutions such as light rail, metros and tram systems.
- **Urges Member States to fully use current EU public procurement provisions**, including its EU added-value principle and the possibility to exclude bidders from certain third countries across rail procurement. This will strengthen the competitiveness of European suppliers, including SMEs, and consequently, the EU's internal market.
- **Calls on the European Commission to ensure that access to EU-funded programmes** (be it under direct, shared or indirect management) **in the next MFF 2028-2034 is only possible to European companies,** and that **the Most Economically Advantageous Tender (MEAT) principle (understood as the Best-Price Quality Ratio) is fully enforced.**
- **Calls on the European Commission to ensure that any future revision of *Directive 2014/25/EU* shall actively promote provisions to create EU jobs** (EU added-value principle and possibility to exclude bidders from certain third countries), **enhance award criteria other than price (MEAT)** and **ensure fair competition on the EU public procurement market.**

Rail technical regulatory framework: *Simplifying rules, increasing predictability and reducing costs*

In recent years, the technical, regulatory framework governing rail products and authorisation in the EU has undergone extensive revision to remove the remaining barriers to creating a Single European Railway Area (SERA), and reducing the time and costs for vehicle authorisation.

One of the key milestones was the approval of the **Fourth Railway Package Technical Pillar** in 2016, followed by its implementation in 2019. With the Technical Pillar, the European Union Agency for Railways (ERA) has extended its scope from a regulatory body to an operational European Authorising Entity responsible for delivering rail vehicle authorisations and safety certificates across the EU since 2019. Much to the disappointment of the European Rail Supply Industry, one of the initial objectives of implementing the Fourth Railway Package Technical Pillar to reduce the cost and time for vehicle authorisation by 20% has not been achieved.

The **Technical Specifications for Interoperability (TSIs)** – the key regulations for defining the standards to be met and ensure the interoperability of the railway system of the European Union – have undergone numerous revisions in recent years, the latest being the 2023 “Digital Rail and Green Freight” TSI Revision Package.

Despite these significant efforts, the European Rail Supply Industry is concerned that we are moving away from achieving an efficient technical framework and a shared goal of increasing rail transport's competitiveness and market share by supporting the European Green Deal. Care is needed regarding the frequency of regulation changes and their transitional arrangements to **provide sufficient stability so rail contracts and long-term projects can be achieved**. At the same time, the system requires openness and flexibility to facilitate innovation uptake in accordance with the needs of the market.

Key ask:

To achieve a true European single market for railway systems and the smooth deployment of rail solutions, **simplify the European rail technical, regulatory framework with a swifter and less costly vehicle authorisation.**

More specifically, UNIFE:

- **Calls on the European Commission to establish a long-term roadmap for rail regulatory stability and evolution predictability aligned with the European Union Agency for Railways (ERA) and the sector.** The target shall be an optimised level of detail in regulation with a lean interface to standardisation, ensuring interoperability and safety but without impeding innovation. The next revision of TSIs shall focus on key priorities identified by the sector (e.g., DAC and FRMCS) aiming to increase the modal shift to rail in Europe.
- **Calls on the European Commission to optimise the implementation of the Fourth Railway Package Technical Pillar and its EU vehicle authorisation process introduced in 2019** to simplify the process and reduce efforts, time and costs for vehicle authorisation as initially intended.
- **Calls on the European Commission, with the support of the European Union Agency for Railways (ERA), to eliminate the remaining National Technical, Operational and Safety Rules** impeding the achievement of a single market for railway systems.
- **Calls on European Institutions to provide the ERA with the increased human and financial resources needed to support rail in delivering its central role in achieving the EU Green Deal objectives.**

Digitalisation & cybersecurity: *Unleashing the potential of a digital, cyber secure rail system*

Rail transport has always been a frontier of technological progress, with the supply industry leading the way. In the past years, the pace of change in the sector has moved up a gear with digital innovation, from signalling (European Rail Traffic Management System (ERTMS)) to digitalisation of freight services (Digital Automatic Coupling (DAC)), or the integration of Artificial Intelligence. Digital transformations shall contribute to achieving the ambitions of Europe's rail sector and its supply industry – both in terms of enhancing the experience of rail passengers and also optimising logistics and boosting capacity for carrying freight. Doing so will profoundly improve the performance and overall attractiveness of the sector.

However, **European decision-makers must consider the specificities of the rail sector and supply industry.** Indeed, rail products have a long lifespan – more than 30 years for rolling stock such as trains, metros and tramways . For trains, the sector is regulated vertically and business is done through a business to business (B2B) mode. Against this background, some challenges have to be considered:

- The rail sector generates billions of data points annually. The effective regulation of the collection, management, and processing of these data is crucial. The recent *EU Data Act* is a step in the right direction to improve the railway system's reliability, performance and attractiveness.
- The rail industry's digitalisation also increases the risks of cyber threats and opportunities for cybercriminals to disrupt critical infrastructure. However, cybersecurity is a challenge in complex industrial sectors such as the rail industry: ad-hoc interconnected, sophisticated subsystems, a complex value chain and legacy systems due to long life cycles. Cybersecurity is increasingly regulated, and horizontal legal instruments must be sufficiently coordinated to avoid overlaps (e.g. NIS2, CRA, CSA, RED, etc.). The rail sector is at the forefront of cybersecurity standardisation, and UNIFE members are very much involved in developing such standards, ensuring adequate protection for our systems.

Key ask:

Acknowledge the specificities of the rail sector to fully reap the benefits of digitalisation and cybersecurity, while maintaining the competitiveness of the European Rail Supply Industry.

More specifically, UNIFE:

- **Calls on the European Commission and Member States to pursue and intensify their efforts to speed up the full deployment of ERTMS in the entire TEN-T Network to** meet the 2040 target set in the revised TEN-T Regulation.
- **Calls on the European Commission to avoid a horizontal regulatory approach. A "one-size-fits-all" approach can harm European rail suppliers, including hundreds of SMEs**. Business-to-consumer (B2C) data significantly differ from business-to-business (B2B) data, like the rail supply industry, where data-sharing is predominantly stipulated in bilateral contracts or agreements. Public procurement is also a fundamental aspect for rail suppliers as their customers are often public authorities that might request access to data.
- **Calls on the European Commission to acknowledge the particularities of the rail sector industry on cybersecurity**. Furthermore, the policy architecture built under the New Legislative Framework (NLF) in cybersecurity is complex, and risks overlap. The horizontal and sectoral legal instruments should be sufficiently coordinated to promote consistency and consider the rail sector's specific needs. Sectoral cybersecurity standards are essential for successfully implementing the appropriate cybersecurity requirements. In parallel, close cooperation with ENISA should be pursued.

International trade & market access: *Achieving a must-have global level-playing field*

The European Rail Supply Industry is export-driven. Despite the important growth rate of the world rail market, the accessibility rate has constantly decreased in the past years. Today, **only 61% of the total market is considered accessible to European companies, representing almost €69 billion of lost opportunities annually**.

According to the *OECD Report on Measuring Distortions in International* Markets – *the Rolling Stock Value Chain*, countries like South Korea, Japan and China buy less of their rolling stock from abroad. In contrast, the same domestic rolling-stock manufacturers have seemingly gained a strong foothold in foreign markets, including in the EU. These are precisely the countries where the EU rail supply industry struggles to have a substantial business presence, even though we have well-implemented trade or economic agreements with South Korea and Japan.

Against this challenging international environment, it is paramount for the European Rail Supply Industry to **ensure open markets, reciprocity and a level-playing field**. This would translate not only into new business opportunities but also demonstrate that trade policies benefit EU businesses and society. Similarly, **European initiatives with concrete outcomes, such as the *Global Gateway***, are much needed to project EU values and principles (e.g., the Most Economically Advantageous Tender (MEAT) principle as well as the overall European Green Deal objectives) outside EU borders, especially due to increasing unfair competition faced by European exporters, including SMEs, in EU third markets.

Key ask:

Achieve open and fair international markets, especially in public procurement, as well as a coherent EU strategy in third-country project financing to support the European Rail Supply Industry.

More specifically, UNIFE:

- **Urges the European Commission to ensure reciprocity and a level playing field in market access, public procurement and investment, and calls on the European Commission and Member States to use the new trade autonomous tools** to tackle unfair competition in the EU and world procurement markets. However, these tools must balance effectiveness and administrative burden.
- **Calls on the European Commission to enable further market opening and diversification** through high-standard free trade agreements with enforceable provisions, which will be beneficial to increase the competitiveness of European exporters, including SMEs. This also calls to **address challenges related to enforcing ongoing free trade agreements** (e.g. Japan and South Korea on public procurement) that do not deliver for EU businesses.
- **Calls on the European Commission**, on instruments such as the Carbon Border Adjustment Mechanism (CBAM), **to achieve a level-playing field for imported finished products at the relevant levels of the rail supply chain.**
- **Calls on the European Commission and Member States to unleash the full potential of *Global Gateway*** by maximising the role that rail can play in supporting EU third partner countries in decarbonising their transport systems, and ensuring the full integration of the MEAT (Most Economically Advantageous Tender) across EU-launched procurement worldwide. Deploying rail solutions (e.g. ERTMS) and promoting European standards in third countries through qualitative public procurement will be vital to balancing fierce competition with non-EU players.
- **Calls on the European Commission and Member States to accelerate the development of a European Export Credit Strategy** by establishing a genuinely European Export Credit facility, taking into account the challenges posed by the delivery of untied/tied aid for European exporters.

Research & innovation:
Maintaining our competitive edge beyond Europe's Rail Joint Undertaking

As the foremost provider of European rail products and a global leader internationally, the European Rail Supply Industry relies on research and innovation to remain at the forefront of transportation needs. Doing so allows European rail suppliers to overcome our industry's competitive challenges. Demonstrating its commitment to next-generation technology, the European rail supply industry reinvests 3.6% of its annual revenue to research and innovation activities.

UNIFE and its constituent companies were at the origin of the first European rail Joint Undertaking, Shift2Rail (2014-2021; 450M€ funding), and of its successor, **Europe's Rail Joint Undertaking** (launched in 2021; 600M€ funding through the EU Research Framework Programme – Horizon Europe). Europe's Rail Joint Undertaking is based on two pillars: the Innovation Pillar drives the research and innovation activities, and the System Pillar aims to define the rail system architecture of the future, and better exploit the outputs of the Joint Undertaking for the evolution of the technical framework.

The success of Shift2Rail and Europe's Rail, and the excellent cooperation between the members of these Joint Undertakings, confirm the significance of such public-private collaboration. This cooperation creates the technological progress that will enable the future Single European Railway Area and strengthen the competitiveness of the European rail supply industry worldwide.

The Digital Automatic Coupling (DAC), the Automatic Train Operation (ATO), the evolution of the European Rail Traffic Management System (ERTMS) and the Digital Twin for rail are **a few examples of key technologies for the rail sector to be delivered by the Europe's Rail Joint Undertaking**. Delivering such new technologies will benefit European rail transport (e.g., increasing capacity, reliability, efficiency and attractiveness). However, it is paramount to accelerate the deployment of these technologies (when mature) in Europe with a straightforward migration roadmap and substantial European financing.

Key ask:

Increase and facilitate the support to European rail research and innovation, with competitiveness of the European Rail Supply Industry as its core objective.

More specifically, UNIFE:

- **Calls European institutions to ensure that the ongoing Europe's Rail Joint Undertaking will contribute to a stable and predictable evolution of technical rail regulation and standards**, considering the need to strengthen the competitiveness of the European Rail Supply Industry.
- **Calls on the European Institutions to create the necessary conditions to fasten the deployment of new European rail technologies delivered by European rail research programmes**.
- **Calls on the European Institutions to establish, together with other rail stakeholders, the successor of the Europe's Rail Joint Undertaking in the next European Research Framework Programme** (FP10). The amount of EU funding allocated to this new programme and European rail research in general should be significantly increased to deliver new solutions that will make rail transport more attractive, reliable and efficient.

Skills, diversity & inclusion:
Increasing attractiveness and gaining talents

European rail suppliers are confronted with an ageing workforce, with a significant cohort of employees expected to retire within the coming years. Further to this,only 20% of the staff is composed of women. Yet, rail does answer to the aspirations of all generations as a way to fight against climate change, since it is responsible for only 0.4% of greenhouse gas emissions within the transportation sector.

The European Rail Supply Industry has been at the forefront of reinforcing rail attractiveness through specific actions and initiatives such as:

- the “Hop On for Our Planet” campaign to raise awareness among young people of rail’s green credentials;
- the ERASMUS+ project STAFFER (European Rail Skills Alliance) focused on the necessary skills and profiles within the rail sector; and
- the “Women in Rail” campaign as a commitment to promote a gender-inclusive work environment and encourage more women to start careers in rail.

It is, however, fundamental to do more and develop specific actions at European, national and regional levels. The objectives would be to speed up the deployment of tailored programmes to up-skill and re-skill the workforce through EU financial support (especially for SMEs), and to boost the collaboration between authorities, rail suppliers and universities/educational providers – hence increasing the pool of newcomers into a more diverse and inclusive rail industry.

Key ask:

Increase support at all levels (European, national, regional) to raise the attractiveness of rail supply jobs and the availability of talent.

More specifically, UNIFE:

- **Calls on the European Commission and Member States to widely implement the results of the ERASMUS+ project STAFFER (European Rail Skills Alliance) at both European and national levels.** The main priorities are upskilling and reskilling the current rail supply workforce (e.g., integrating the identified skills and profiles into educational curricula and programmes) and ensuring they are also considered in future policy educational frameworks.
- **Calls on the European Commission and Member States to co-support European rail suppliers, in particular SMEs, to attract newcomers** – especially women and young people – for instance, through dedicated actions and campaigns at European and national levels to build interest around rail (e.g. events in schools, universities and rail site visits), and to promote diversity and inclusion in the rail sector.
- **Calls the European Commission and Member States to financially support European rail suppliers (through EU funds and programmes such as the European Social Fund and the European Regional Development Fund) on skills-related topics.** This should include implementing internal training programmes to upskill and reskill the workforce and supporting collaboration between national, regional, and local authorities with universities and the rail industry, to implement local/regional hubs for railway engineering expertise.

WindEurope priorities for the 2024-2029 EU legislative term:

making the case for renewables-based electrification

Renewables-based **electrification** is the most resource-efficient and reliable strategy to decarbonise our economy and reach climate neutrality by 2050. But as it stands our economy still runs primarily on non-renewable energy, with around 70% of final energy demand in transport, buildings and industry relying on carbon-emitting fuels.

As the new institutional cycle begins in 2024, Europe has a unique opportunity to bring in concrete measures to achieve climate neutrality by 2050. If we want to build a carbon neutral Europe, we need to see vital investment in network infrastructure, smart solutions, renewable energy projects, and in strengthening Europe's green workforce – and all policies should be geared towards achieving this objective. Putting **renewables-based electrification** at the heart of the 'strategic agenda 2024-2029' will put Europe on track to reach net-zero emissions while also bringing major benefits to European citizens and the economy. New electrified solutions will allow end-users to save energy and make more affordable decisions that decarbonise their transportation, heating and industrial processes.

In the next section, we have outlined **six priority areas** which should be at the top of the current and the **post-2024 EU agenda**.

1. *Set an electrification target of 35% by 2030*

Electricity makes up 23% of all energy consumed in Europe. To achieve climate neutrality by 2050, **up to three-quarters of final energy consumption** in Europe will need to be electrified directly or indirectly. Similarly, in the Commission's recent Communication on Europe's 2040 climate target, electrification is recognised as the main driver of the energy transition. It sees the **electrification rate** more than **doubling by 2040**, allowing the EU's final energy consumption to fall by 30%.

The EU must set the right milestones to deliver that trajectory. This means setting the European economy on course for electrification by designating an intermediate **target** of at least **35% by 2030**. A new **unit** in charge of electrification should be created in the European Commission's Directorate-General for Energy, tasked with monitoring progress in electrification.

2. *Make Europe's grid ready for net-zero*

To deliver climate neutrality, the electrification of demand covered by home-grown renewable electricity generation will depend on a fast-evolving **power grid**. The EU wants to install around 30 GW of new **wind** energy every year between now and 2030. Last year, the EU built 16 GW of new wind farms. A lack of proactive grid planning and investment, as well as significant delays in **grid reinforcement** and in managing **grid connection requests** are quickly becoming the main bottleneck for the accelerated deployment of wind energy.

This is also a **supply chain** issue. Europe cannot reach its energy and climate targets without investment in new manufacturing capacities for grid equipment. Member States should take action and set out anticipatory investments in grids, both on the supply and demand side. They should also implement the right strategies to make grid capacity available for net-zero technologies.

The European Commission and Member States need to draw up the right **framework and market design** to scale-up investments in **flexibility solutions**, including support mechanisms, and enable the use of dynamic electricity pricing and time responsive grid tariffs to incentivise **demand side flexibility**. The inadequate assessment of the needs for power system flexibility and lack of proper market incentives have kept Europe reliant on fossil-based dispatchable electricity generation. At the same time, the curtailment of renewables is growing across Europe, increasing the volume risk and thus the investment risk for new RES projects and system integration costs. On the other hand, the newly electrified demand has huge potential in providing time-flexible, demand response services that can support the integration of renewables.

In terms of **offshore wind infrastructure**, the Commission and Member States should further promote **regional cooperation** at sea basin level. For instance, to unlock full offshore wind power potential of the North Sea, collaboration with neighbouring energy partners such as the UK and Norway is key. Moreover, the EU must establish the right cross-border cost sharing

mechanisms. A strategic, coordinated offshore and renewable hydrogen infrastructure plan will maximise Europe's renewable energy potential, while boosting energy security, minimising local environmental impact and reducing costs for consumers.

3. *Enable the electrification of demand*

Direct electrification is the most effective way to enhance the European industrial sector's competitiveness, while helping to decarbonise **end-users**. The significant potential of industrial electrification can only be tapped into if the regulatory framework guarantees **cost-competitive electricity prices**. Moreover, to facilitate the uptake of electricity-based technologies in industries, we need lower **taxes** for electricity (and renewable hydrogen) compared to fossil fuels.

Producing **renewable hydrogen** to help decarbonise hard-to-electrify sectors will mean a massive scale-up of electrolysers, additional renewable electricity capacity, and accelerating electricity grid roll-out. It is also central to Europe's energy security strategy. To deliver on this, the EU must ensure a **level playing field** for renewable hydrogen producers in the EU, while targeting the right **end-uses** (aviation, shipping, steel, other parts of industry), driving investments in **projects**, and developing and financing **infrastructure** accordingly. Economic and financial **support** for the **production** of renewable hydrogen should be complemented with the creation of **demand signals** in different sectors. Demand can be incentivised via the European Hydrogen Bank, demand creation mechanisms (e.g., carbon contracts for difference for hard-to-electrify sectors, rewarding the use of green steel in wind products via non-price criteria) and the full implementation of the legally binding targets for renewable hydrogen. This is key to scaling-up renewable hydrogen to a competitive level this decade.

4. *Mainstream electrification in all funding and financing*

All **finance** flows must be consistent with Europe's climate and energy objectives. EU investment frameworks, including the 2027-2034 Multi-Annual Financial Framework, should therefore work to mainstream electrification. This will channel investment to where it is most needed.

According to the EU Action Plan for Grids, **€584 billion** will need to be invested in grids **by 2030.** This will involve well-coordinated planning and commitment at the EU and national level. The transition should be supported by aligning taxation for energy products with EU energy and climate policies. Currently, electricity is taxed several times more than gas in many Member States. This needs to change.

5. *Build Europe's Green Workforce: Jobs and Skills for the Energy Transition*

Europe must boost the number of green workers and equip them with the right skills to deliver the energy transition. The wind industry alone will need **515,000 workers by 2030**, up from 300,000 today.

Electrification can also help to fuel local growth and career opportunities. By attracting and training more workers in electrification-focused positions, policymakers will successfully address decarbonisation, creating full-employment and boosting social support for climate change.

6. *Fully implement the Clean Energy and Fit-for-55 Packages*

The next legislative term will have to ensure that the ambitious energy, climate, environmental and transport targets, agreed under the Clean Energy and Fit-for-55 Packages, are swiftly **implemented** by the Member States. Only then can Europe reap the benefits of large-scale electrification of energy use. The Commission should monitor progress on electrification and support Member States to meet their targets through close cooperation in the implementation of their National Energy and Climate Plans. Therefore, the recently agreed EU rules should not be opened for revision before being fully implemented, and any new legislative initiatives should only complement the measures needed to achieve the climate-neutrality objective.

By implementing these 6 measures, the EU will provide the clear signals we need for investors, authorities, and end-users. This will set the European economy on course for renewables-based electrification, reaching climate neutrality by 2050 and delivering an efficient, secure, and decarbonised energy system.

Press release

Brussels, 17 April 2024

Railways invite legislators to get 'On Track for Europe'

Ahead of the EU elections this June, the Community of European Railway and Infrastructure Companies (CER) has launched its 2024-29 manifesto "On Track For Europe" at a high-level event hosted in the European Parliament this evening by MEP Dominique Riquet. Aimed firmly at reaching the modal shift and modal share objectives of the EU Strategy for Sustainable and Smart Mobility, the manifesto sets out the European Rail Sector's vision for well-functioning rail passenger and freight services in a high-capacity rail infrastructure network, that will be a key enabler of Europe's green and digital transitions.

Railways hold high ambitions for the future of sustainable transport in Europe: high-speed connections between all EU capitals and major cities, quality regional services for all, more night trains and sustainable tourism options, fully digital freight operations with rail as the backbone of net-zero logistics. The importance of these issues was also stressed in Former Italian Prime Minister Enrico Letta's High Level Report on the future of the Single Market, published today, which calls on the EU to build high-speed rail connections between all EU capitals to resolve a "glaring paradox" in EU infrastructure.

The manifesto contends that rail, with its unique advantages in terms of emission savings, energy-efficiency and generation of economic activity, should be at the centre of all policy tools designed to promote Europe's sustainability, energy independence and prosperity. As Heads of States and Governments meet today to discuss the future of the EU, CER stresses the need for a strategic vision encompassing sustainable transport. As such, supporting public and private investments in infrastructure is critical to continue promoting rail projects on the TEN-T network, deepening the single market through a High-Speed Masterplan as well as furthering interoperability. This development goes hand in hand with the deployment of digital enablers, such as ERTMS or DAC – both allowing safer and more efficient railway operations in the EU. CER calls on Member States to make this a priority in the next term of the European Commission and Parliament.

Four fundamental pillars are identified to guide future policy action:

- **Fair competition between modes –** Despite past efforts, the regulatory framework today is not fair, with railways carrying many costs and obligations not imposed on other transport modes. Much remains to be done to redress imbalances in conditions and pricing to access infrastructure, energy taxation, VAT rules and differing social conditions, notably allowing social dumping practices in the road sector.
- **Adequate financing of railways –** Railways need fair, long-term, comprehensive financing. Meeting the huge infrastructure investment needs of the sector will require a bigger EU transport budget line in a scaled-up Multi-annual Financial Framework including new sources of EU funding such as earmarked revenues from the EU Emissions Trading System.

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- **Deployment of rail's key digital enablers –** This includes the European Rail Traffic Management System (ERTMS) and Digital Capacity Management (DCM) for optimised use of the rail network, Digital Automatic Coupling (DAC) as a crucial step to full digital freight operations, and the Open Sales and Distribution Model (OSDM) for easier international ticketing. Such digital game changers not only enhance rail services for its end users but also reduce costs. For instance, the increase in rail capacity that can be achieved through digital means with DCM requires just 5% of the budget that would be needed to build new physical rail infrastructure.
- **A greener approach to market and competition policies –** Competition policy needs to better take into account the EU's climate and environmental policies and should avoid any modal shift to more polluting modes of transport. Certain rail market segments such as Single Wagon are often not economically viable today yet represent a sustainably viable transport solution to combat the climate crisis. Aid to such services cannot be assessed based on rules that do not consider the EU's strategic policy orientations as a whole, including EU Green Deal objectives.

During the launch event, CER gathered the impressions of current policymakers as well as external stakeholders representing business and civil society users of rail services, many of which contributed to the 2023 survey that fed into the final manifesto.

Member of the European Parliament and event host Dominique Riquet stated: "*As this parliamentary term concludes, it is time to take stock on our achievements. We've accomplished much with CEF II, the ongoing rail capacity regulation, or TEN-T guidelines. Yet, the fight for rail continues. We must now reflect on future policy developments to use it best and reach our decarbonisation objectives*."

Keynote speaker **Belgian Deputy Prime Minister and Minister for Mobility Georges Gilkinet** welcomed the sector's initiative, stating: "*Trains must become the backbone of our European mobility if we want to decarbonise our economies. Modal shift to rail, the most sustainable mode of transport, must be a political priority for the next EU Commission. To implement this and connect all Europeans by rail, we need to invest massively in the sector. The CEF Program is playing a crucial role and we need to continue in this direction with a third and well-financed CEF call. A long-term vision, sound financing and people are the key to future-proof European mobility*."

Also speaking at the launch event, **Filip Alexandru Negreanu Arboreanu, Head of Cabinet of European Transport Commissioner Adina Vălean**, gave his positive reaction to the manifesto: "*Your support for a strong funding instrument for transport infrastructure is extremely valuable and very much appreciated. And you can also rely on our support for making rail the desired transport mode of the future.*"

CER Executive Director Alberto Mazzola said: "*In the CER Manifesto, railways commit to provide for the new generations of Europeans: better passenger services for all, including high-speed connections between capitals and major cities; digital rail freight operations integrated with other modes, leading to zero-emission European logistics; and reliable, safe, high-speed infrastructure as well as improvements to the existing network through modernisation and digitalisation. We call on the EU and Member States for a sustainable investment policy to continue prioritising and supporting rail".*

With concrete policy suggestions for each of its four pillars, the CER manifesto 2024-2029 shows what is needed to allow rail to further develop and Europe to benefit from

rail's full potential.

Discover the complete manifesto at **www.cer.be/ontrackforeurope.**

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About CER

The Community of European Railway and Infrastructure Companies (CER) brings together around 70 railway undertakings, their national associations as well as infrastructure managers and vehicle leasing companies. The membership is made up of long-established bodies, new entrants and both private and public enterprises, representing 78% of the rail network length, 81% of the rail freight business and about 94% of rail passenger operations in EU, EFTA and EU accession countries. CER represents the interests of its members towards EU policymakers and transport stakeholders, advocating rail as the backbone of a competitive and sustainable transport system in Europe. For more information, visit www.cer.be or follow us on Twitter @CER_railways or LinkedIn.

Manifesto 2024-2029

For a more sustainable and innovative European E-mobility ecosystem

Progress on electromobility in the EU is accelerating rapidly, driven by key legislative measures taken during the existing mandate.

Despite being relatively young, the EV sector also **demonstrates vast growth potential** - particularly in **generating new job opportunities**, with projections that employment in the sector will skyrocket from 44,000 full-time equivalents (FTE) in 2022 to an estimated 162,000 by 2030.*

ChargePoint has entered the European the electric vehicle (EV) market to promote and support its growth as an industry innovator, applying **state-of-the-art software technology** to improve EV charging performances and provide a more streamlined experience to its customers.

With European EV fleets expected to grow from 8.1 million units in 2023 to 55.3 million units in 2030, **ChargePoint welcomes the phase-out of ICE passenger cars by 2035**. We are also committed to a corresponding **transition of commercial fleets** and fully support the Commission's proposal to **reduce CO2 emissions from the heavy-duty sector by 90% by 2040**. However, this must go hand in hand with the development of a **safe and reliable charging infrastructure**.

Who is ChargePoint?

ChargePoint is creating a **new fuelling network** to move people and goods on electricity. Since 2007, we have been dedicated to **helping businesses and drivers switch to electric vehicles effortlessly**, with one of the largest EV charging networks and a complete range of charging solutions.

We offer a unified solution of **software, hardware, and professional services,** that is purpose-built for commercial, fleet, workplace, and residential settings, allowing users to use **one charging and e-mobility platform for the entire operation**.

We provide these solutions to drivers, business, utilities and fleets to enable them to own and operate their own stations, while leveraging the expansive ChargePoint **network of over 286.000 stationary ports and 630.000 roaming ports across Europe**.

What ChargePoint represents

A new kind of tech company. A software and hardware company devoted to the development of an **integrated and connected platform for the e-mobility sector**. The perfect conjunction to **support the Green Deal objectives through innovation**.

* Charge Up Europe State of Industry, 2023.

To match the expected EV demand by 2035, **ChargePoint is committed to accelerating deployment across Europe** (and the UK). E-mobility is crucial for unlocking the full potential of green transport and greening supply chain systems, as well as for fostering the independence of the EU economy. Yet the creation of a harmonized European e-mobility ecosystem faces challenges stemming from the **overlap between national and EU regulations**, as well as the **lack of technical compatibility in existing infrastructure**.

What we stand for

An enhanced experience of both customers and EV drivers

We want to ensure the best experience for both our customers and our drivers: our charging network allows the driver to enter the ChargePoint ecosystem for easy localisation and secure payments. The **Alternative Fuels Infrastructure Regulation (AFIR)** created a clear legal framework for public charging stations, and the **Energy Performance of Buildings Directive (EPBD)** will do the same for private charging; and ChargePoint is committed to supporting their **swift, comprehensive and coherent implementation**.

A stronger and competitive Single Market

The e-mobility sector has a lot of untapped potential, especially in Europe. We want to support the **expansion of the sector,** as we see this as a fundamental step to attain the European Green Deal objectives. In order to allow a **harmonised EV charging market**, standards and common approaches to smart meters are essential. The **Measuring Instruments Directive (MID) Revision** will be a key step to foster the e-mobility sector.

Increased EV uptake

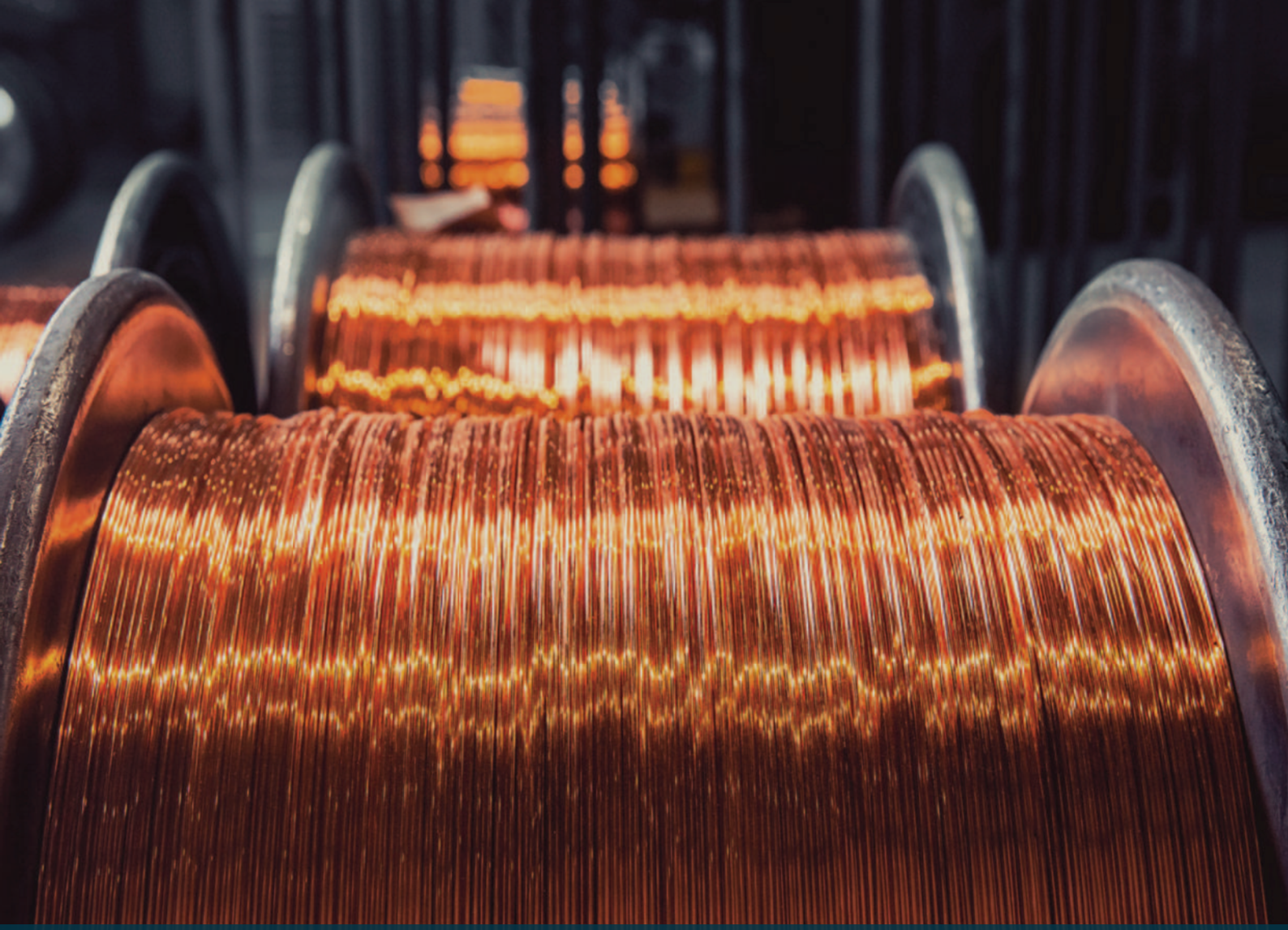
The electrification of vehicles is crucial for delivering the sustainability goals of the EU. **We therefore welcome the ban on ICE vehicles as of 2035** and we are aligned with the proposal to greatly reduce the emissions of HDVs. Looking ahead, we are confident that ambitious targets for corporate fleets will be a key step in accelerating the transition to electric mobility and **ensuring a sustainable future for the environment and society**. Facilitating the **integration of electric vehicles into corporate fleets** can effectively reduce greenhouse gas emissions and mitigate the environmental impact of transport on our climate.

Contribution to data economy

With the Data Strategy, the EU has set clear goals to develop a data economy beneficial for us all. ChargePoint is **committed to fostering the use of data**, and we believe that the **Data Act** has been a step in the right direction. However, we call for further clarification on the the status on the **proposal on access to in-vehicle data** as it would be essential to avoid leaving the whole sector open to legal uncertainty.

Security of infrastructure

Cybersecurity is key for a safe and strong e-mobility infrastructure. Legislation such as the new **NIS2 and the Cyber Resilience Act** will play a fundamental role in **enhancing the level of cybersecurity of the e-mobility sector**. However, to attain this goal, it is imperative to work towards coherent implementation of these rules.



An industrial plan for strategic net zero value chains to deliver a resilient, climate-neutral EU

How the copper industry can support the EU's political goals during the next five years

Policy Priorities 2024-2029

Cu International Copper Association Europe

The copper industry can play a key role in supporting the transformation of the EU into a climate-neutral and resilient economy. **Copper stands at the forefront of the EU decarbonisation journey as a strategic raw material that enables electrification, energy efficiency, and renewables.** The production of copper can also allow the generation of other critical raw materials such as cobalt, rhodium, and palladium. Largely because of its crucial role in decarbonisation technologies, copper demand is expected to grow by 35% in the EU by 2050.

The copper industry is also committed to reducing the impact of its operations on the environment and communities. **Members of the International Copper Association (ICA) have committed to a goal of bringing their copper production to net zero Scope 1 and 2 greenhouse gas emissions by 2050,** based on a thorough analysis of technologies and conditions to decarbonise copper production. **ICA members are also prepared to contribute to the EU's resilience by developing more mining, refining, and recycling capabilities within EU borders and abroad** while implementing high environmental protection and community development standards.

The upcoming European Commission and Parliament must put the European Union on a solid track toward climate neutrality and resilience. To achieve this, **bold action must be taken to strengthen the strategic value chains for net zero industries, based on a broad approach encompassing raw materials, intermediate as well as final products**. This journey requires a collective effort in which policymakers, industry leaders, and civil society must closely work together.

The Critical Raw Materials Act is a good first step to establishing an inviting and stable environment for investments in strategic raw material value chains that will fuel growth, spur innovation, create jobs, and bolster social stability. Yet, **a more coordinated approach is needed to create a genuine EU Industrial Policy** that balances the interests of citizens, businesses, and the environment t**o create the conditions for attracting investments in the strategic raw material value chains needed to deliver a climate-neutral, resilient EU**.

Concretely, this requires 5 elements to be in place:

Policy Priorities

01.

Making the resilience and competitiveness of strategic net zero value chains a defining political priority.

02.

A stable, coherent, and inviting regulatory environment to promote investments in strategic raw material value chains

03.

Streamlined permitting for mining, refining, and recycling in the EU, and stronger partnerships outside the EU.

04.

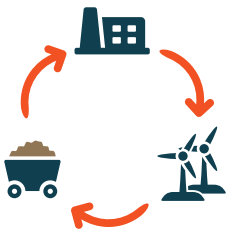
Access to competitively priced, fossil-free energy in sufficient quantities.

05.

Effective policies to promote electrification, energy efficiency, and renewables, in particular in buildings and transport

01.

Making the resilience and competitiveness of strategic net zero value chains a defining political priority.



The next European Commission should make the resilience and competitiveness of strategic EU industries a key political priority, starting with appointing a **Commission Executive Vice-President dedicated to Strategic Net Zero Value Chains**. The EU must accelerate the green transition while enhancing its open strategic autonomy, and the EU industry should be supported in its major role in this transition.

This Executive Vice President should be tasked with defining an EU Industrial Policy that ensures that coordinated regulatory frameworks facilitate investments in strategic net zero value chains, boost their competitiveness and resilience, ensure sustainability, and unlock economic growth. Such policy convergence should be underpinned by a broad engagement of the Executive Vice-President, industry leaders, and civil society in a constructive dialogue to strike the right balance between economic, societal, and environmental ambitions.

02.

A stable, coherent, and inviting regulatory environment to promote investments in strategic raw material value chains

A stable, coherent, and inviting regulatory framework is key to attracting investments in extracting, processing, and recycling the strategic raw materials needed by Europe. Mining, refining, and recycling copper involve substantial capital investments with a return that spans many years and hence require stable and predictable operating conditions.

The EU regulatory framework must also maintain fair competition among European and international players. **EU climate regulations** must ensure effective protection against carbon leakage for EU operators.

To improve the business case for **recycling** strategic raw materials, the EU regulatory framework should facilitate the development of recycling capacity through higher collection rates of products at their end of life, improved metals sorting technologies, as well as chemical management policies that do not hinder metals recycling.

The regulatory framework should provide **financial incentives** for investments into strategic raw material value chains: grants (via an EU Fund for Strategic Raw Materials), subsidies, tax credits, and low-interest loans to support investments in decarbonisation and sustainable projects. These incentives should be complemented by an ambitious but workable **taxonomy for sustainable finance**, that directs capital to support industry investments into the transition to net zero, circularity, and environmental protection.

03.

Streamlined permitting for mining, refining, and recycling in the EU, and stronger partnerships outside the EU

Streamlined permitting processes are essential to encourage responsible mining, refining, and recycling of strategic raw materials like copper in the EU. It is also important that industrial projects get the opportunity to demonstrate their relevance and sustainability, even in areas currently covered by the Habitats Directive and the Birds Directive, specifically by highlighting their connection to the public interest.

As we approach 2030, with copper demand expected to increase by 3% per year, it is clear that the EU must not only bolster its domestic copper supply from primary and secondary sources but also protect the open global flows of primary and secondary production. In this respect, it is important to establish and strengthen **trade agreements with third countries** and to develop **strategic partnerships** to de-risk investments in partner countries and facilitate the diversification of imports.

04.

Access to competitively priced, fossil-free energy in sufficient quantities

Copper production is energy-intensive and EU producers cannot pass higher energy or regulatory costs to their customers since copper is traded on global commodity markets. Investments in the expansion of copper production in the EU can only be made based on predictable and competitive energy and electricity prices. The role of electricity in particular is crucial because process and equipment electrification is the biggest lever to decarbonize copper production. **Access to competitively priced, decarbonised electricity is, therefore, a pre-condition for decarbonizing copper production.**

Current EU electricity prices are higher than in most other countries where copper is produced, which impacts the global competitiveness of EU producers. Due to the marginal pricing system for electricity, gas is expected to continue to set high wholesale electricity prices in the EU still in 2030. **The next Commission must take action alongside Member States to ensure that strategic electro-intensive industries, like copper, have access to competitively priced electricity.**

05.

Effective policies to promote electrification, energy efficiency, and renewables, in particular in buildings and transport.

Strategic net zero value chains must be developed to enable decarbonisation of all sectors. This also requires a **predictable market outlook with clear transition trajectories** defined by electrification, energy efficiency and renewable policies in key sectors.

A rapid transition to a **greener electricity grid** must be achieved, the **energy efficiency first principle** must be applied and **direct electrification prioritised** in construction, transportation, and significant portions of the industry. To give a clear signal on the need to accelerate electrification, the Commission should put forward an EU electrification target for 2030.

The renovation wave must unlock the untapped potential in buildings and accelerate the transition to **clean heating**. It should be supported by an **EU fire safety strategy** to ensure the safe deployment of electrification technologies in buildings across Member States, among others, through the inspection and upgrading of obsolete electrical installations.

Meeting the 2030 energy and climate targets will require full implementation of the Fit for 55 Package. The 2040 trajectory must maintain the focus on **energy efficiency, renewables, and electrification** with initiatives in the replacement of inefficient equipment like old electric motors, the application of heat recovery solutions, and the development of the electricity grid at multiple levels.

"2030 is around the corner. Let us be bold and ambitious, let us create the conditions for strong net zero value chains to deliver a strong, resilient, and climate-neutral EU. It is time for action, and you can count on the support of the copper industry!"

Quentin de Hults, Director General,
International Copper Association Europe