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BUSINESSEUROPE PRIORITIES ON ZERO- AND LOW-EMISSION MOBILITY IN THE NEXT EU POLITICAL CYCLE

KEY MESSAGES

- 1** **European business stands behind the EU ambition of climate neutrality** and is investing heavily to ensure that all modes of transport help to achieve this common goal. The energy transition is an opportunity for European industry that we need to take advantage of. European policymakers should therefore engage with all relevant stakeholders in public-private partnerships and conduct a strategic mapping exercise on where industry's competitive advantages lie, how to deliver new strategic value chains, match labour skills to future needs and create policy synergies in order to be globally competitive.
- 2** Furthermore, **demand-side measures should be coordinated at EU level** across all modes of transport, in particular in designing cost-effective consumer and customer purchasing incentives (CPIs), implementing Member State agreements under the Alternative Fuels Infrastructure Directive, promoting new mobility services and standardising technology and infrastructural solutions.
- 3** **Funding for research, development and deployment can be improved** by leveraging remaining structural funds and the new Multiannual Financial Framework, but also by improving the public procurement strategy of Member States, paying attention to the needs of SMEs and underwriting new risks to leverage private-sector financing.
- 4** **To complete the integrated approach**, it will be important to connect zero- and low-emission mobility legislation to other key areas, to involve stakeholders in reflecting about the feasibility of a robust and reliable methodology for a lifecycle approach, and to develop a stable and enabling policy framework for sustainable, synthetic and advanced fuels and gases.

1. Introduction

European business at the heart of EU climate ambition

BusinessEurope stands behind the EU ambition of net-zero greenhouse gas emissions (climate neutrality) to reach the objectives of the Paris Agreement.¹ Zero- and low-emission mobility (ZLEM) will be a key part to achieve this shift, and will be needed for Europe to stay competitive and serve the mobility needs of people and goods. After all, the transport sector is the backbone of the European Union's pursuit for job-creating growth, supporting 13.3 million jobs (6.1% of EU total) in the automotive industry alone.² European policymakers and Member States have passed essential pieces of legislation to ensure the EU's position as a global leader on climate action.³ These files have been heavily debated with other stakeholders regarding the extent to which such regulatory proposals were technically and economically feasible.

Industry is committed to drive Europe's economy to zero- and low-carbon solutions. For example (company-specific examples in annex and on www.ClimateYourBusiness.eu):

- The European **automotive industry** decreased CO₂ emissions of new cars by 36.1% between 1995-2017⁴ and aims to reduce the CO₂ emissions of new cars, vans and heavy-duty vehicles by another 30-37.5% by 2030 compared to 2019/2021 levels.
- In Europe's **aviation industry**, average aviation fuel consumption fell by 24% per passenger kilometre between 2005 and 2017.⁵
- The **shipping community** has supported the UN International Maritime Organisation (IMO) to bring shipping in line with the Paris Agreement's objectives. In 2018, a global strategy with concrete greenhouse gas (GHG) reduction targets for international shipping was approved, which will cut the shipping sector's overall GHG output with at least 50 percent by 2050 compared to 2008.⁶
- The European **railway industry** already consumed 20% renewable electricity in 2015 and strives towards carbon-free train operations by 2050.⁷

¹ More information: BusinessEurope, 2019. European business views on a competitive energy and climate strategy.

² ACEA, 2017. Employment trends.

³ Among other things, in 2018 and 2019 they have found common agreements on emission performance (CO₂) standards for newly sold light-duty and heavy-duty vehicles, the Clean Vehicle Directive, and the Commission has made proposals on tyre labelling and a strategic action plan for Batteries. Transport also played a prominent role in the European Commission's 2018 'strategic long-term vision for a prosperous, modern, competitive and climate neutral economy'.

⁴ ACEA, 2018. Passenger cars.

⁵ EASA, 2019. European Aviation Environmental Report.

⁶ IMO, 2019. Low carbon shipping and air pollution control.

⁷ [CER and UIC](http://CERandUIC), 2015. Rail transport and environment – facts and figures.

As the BusinessEurope position paper on the future of low-emission mobility⁸ shows, a large number of different solutions are available to decarbonise the various modes of transport in the coming decades in order to reach the objectives of the Paris Agreement to limit global average temperature rises as much as possible to 1.5°C. BusinessEurope has therefore advocated actively that **the full potential of all such solutions should be explored in a technology- and fuel-neutral way**, and that this should be done through public-private partnerships wherever possible.

In this regard, it is now crucial that we make sure that the value chains and breakthrough technologies of zero- and low-emission mobility (ZLEM) are supported and can rapidly be deployed on a large scale in Europe, and with it attract the many billions of euros of investments needed for the transition. Such a focus will enable European businesses to maintain and further strengthen their position as global frontrunners, while Europe at the same time creates jobs in new industries. In short, **the energy transition is an opportunity for European industry that we need to take advantage of.**

2. Connecting the dots is key to create sustainable and competitive value chains

Over the past few years, many European businesses have made strong commitments to decarbonise their modes of transport, oftentimes linked to billions of euros in investments. However, it is not certain whether a significant part of these investments will be made in Europe. We should not be naïve. Some of Europe's main competitors such as the United States and China are heavily competing for the financial and human capital that will drive these future value chains. For example, China's New Energy Vehicle (NEV) and the "Made in China 2025" initiative have provided more than US\$10 billion in financial incentives since 2012 to boost sales of electric vehicles. This has allowed China's electric vehicle stock to rise from almost zero in 2013 to 2.3 million in 2018, taking up almost half of the global electric car stock.⁹ 85% of battery cells are also produced in Asia, with just 3% in Europe.¹⁰

Creating sustainable and competitive value chains is a public-private partnership

In particular, Europe must assess and act on whether it is currently providing the right incentives to original equipment manufacturers (OEMs), transport mode manufacturers, suppliers, operators, new mobility services and other players across the mobility value chains to invest in Europe rather than to export finished ZLEM solutions to it. Rather, **Europe needs incentives that help make its companies global leaders that export their ZLEM solutions from Europe to other parts of the world.**

⁸ [BusinessEurope](#), 2018. The future of low-emission mobility.

⁹ [IEA](#), 2019. Global EV Outlook 2019.

¹⁰ [European Commission](#), 2019. Implementation of the strategic action plan on batteries.

An important way to do so is to connect the dots: How can we make sure that the many pieces of legislation create tangible benefits to both consumers and producers, such as those proposed in the 3rd Mobility Package¹¹, and incentives zero- and low-carbon investments? We believe that the following actions are necessary:

- **Conduct a mapping exercise** of the zero- and low-emission related value chains for all modes of transport in Europe compared to those in other major economies. This would allow for better reflections on what Europe's competitive advantages are really going to be. Such an exercise should also include:
 - A description of why certain regions managed to attract parts of the value chains and how such regions developed in terms of know-how and economic prosperity.
 - A vision on which parts of the value chains for ZLEM are currently missing in Europe and if there are incentives that could attract those parts of the chain to establish in Europe.
 - An analysis of what skills are needed in the short-, medium- and long-term to be able to cope with new technologies linked to low-carbon transport and automation, and how to effectively train European students and workers to bridge the gap.
- **Align transport policies and create synergies** with policy areas that are not directly related to decarbonisation of transport modes but do have important impacts on its success. Oftentimes these are driven by digital infrastructure developments, such as connectivity, automation and co-modality.
- A detailed elaboration on **demand-side incentives** (more details below).

3. Accompanying measures

Focus more demand-side incentives and proper implementation

There are many forces in the market at play that go beyond the control of manufacturers and operators of transport modes, but that are crucial for them to reach the ambitious EU climate targets for modes of transport. In particular, there needs to be more focus on the role of the consumer in the shift towards the adoption of zero- and low-emission mobility (ZLEM) solutions. Examples include consumer purchase incentives and infrastructure development to ensure the take-off of the market:

- On **consumer purchase incentives** (CPIs), specific policies could be coordinated at EU level, such as voluntary upfront grants or purchase tax exemption. To be cost-effective, CPIs could be designed to maximise their environmental benefit, for example based on whether the ZLE vehicle is low-end or high-end, short-range or long-range. Furthermore, it is important that the incentives match the needs of the consumer, so that consumers purchase the right vehicles for the right type of journeys they incur. Incentives should also be technology and fuel neutral, allowing vehicles driving on electricity, fuel cells, advanced biofuels (liquid and gaseous), synthetic fuels

¹¹ [European Commission](#), 2018. Europe on the Move.

or other low-carbon solutions to be able to compete. This is especially important given the fact that electric batteries, for now, might not be suited for all modes of transport. Furthermore, as market penetration increases in the future, it should be possible to gradually reduce incentives whilst not affecting market development. This should be combined with education and awareness raising campaigns that explain the nature of the CPIs, allowing incentives to have the right impact and to not go unnoticed by new buyers.¹²

- On **infrastructural development**, there is still a long way between what EU policymakers have envisaged and how policies are actually being implemented. For example, whereas the Commission's 2018 updated impact assessment on new cars and vans estimates Europe needs at least 2.6 million publicly-accessible electric recharging points in Member States by 2030¹³, the current number of points as of 2019 only stands at about 151,000,¹⁴ and the quality of existing points is not optimised. Furthermore, many of the existing charging and alternative fuelling points that have been developed for cars and vans are not fit for larger modes of road transport like trucks and buses. In fact, none of the electric vehicle charging points are actually suitable for heavy-duty vehicles with regards to size and power capacity. The infrastructure needed for heavy-duty vehicles in the energy transition seems to be entirely absent for alternative energies such as electricity¹⁵ and hydrogen, somewhat more developed but still insufficient for (bio-)CNG and (bio-)LNG, despite high ambitions for decarbonisation by policy makers.¹⁶ The issues of infrastructural development are not limited to road transport modes. For example:
 - While long-term regulatory certainty on advanced biofuels and synthetic fuels needed for sustainable **aviation** has recently been improved under the revised Renewable Energy Directive, the urgent need for how to secure sufficient supplies of advanced biofuels in Europe still needs to be addressed. Furthermore, completion of the Single Aviation market can be achieved by reforming the architecture of Europe's Air Traffic Management. Europe's airspace architecture – e.g. through harmonised and more widespread implementation of Free Route Airspace (allowing airlines to fly their preferred trajectories) – and adapting airspace design to traffic flows, would lead to at least a 10% decline in CO₂, thereby contributing towards making air transport even more sustainable in the future.¹⁷
 - With respect to the **maritime sector**, infrastructure for alternative fuels such as (bio-)LNG, (green) methanol and (green) hydrogen must be facilitated across the EU. In addition, for existing vessels the use of shore-side electricity will significantly reduce emissions in ports and, therefore, implementation should be supported. Moreover, to facilitate more sustainable short sea shipping, infrastructure is needed that can easily adapt to changes in fuels used.

¹² [Hardman et al.](#), 2017. The effectiveness of financial purchase incentives for battery electric vehicles – A review of the evidence.

¹³ [European Commission](#), 2018. Technical update of the non-paper on cars/vans CO₂ regulation.

¹⁴ [European Alternative Fuels Observatory](#), 2019. Normal and fast public charging points.

¹⁵ Though noting that there are promising pilots being undertaken for electrified heavy-duty vehicles on electric road systems (ERS) or "eHighways" in Sweden and Germany.

¹⁶ [ACEA](#), 2019. Alternatively-powered trucks. Availability of truck-specific charging and refuelling infrastructure in the EU.

¹⁷ [SESAR](#). Benefits environment (website accessed on 14 June 2019).

- For **railroad** transport, electrification has already taken a big leap forward in zero-emission mobility, but cross-border links on regional and main lines are still missing in order to reach its full potential. Additionally, in some cases the electrification of a railway line may not be economically viable, and instead it could be more logical to use other zero- and low-carbon solutions.
- An excellent opportunity to improve the availability of charging and refuelling infrastructure for all modes of transport is through the forthcoming **review of the Alternative Fuels Infrastructure (AFI) Directive**. The focus of a review should be on how Member States can reach their deployment targets of infrastructure suited for ZLEM and to further standardise technology and infrastructure solutions. This helps to achieve economies of scale in production and ultimately helps to reduce costs for the final user. In addition, such a review should secure better incentives for the creation of this infrastructure. Furthermore, implementation of the Directive should be more coherent and consistent across the EU. To achieve tangible results:
 - The introduction of harmonised incentives to achieve infrastructure targets for the different Member States should be considered, as there are also procurement targets for clean light-duty vehicles in the Clean Vehicle Directive.¹⁸
 - The revised Energy Performance of Buildings Directive (2018/844/EU), where charging point requirements are introduced for car parks over a certain size, needs to be implemented properly.
 - The list of technologies referenced in the AFI Directive should be updated to reflect recent technological developments. As one example, Electric Road Systems should be included next to charging points when it comes to electricity as a fuel.
 - Following the recently updated Renewable Energy Directive (RED II) that included provisions on planning for renewable power production, government should ease planning applications, including facilitated permitting and approval procedures for renewable fuel infrastructure.
 - The infrastructure development for a fully functional and EU-wide co-modality network of core-corridors as set out in the TEN-T-regulation (Trans-European Transport Network) is not yet completed. Such a co-modal network should ensure efficient links between the EU capitals and other main cities, ports, airports and key land border crossing, as well as other main economic centres.
- On **automobile taxation**, there is a tendency in some Member States to favour this as a policy option to stimulate the renewal of the fleet and the uptake of ZLEVs. Such a discussion is taking place on EU level in the context of the review of the VAT Directive, for which the European Commission made a proposal in January 2018. Regardless of the design of the final system of VAT-rates, if Member States would install reduced VAT-rates on alternative vehicles, it would be important that there is quick and accurate access to the relevant information about the different VAT-rates on alternative vehicles in the different Member States.

¹⁸ [Directive 2019/...](#) amending Directive 2009/33/EC on the promotion of clean and energy-efficient road transport vehicles. EU institutions agreed on procurement targets for clean light-duty vehicles (17.6-38.5% by 2025) and heavy-duty vehicles (6-10% for trucks, 24-45% for buses by 2025).

Increase financing for research, development and deployment

According to the Commission's long-term climate strategy, the investment needs for ZLEM alone under the current energy and climate policy framework will amount to EUR 685 billion per year (3.5% of future GDP) for the period 2021-2030, and up to EUR 904 billion per year (4.6% of future GDP) between 2031 and 2050 in a climate-neutral scenario.¹⁹ To mobilise such huge amounts will be very challenging, therefore:

- The remaining **EU structural funds and projects of common interest (PCIs)**, as well as the highly-important new **Multiannual Financial Framework** should be leveraged for directing more money to research, development and deployment of new ZLEM technologies. R&D support can also be extended for developing greener aircrafts to back industry's efforts to reduce dependency on fossil fuels. Aircraft fuel efficiency levels have improved by 2% a year in Europe in recent years and further significant progress can be made if current research and development initiatives, such as electric and hybrid engine technologies, and sustainable alternative fuels were better funded. It is necessary for the right political decisions do be taken to remove any hurdles hampering this progress.
- Policymakers should consider the recommendations expected later in 2019 from the **Strategic Forum for Important Projects of Common European Interests (IPCEI)** on automated, clean and connected vehicles, as well as hydrogen systems and technologies. Learning points from negotiations in other modes of transport should also be followed. For example, the Waterborne Technology Platform²⁰, which is the European research and innovation platform for waterborne industries, is a good example of how several stakeholders, such as vessel owners, manufacturers and service providers are closely working together to reach consensus on a broad range of R&D solutions and financing opportunities for clean transport.
- Europe's **public procurement strategy should not primarily focus on price aspects**. By considering the environmental impact of products, possibly through a methodology for a lifecycle approach (more details below), a better consideration can be given to infrastructure quality and implementation of ecological and sustainable innovations. For example, contracts for infrastructure construction that transfer the responsibility for maintenance to construction companies provides these companies with incentives for more sustainable designs and construction choices. Another example could be the procurement of public transport in cities, whereby authorities should be encouraged to choose ZLEM solutions in line with obligations in the Clean Vehicles Directive.
- **Attention should also be paid to small- and medium-sized enterprises (SMEs)**, as funding conditions must be adapted to the reality of SME business models. For example, better funding conditions for the renewal of fleets is essential in order to prevent mobility rules from disrupting the effective development of freight transport by road, which is still hugely important to the EU's economy.
- On a final note, **governments should do more to leverage private-sector financing**. The investment capacities of many private companies for breakthrough technologies will be driven by the extent to which they can attract enough funding from financial markets. In that context, the legislation on **sustainable financing** should channel investments towards projects with a significant CO₂ emission

¹⁹ [European Commission](#), 2018. 2050 long-term strategy. Figure 92 and Table 10.

²⁰ [WaterborneTP](#), 2019. Website accessed on 9 May 2019.

reduction potential, not to preclude current mobility and fuel providers from access to finance that might be necessary for the low-carbon energy transition. For financial markets, there needs to be a business case to provide this funding, which is often linked to policy uncertainty and in some cases requires public support to underwrite new risks.

Connect zero- and low-emission mobility legislation to other key areas

Rather than thinking in silos, an integrated approach is needed when creating new legislation for zero- and low-emission mobility (ZLEM) as there are many factors outside of the debate that influence the success of such a policy. The current Commission has already made significant progress with the 3rd Mobility Package, which in addition to decarbonisation also discussed digitalisation, automation, road and maritime safety. The next Commission can complement this work by looking how other pieces of legislation could support the zero- and low-emission policy agenda. Examples include the legislation that is part of the Clean Energy Package (such as on renewable energy and energy efficiency), the Industrial Strategy, the review of the Intelligent Transport Systems (ITS) Directive, the Urban Mobility Strategy and the Alternative Fuel Infrastructure Directive review. It also includes the Sustainable Development Goals (SDGs): Transport is a prerequisite for many SDGs, which underline the right to access for what people need: Jobs, markets and goods, social interaction, education, as well as other services.²¹ Such goals must be taken into account when formulating transport policy.

In this regard, it is crucial to ensure that negative impacts of regulatory overlaps are minimised, and that **regulation is implemented in a harmonised, non-fragmented way across the EU territory**. This is important to avoid differences in interpretation and impacts between the national and regional legislations, and to preserve the EU's single market. For example, the restrictive interpretations of EU legislation regarding the cross-border use of European Modular System (EMS) combinations could be abandoned in order to easily achieve significant CO₂ reductions in road transport operations.²² There is also a need to identify and promote best practices, for example on emerging mobility services and new modes of transport such as car-sharing, bike-sharing and scooter-sharing.

In turn, **businesses also have responsibilities**. For example, the calculation and reporting of GHG emissions resulting from freight movement and logistics activities should be a priority of businesses and organisations with logistics supply chain emissions. This will improve business decisions. Setting targets is important to ensure that the freight and logistics sector contribute to decarbonisation of transport.

When linking legislation, it is important to assess the extent to which other legislation has already impacted or could will likely impact ZLEM legislation. This should complement the future reviews of current legislation, such as the Third Mobility Package and the Clean Energy Package, but also account for international developments such as under CORSIA and the IMO.

²¹ [United Nations](#), 2016. Mobilising sustainable transport for development.

²² [ACEA](#), 2019. High Capacity Transport. Smarter policies for smart transport solutions.

Involve stakeholders in the common methodology for a lifecycle approach

Since an analysis into the feasibility of lifecycle assessments is now formally adopted in the regulation regarding CO₂ standards for newly-sold cars, vans and heavy-duty vehicles, it is crucial for the Commission to **consult stakeholders to evaluate the possibility of developing a common, robust LCA methodology**. Currently, such a methodology is missing as well as most of the data to perform lifecycle assessments and a deep knowledge about the entire value chain, causing the users of any future LCA approach to make subjective decisions. Discussing the possibility for a consistent way of measuring lifecycle emissions without imposing a disproportionate burden on companies is also a necessary pre-requisite to facilitate and feed into other priorities, such as the role of the consumer in a ZLEM economy, the establishment of sustainable and competitive value chains, a clear definition of zero- and low-emission mobility, and a long-term vision for transport. Broader environmental impacts not directly linked to emissions (such as water use) could also be considered.

Develop a stable and enabling policy framework for sustainable, synthetic and advanced alternative renewable fuels and gases

It will be crucial to support alternative decarbonisation innovations next to battery technology as this enlarges the decarbonisation potential in mobility and stimulates the innovation drive of industry as a whole. For example, the CO₂ reduction resulting from the use of sustainable, synthetic and advanced bio- and renewable fuels and gases would allow for further CO₂ reductions in an integrated manner. Therefore, the contribution of fuels that are expected to play a role to realise CO₂ reductions should be recognised under the 2022/2023 revisions of the CO₂ emission performance standards for light- and heavy-duty vehicles in order to allow to contribute to the achievement of the Union's climate goals. Furthermore, we urge EU policymakers to develop the right policies to scale-up the production and use of sustainable aviation fuels. The recent review of the Renewable Energy Directive (RED II) missed the opportunity to put the right incentives in place. We count on future EU legislators to reassess what regulatory tools could be put in place in order to develop an industrialisation pathway for the production and use of sustainable fuels.

4. Annex – Low-emission mobility company initiatives



For more examples, please visit www.ClimateYourBusiness.eu

- **CORRI-DOOR** (Belgium, France, Italy, UK) is a joint-industry initiative laying out fast-charging stations for electric vehicles:
<http://climateyourbusiness.eu/project/corri-door-ev-charging-edf/>
- Ferry company **Norled** (Norway) together with partners will build and operate four hydrogen ferries by 2021: <http://climateyourbusiness.eu/project/norled-hydrogen-ferry/>
- **PORTHOS** (the Netherlands) is joint initiative between the Port of Rotterdam, Gasunie and EBN to realise a carbon capture and storage (CCS) to store 2 million tons of CO₂ annually by 2020, increasing to 5 million tons by 2030:
<http://climateyourbusiness.eu/project/porthos-co2-project/>
- **SOLH2UB** is Austria's first in-house hub for green hydrogen for fuel cell electric vehicles (FCEVs): <http://climateyourbusiness.eu/project/fronius-solh2ub/>
- **Yara** (Norway and Romania) is constructing the world's first fully electric and autonomous container ship, with zero emissions:
<http://climateyourbusiness.eu/project/yara-zero-emission-ship/>