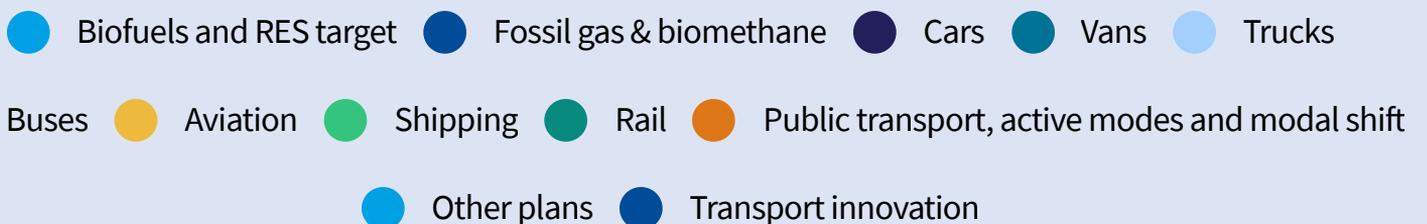
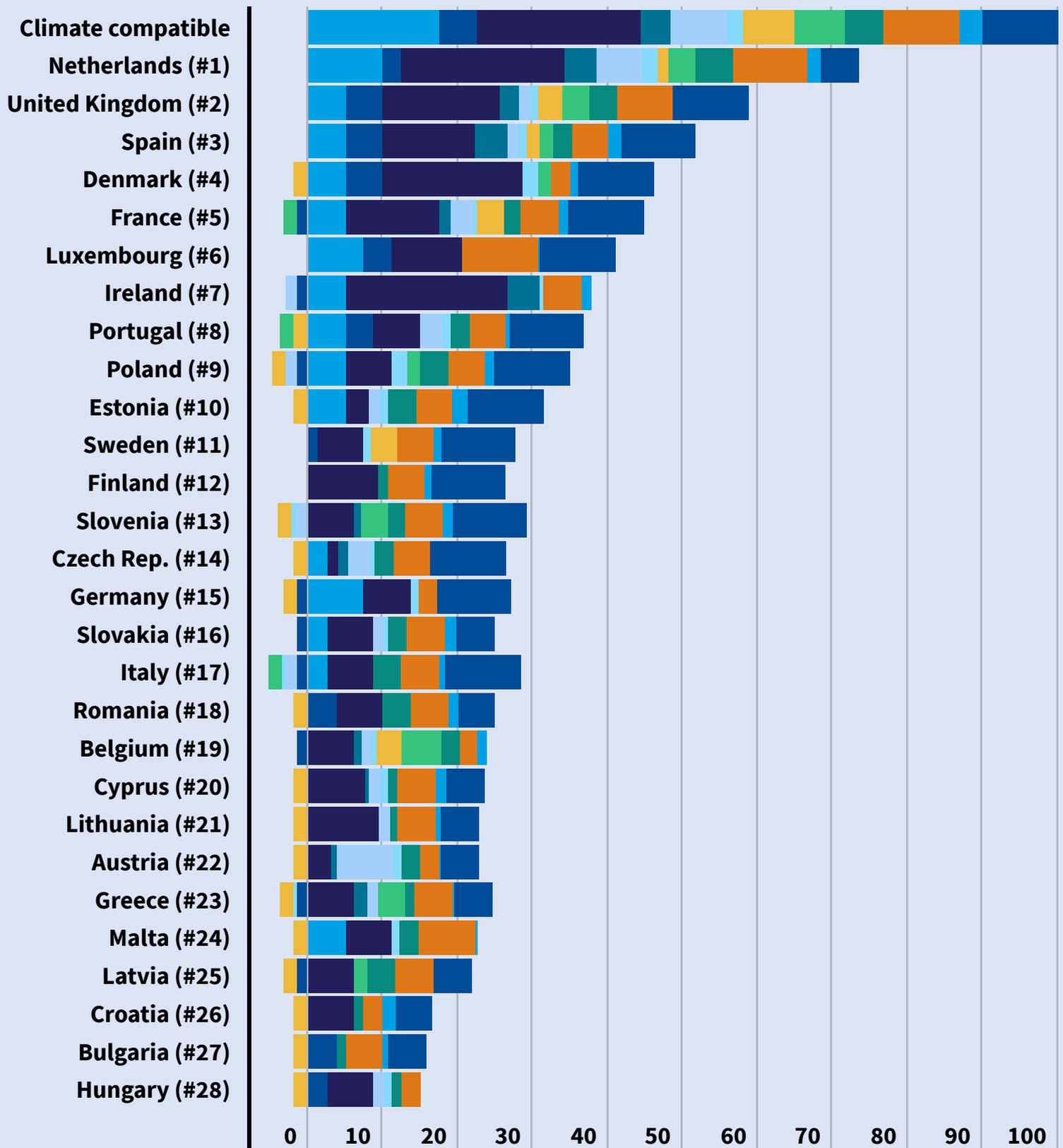


# Draft National Energy and Climate Plans transport ranking



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## Executive Summary

All European member states had to submit before the end of last year their draft plans on how to achieve 2030 energy and climate targets; the so-called draft National Energy and Climate Plans (NECPs). In T&E we have analysed the 28 draft NECPs from a transport perspective. We wanted to know if they were compatible with 2030 targets and more importantly if they were aligned with longer term transport decarbonisation, based on previous T&E work on the topic.

The main conclusion is that all draft NECPs are clearly insufficient both in a 2030 and 2050 perspective from a transport point of view. If the European Union wants to dramatically reduce its transport emissions (the most emitting sector) in the decades to come, the EU cannot wait until 2030 to start reducing emissions. Clear action needs to start already in the decade of the 2020s. Additionally, missing 2030 targets could come at a high economic cost for many member states.

On the other hand, there are some positive measures included in the draft NECPs. For instance, some countries include a phase-out of internal combustion engine cars (petrol, diesel and gas) by 2030. Others include an almost phase-out of food-based biofuels by 2030, just to mention two examples. Overall, if best measures of all draft NECPs would be combined, Europe would have a chance to decarbonise its transport sector by 2050.

By creating this ranking, T&E intended member states to be able to compare themselves with each other and identify best practices. The objective is to spark debate at a national level and to ensure that the final NECPs include a comprehensive plan on how transport should look like in the decades to come.

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# 1. Context and objective of this report

Europe needs to decarbonize its economy by 2050 if we want to avoid catastrophic climate. EU transport is the most greenhouse gas emission (GHG) emitting sector every year. Additionally, its emissions have grown year after year during the last 4 years. It is the only sector which emissions are considerably above 1990 levels. Europe has three decades to completely revolutionize how people and goods are transported across the continent and beyond.

In the medium term, European countries have committed to reduce its emissions by 40% by 2030, if compared with 1990. In order to get there, there are different targets for renewable energy, sectors included within the emissions trading system (ETS) or for each member state's non-ETS sectors, the so-called effort sharing sectors, just to name a few.

The Governance [Regulation](#) created the framework to ensure that member states take the necessary steps in order to meet 2030 and longer term targets. To do so, it required member states to submit, before the end of 2018, a draft National Energy and Climate Plan (NECP), stating how they were planning to achieve EU and national targets on energy and climate change. Even if some member states were late, all countries ended up submitting their draft NECP. They can all found [here](#).

The European Commission will provide feedback on the NECPs before the end of June 2019. Then, member states will have to submit their final NECP before the end of 2019. Also before the end of 2019 EU countries will need to submit a long-term strategy, with a 2050 perspective.

Transport & Environment has analysed the 28 draft NECPs submitted by member states, from a transport perspective. This report summarises our findings, and compares member states with each other. To do so, T&E developed a methodology (explained below) by which we assigned points on different transport aspects to each NECP.

The objective of this report was to assess if the submitted draft NECPs were aligned with 2030 targets and, more importantly, with transport decarbonisation by 2050 at the very latest. This report intends to serve as feedback to all EU countries, and hopes to be a useful tool so member states can improve their transport draft NECPs, and also use it as input in their preparations for the long-term strategy.

A key consideration of this report is that all member states have an annual GHG budget between 2021 and 2030 for all sectors not included in the ETS. At EU level and for most member states, transport is, by far, the most emitting sector within the Climate Action [Regulation](#). Without tackling transport emissions member states will have a very hard time to achieve 2030 targets.

EU legislation will help member states to achieve their transport targets. For instance, CO<sub>2</sub> regulations for cars, vans and trucks will ensure that new vehicles put into the market by 2025 and 2030 will emit less CO<sub>2</sub> than vehicles sold today. However, T&E analysis shows that such standards will only reduce CO<sub>2</sub> emissions by 11% in 2030 compared to 2005 levels. The relatively slow turnover of the vehicle fleets and the anticipated increase in transport activity means that the increase in vehicle efficiency is insufficient. Therefore, action at national level is fundamental to guarantee that targets are achieved. Member states that do not meet their targets, after applying some [loopholes](#) included in the regulation, will have to buy surplus from other EU member states. Depending on demand and supply, not meeting the 2030 targets could come at a price of several billion euro.

This work builds on the other assessments performed by other organizations on draft NECPs, such as the [European Climate Foundation](#) or [Climate Action Network Europe](#). The difference of this report is that it was the only one that looked in detail to the transport aspects of the draft NECPs.

## 2. Methodology

It is important to note that, even if the methodology was applied consistently, the methodology was based on an informed guess on what T&E considers to be compatible with transport decarbonization in the long-term. The basis was T&E 2050 decarbonization strategy. For more details, please consult our synthesis report here: <https://www.transportenvironment.org/publications/how-decarbonise-european-transport-2050>. Even if we think that our methodology was scientifically rigorous and transparent, it is a qualitative assessment. This exercise just wanted to be a comparative analysis to encourage member states to improve their draft NECPs when it comes to transport. Other methodologies could have been defined.

In order to prepare the assessment of the transport aspects of the draft NECPs, we decided to allocate up to a score of 100 to each member state, based on what we considered to be climate compatible in the transport sector. In order to split the points, we created two overall categories:

- a) On one hand, half of the points were assigned to each transport mode (cars, vans, trucks, buses, aviation, shipping and rail) based on their contribution to EU's total transport greenhouse gas emissions in 2016. International aviation and shipping were also included. That percentage was then weighted to 50 points. In the case of rail, more points than its equivalent GHG emissions were assigned (5 instead of 1), as its emissions are very low given that the mode is mostly electric. In total all modes above combined received a maximum of 54 points.
- b) On the other hand, there were a number of important cross-cutting topics that were included in our assessment. The weighting of each theme was an educated guess on their weight towards transport decarbonization, or their impact on the climate. The selected themes were: biofuels & renewable energy transport targets, fossil gas & biomethane, public transport & active modes, transport innovation and other plans in general. In total, they received up to 46 points.

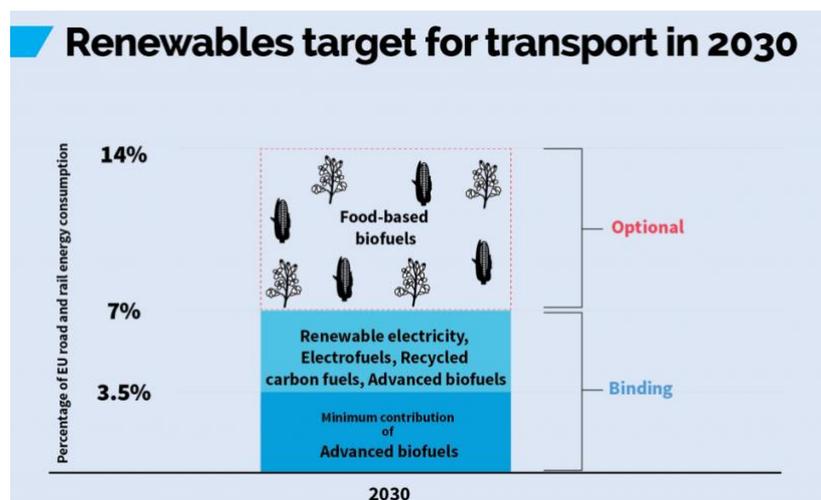
Each transport mode or theme had a maximum score based on the above. To simplify it, each mode or topic had a maximum of points based on the specific methodology. Those were then proportionally assigned to the maximum score for that mode or category. Illustrated with an example: cars represent ~43.5% of all transport emissions. That means that cars could achieve a score of up to 21.75. When assigning points, cars had points between 0 and 7 points. If a member state got for example 5 points for cars, it would get a score of 15.5 points out of 21.75.

In some cases, as explained below, for some specific themes, member states could also receive negative points, when they were promoting measures that were worse than doing nothing. For details on how points were assigned within each mode or theme, please read the sections below.

### 2.1. Biofuels and transport renewables target

The recast of the Renewable Energy [Directive](#) made mandatory to achieve a certain amount of renewable energy in transport by the year 2030. Article 25 says that all countries must achieve a minimum of 14%. However, article 26 says that, in the case that an individual member state decides to have an amount of food-based biofuels below the EU maximum of 7%, in that case the overall transport renewables target could be lowered proportionally. For instance, if a country transposes the Directive and establishes a food-based biofuels cap of 2% (5% less than 7%), that country would have the option to decrease its target to 9% (14% minus 5%).

The Directive made mandatory to all member states to have at least 3.5% of advanced biofuels (as defined in Annex IX of the Directive) by 2030. However, those biofuels could be double-counted, so in energy terms those biofuels would correspond to 1.75% of transport energy. The other 3.5% to achieve the minimum 7% could be achieved through renewable electricity, electrofuels, recycled carbon fuels or more advanced biofuels, each of which are subject to different multipliers as well. For illustration, check figure below.



This category was given high importance in this exercise because of the potential high impact biofuels have on deforestation, impacting the climate, local communities and biodiversity. In order to assess the draft NECPs, we considered that the most urgent measure is to phase-out food-based biofuels that cause Indirect Land Use Change (ILUC). The lower the value of the cap, the higher the number of points allocated. We also rewarded the specific mention to phasing out those food-based biofuels with the highest ILUC impacts, such as palm or soy. Regarding advanced biofuels, we rewarded if they were produced from domestic sources. We also rewarded transparency regarding the type of biofuels (bioethanol or biodiesel, food-based or advanced, type of feedstock, imported vs. domestic). Finally, we also assessed if draft NECPs promoted renewable electricity as the main way to achieve their targets, as this is the only credible alternative in the long term to reduce emissions from the sector.

#### Methodology

Points: 0 to 7.

Maximum score: 17.5/100.

- Food-based biofuel cap by 2030 at 2% or below (2 points), between 2% and 5% (1 point), above 5% or no information provided (0 points).
- 1 point: phase-out by 2030 of high-ILUC biofuels (palm, soy).
- 1 point: advanced biofuels from domestic sources.
- 1 point: transparency regarding food-based vs. 2<sup>nd</sup> generation, within 2<sup>nd</sup> generation, about feedstocks and/or imported vs. domestic.
- 2 points: promotes renewable electricity as the main way to achieve renewable energy transport targets, otherwise zero points.

## 2.2. Fossil gas and biomethane

Natural gas is a fossil fuel. Some advocate that is a way to reduce both GHG and air pollutant emissions in the transport sector. However, [evidence](#) points in a different direction. When compared to a new vehicle, Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) vehicles hardly reduce any emissions (in the best case scenario) if compared with other fossil fuelled vehicles. Therefore, promoting CNG or LNG in transport is worse than doing nothing, as it requires new investment to create the infrastructure and cost governments in the form of foregone revenues due to lower taxation in comparison to petrol and diesel, and deviates attention and resources from feasible decarbonisation options. Additionally, it is a technology that does not contribute to improve energy sovereignty in Europe.

Regarding biomethane, it should be promoted from sustainable sources. However, it should not be directly allocated to the transport sector, which currently is not dependant on gaseous fuels. Instead, it should be used in sectors already using natural gas, such as heating and industry. Not even the most optimistic studies

show that there will be enough sustainable biomethane to decarbonise existing uses, even less if a new sector, such as transport, starts using gaseous fuels as an energy source. Therefore, we rewarded countries that mentioned that biomethane would be injected into the grid to be used by existing users of gaseous fuels. For more information, check reference indicated above.

### **Methodology**

*Points: -1 to 4.*

*Maximum score: 5/100.*

- 3 points: No promotion of fossil gas in transport, otherwise zero.
- 1 point: biomethane produced would be injected to the grid, contributing to decarbonisation of all sectors using gas.
- 0 points: exploring the use of gas in transport.
- -1 point: Strong promotion of gas in transport.

## **2.3. Passenger cars**

Passenger cars are responsible for the largest share of GHG emissions in the transport sector, almost 44% of the total. For this reason, in our assessment is the single category that carries the maximum score possible. Without reducing emissions from cars, reducing emissions in transport will be very difficult. In order to assess policies, we used as a reference the T&E [paper](#) dealing with cars decarbonisation. Even if modal shift and demand reduction are important, they were assessed in other parts of this exercise. But as far as there will be cars, they will need to be zero emissions. Therefore, we considered that the most important measure a country could include in its draft NECP was to include a phase-out of diesel and petrol engines. However, a phase-out as such is not enough, and the date of implementation is also fundamental. Additionally, we also rewarded member states that on one hand included clear taxation policies to speed the transition (like a bonus-malus system) and those that included clear infrastructure plans to allow the deployment of zero-emission vehicles.

### **Methodology**

*Points: 0 to 7.*

*Maximum score: 21.75/100.*

- 2 points: includes a phase-out of Internal Combustion Engines.
- Phase out of ICEs by 2030 (3 points), if by 2035, 2 points.
- 1 point: target for minimum sale of zero-emission vehicles (ZEVs), but no phase-out.
- 1 point: taxation policy to speed up sales of ZEVs.
- 1 point: clear charging infrastructure plans.

## **2.4. Light commercial vehicles (vans)**

Vans are responsible for around 9% of transport emissions. Given that they are subject to less legal requirements than trucks (tolls, special driving license, resting times), their importance on freight transportation is growing. However, as explained in our synthesis [report](#), they can also be decarbonised. As in the car section above, we considered the inclusion of a phase-out of ICEs the most important measure that could be included, as it sends the right signal to the market. As specific dates were less common than for cars, we developed other criteria in comparison to passenger cars. In this case, we rewarded more countries that focused on promoting battery vans versus those that focused on hydrogen, considering the lower overall efficiency of hydrogen technology.

### **Methodology**

*Points: 0 to 5.*

*Maximum score: 4.25/100.*

- 3 points: includes a phase-out of ICEs.
- 2 points: focuses on electric vehicles.

- 1 point: focuses on hydrogen.
- 1 point: includes targets for minimum sales of ZEVs, but no phase-out.
- 0 points: omits them.

## 2.5. Heavy goods vehicles (trucks)

Trucks are responsible for ~15% of emissions from the transport sector. While the decarbonization pathway for cars and vans seems clearer, there are more doubts regarding trucks. At the same time, emissions from the sector continue growing. However, it is clear that zero-emission trucks need to become the norm if transport is to decarbonise. A first step to make it happen is the recently approved EU Regulation on CO<sub>2</sub> standards for trucks, even if the targets for zero-emission trucks (ZET) are not mandatory and insufficient. In T&E transport decarbonisation [paper](#) we summarised recent T&E studies that looked into the issue. In comparison to cars, we rewarded countries that first of all acknowledged that the solution passed by ZETs, while on the other hand we penalised those that pushed for non-solutions, such as LNG (as explained in 2.2 above). Those that went further and included measures to drive demand of ZETs received extra points. Additionally, we also rewarded member states that included measures to reduce the impact of the mode in the shorter term, such as improving efficiency of the system through e.g. road charging.

### Methodology

*Points: -1 to 5.*

*Maximum score: 7.5/100.*

- 2 points: recognizes zero-emission trucks (ZET) as the long-term solution.
- 2 points: includes specific measures to drive demand for ZETs.
- 1 point: includes measures to reduce the impact of road freight, e.g. road charging or shifting to rail.
- 0 points: omits them.
- -1 point: promotes gas in heavy-duty vehicles.

## 2.6. Buses

Buses are among the fastest changing transport modes. Even if they represent ~4% of all transport emissions, they mostly operate in cities. Urban buses are the first transport mode where [electrification](#) is having a significant impact today. This trend is driven primarily by the rising awareness of toxic air pollution in our cities from internal combustion engines and supported by the compelling economic, comfort, and noise advantages. In this exercise, we assessed how countries are supporting this transition. Countries supporting zero-emission buses and those with clear targets were rewarded. On the other hand, those pushing for false alternatives, such as the promotion of natural gas buses, were penalised because they don't contribute neither to climate change mitigation, air quality (in comparison to new diesel buses) nor energy sovereignty.

### Methodology

*Points: -1 to 4*

*Maximum score: 2/100.*

- 2 points: recognizes zero-emission buses as the long-term solution.
- 2 points: includes targets for all new sales being zero-emission before 2030.
- 0 points: omits them.
- -1 point: strong promotion of gas buses.

## 2.7. Aviation

Aviation currently causes ~13% of transport emissions, when considering both domestic and international flights. This just takes into account direct CO<sub>2</sub> emissions, but non-CO<sub>2</sub> impacts could cause as much climate change as the CO<sub>2</sub> emissions themselves. Additionally, in comparison to other modes, it is not subject to taxation (fuel taxes nor VAT), nor there are clear measures to reduce its impact, while its emissions grow faster than any other sector. Only intra-EU flights are included under the EU emissions trading system.

Climate action was supposed to come from the International Civil Aviation Organisation (ICAO), but the agreed measure, CORSIA, will cover a very small part of the problem (~20% of emissions between 2021 and 2035), and even those will depend on dubious offsets. Given the lack of details on most NECPs, the methodology was quite broad. For details on how to decarbonise aviation, please check recent T&E's [paper](#) on the issue.

### **Methodology**

*Points: -1 to 4.*

*Maximum score: 6.75/100.*

- 2 points: includes a target to considerably diminish the impact of the sector.
- 1 point: includes some measures to reduce the impact of the sector, e.g. taxation policy.
- 1 point: preparing a plan to deal with the climate impact of the sector.
- 0 points: mentions the issue or only refers to CORSIA.
- -1 point: omits the issue

## **2.8. Shipping**

Shipping, currently responsible for ~14% of all transport emissions in Europe, is another sector which measures to start decarbonisation have hardly started. T&E looked into the [issue](#) and explored different potential clean fuels that could be used in the sector. In the short and medium term, there are specific policies that member states could implement to reduce emissions in the sector. For example, providing electricity in ports, under special conditions to ensure that is competitive with marine fuels. Like with other transport modes, member states pushing for the [wrong](#) alternatives were penalised. Other measures to reduce the impact, or a commitment to create a plan to tackle the problem was also rewarded.

### **Methodology**

*Points: -1 to 4.*

*Maximum score: 7/100.*

- 2 points: promotes electrification of ports, or other climate-friendly alternatives.
- 1 point: includes a commitment to implement further measures to reduce impact of the sector.
- 1 point: includes measures to reduce the impact of the sector, e.g. improving efficiency.
- 0 points: omits the issue.
- -1 point: promotes Liquefied Natural Gas (LNG) in the shipping sector.

## **2.9. Rail**

Rail has the potential to contribute to carbon decarbonisation, mostly through modal shift from dirtier modes of transport such as passenger cars, trucks or aviation. For this reason, this sector was given a total score higher than its corresponding emissions (~0.5%), in order to reflect its importance on modal shift. Assessing the details of draft NECPs was complex, mostly given the lack of details. Therefore, in order to assign points, the methodology was broad. General references to modal shift for passengers or freight was rewarded, while additional measures such as renewal of the rolling stock or further electrification of the sector were also rewarded. These metrics were considered a proxy on how much importance is given to rail transport in draft NECPs.

### **Methodology**

*Points: 0 to 4.*

*Maximum score: 5/100.*

- 1 point: promotes further electrification of the sector.
- 1 point: includes commitment to renew the rolling stock.
- 1 point: promotes rail for passenger transport.
- 1 point: promotes rail for freight transport.
- 0 points: omits the issue.

## 2.10. Public transport and active modes

Public transport, and particularly active modes of transport, such as cycling and walking, have the lowest climate impact. In general, the competencies to promote such transport modes lie at the regional and local level. However, it is important that overall strategies and plans are included in NECPs, creating the framework at a national level. In this case, the methodology was relatively simplistic. It just differentiated between member states that included references to either improvements of public transport and cycling, and those that included more detailed and realistic plans on how to implement those.

### Methodology

Points: 0 to 4.

Maximum score: 10/100.

- Specific plan to promote public transport (2 points). If only mentions its importance, 1 point.
- Specific plan to promote cycling (2 points). If only mentions its importance, 1 point.

## 2.11. Other plans

Apart from the different transport modes, we wanted to include another category that rewarded additional measures that could also contribute to reduce emissions in transport. Those that could have a larger impact, such as implementing low-emission zones or improving fuel taxation were given more points than those that, even if positive, could have a more limited impact, such as eco-driving trainings.

### Methodology

Points: 0 to 8.

Maximum score: 3.25/100.

- 2 points: promotes low-emission zones in cities or better urban planning.
- 2 points: improves fuel taxation.
- 2 points: includes measures to promote road charging.
- 1 point: includes plans to promote eco-driving or green procurement.
- 1 point: includes measures to promote car sharing.

## 2.12. Transport innovation

Not all solutions to achieve transport decarbonisation are already available. And those that already exist, could highly benefit from further development, e.g. battery technology. The draft NECPs were supposed to include information about innovation priorities for each member state. Assessing this category was particularly complex, as the governance regulation was less specific on its requirements than other sections. So the methodology proposed was simple: if countries identified transport, the largest GHG emitting sector as a key innovation priority, countries would be rewarded. If additionally, the identified technologies are actually required to decarbonise the sector, that would translate into additional points.

### Methodology

Points: 0 to 2.

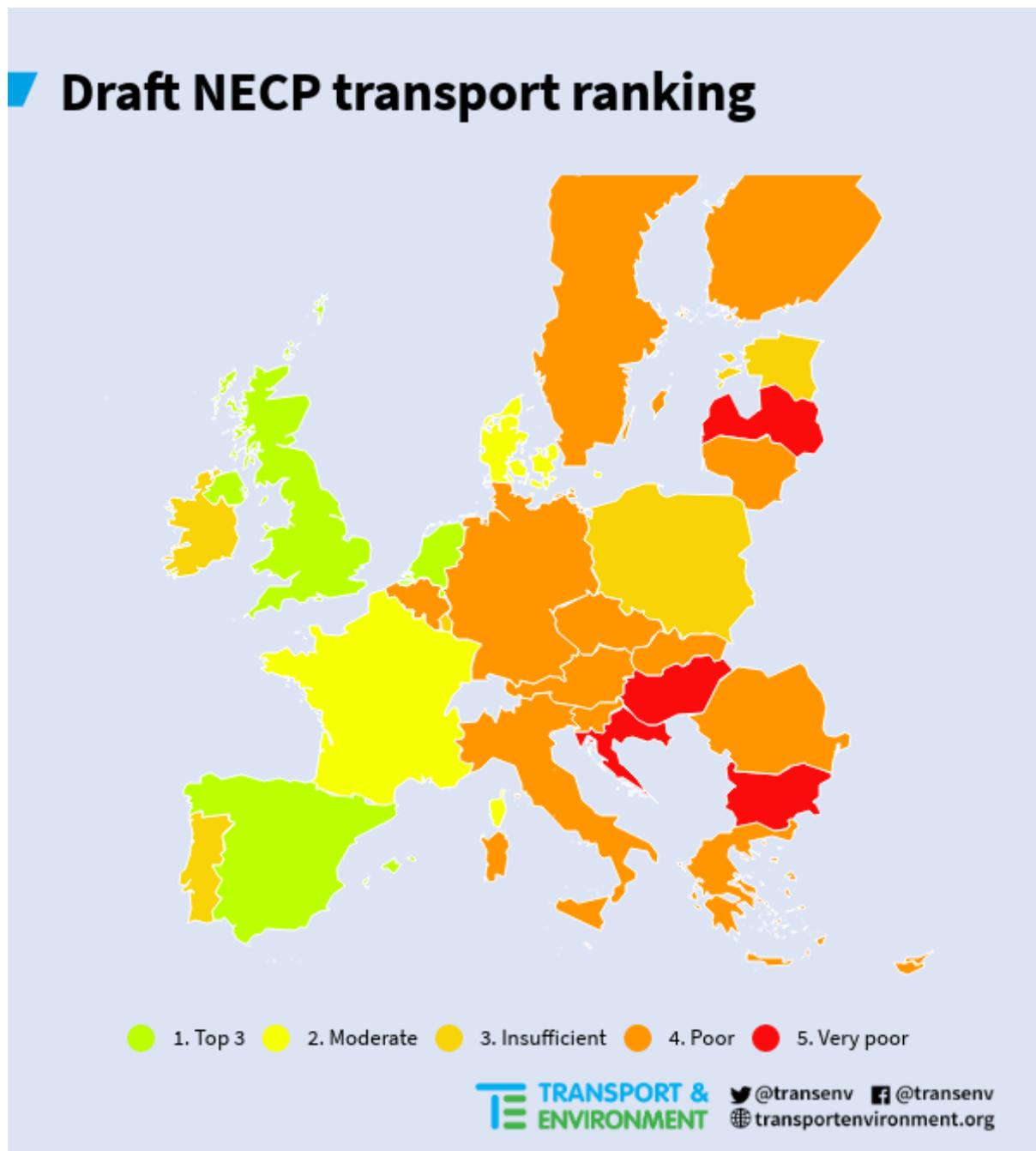
Maximum score: 10/100.

- 1 point: recognizes the need to deal with transport.
- 1 point: includes specific transport themes that are needed to decarbonize the sector.

## 3. Overall assessment and best practices

When it comes to transport, all draft NECPs are clearly insufficient to both achieve 2030 targets and to put the sector in a trajectory to decarbonise by 2050 at the very latest. The average of all member states is below 30 points, very far from the 100 possible. For full results, check the front page of this report and T&E's website, where an interactive ranking can be found.

Even the first draft NECP in the ranking is under threat. The Dutch draft NECP, which included references to the draft text of the mobility chapter of the climate agreement, has the risk of being undermined during on-going negotiations, and most likely it will be watered down. Most draft NECPs lack the level of detail that would make the measures mentioned credible. Many others ignore very important transport modes. The map below summarises the position of different countries in the ranking. In the following sections we looked into the detail of each theme identified, together with some examples of best practices. For details for each member state, please check the annex.



### 3.1. Biofuels and transport renewables energy target

Our assessment found problematic that most member states presented as “mandatory” to achieve a 14% renewable energy transport target by 2030. As explained in section 2.1 above, that is only the case as far as they decide not to include a cap below 7% for food-based biofuels. Most member states decided to keep the cap for these problematic biofuels at 7%, the maximum allowed by EU legislation. That means that

consumption of food-based biofuels would considerable increase compared to current levels during the 2020s.

Most NECPs lack transparency on the biofuels they expect to use, regarding type (food-based or advanced), feedstocks (palm, rapeseed, soy...) and origin (imported vs. exported). Additionally, most NECPs don't include any reference to phase out the most deforestation-linked biofuels as soon as possible, such as palm oil and soy biodiesel. Regarding advanced biofuels, very few NECPs mention if they will be produced from domestic sources, which would be the most environmentally friendly alternative. Finally, most countries do not specify if advanced sustainable biofuels will be used by the aviation sector only, the sector which currently lacks alternatives to decarbonise. No NECP promotes sustainable synthetic fuels for the aviation sector, which would be needed additionally to sustainable advanced biofuels, as the later, if produced sustainably, would cover a very small part of the demand of the sector.

On the other hand, very few member states include specific instruments aligned with their renewable energy transport target to promote renewable electricity in the transport target, which is the most cost-effective way to achieve the targets and truly reduce emissions.

#### **Best practice**

**United Kingdom:** included a decrease of food-based biofuels to a maximum of 2% by 2032.

**France:** included a reference to limit the worst ILUC causing biofuels, such as those produced from palm and soy.

### **3.2. Fossil gas and biomethane**

A total of nine member states include a strong promotion of natural gas in transport. As explained in section 2.2., this is a bad idea for the climate and energy sovereignty. Others mention it only in the context of shipping, which would be another [waste](#) of resources.

#### **Best practices**

**Spain or Denmark:** usage of CNG and LNG in transport is not mentioned. Biomethane is mentioned, but in the context of injecting it to the grid.

### **3.3. Passenger cars**

Most countries lack targets to appropriately tackle the emissions from the sector. Those that include targets, lack the details to ensure that they will be achieved. It is surprising to see that many countries include targets that are less ambitious than those of part of the car industry itself. Most countries have not understood that, in order to decarbonise cars in Europe, the last ICE needs to be sold at the beginning of the decade of the 2030s.

#### **Best practice**

**Ireland:** it aspires to have only zero-emission vehicles sold after 2030.

**Denmark:** no more ICEs sold after 2030, and no more plug-in hybrids sold after 2035.

### **3.4. Light commercial vehicles (vans)**

Some countries include specific measures to clean up vans. But in most cases they are either not specified or directly omitted. On average, out of the 4.25 points possible, countries were below one. Member states should understand the (increasing) impact of this transport mode, and act accordingly.

#### **Best practice**

**Spain:** it includes a specific reference to light commercial vehicles in its aspiration to only sell zero-emission vehicles by 2040 at the latest.

### 3.5. Heavy goods vehicles (trucks)

Trucks are probably, together with aviation, the most overlooked transport mode in the draft NECPs. Most countries don't include measures to reduce their impact, even less to decarbonise them. At the very minimum, it would have been welcome to at least include the intention to develop a plan to deal with the issue. However, that is not the case for most member states. This is one of the key issues that should be resolved for basically all member states.

#### **Best practice**

**Austria:** it foresees a large increase on ZEV trucks by 2040. A measure to help get there is cheaper LKW Maut (toll) for such vehicles. New investment for e-Trucks is also mentioned.

### 3.6. Buses

Many member states do not include specific measures to promote zero-emission trucks. In some cases, they even push for fossil gas buses. With the right measures in place, this is something that could be easily improved in the final version of most NECPs.

#### **Best practice**

**Netherlands:** at least in the draft climate agreement, it includes that all new buses should be zero-emissions from 2025.

**Poland:** The focus is on electric buses. There are tools to try to achieve a target of 3.000 electric urban buses by 2030. A step in the right direction, but not enough. It should be accompanied by cleaning up the power supply.

### 3.7. Aviation

The immense majority of member states omit the sector in their draft NECPs. Even if it was not mandatory to include international aviation, most countries also ignore domestic aviation. Discussions about taking some measures in the sector are starting (e.g. taxation), which is reflected in a few member states. However, that is not enough to reduce the impact of the sector.

#### **Best practice**

**Sweden:** a new tax was introduced. Even if positive, it is not enough to decarbonize the sector. Other policies currently being developed, like potential inclusion of a sustainable advanced aviation fuel mandate could be included.

### 3.8. Shipping

As with aviation, most countries ignored the sector. Even if it was not mandatory to include international navigation, most countries also ignore domestic navigation. However, it was positive to see that a few selected countries included plans to start providing electricity in ports, while others had the commitment to write plans to deal with the impact of the sector.

#### **Best practice**

**United Kingdom:** working with ship owners and ports to identify barriers faced in supplying and using sustainable alternative fuels and cleaner emissions technologies. Preparing a Clean Maritime Plan which will address the challenge of tackling the maritime sector's emissions of greenhouse gases and air pollutants.

### 3.9. Rail

In comparison to other themes in the draft NECPs, almost all member states mentioned the importance of rail for the transport of passengers or goods one way or another. However, in most cases they were simply broad statements, lacking details on how to achieve the actual goals stated. A clear strategy and budget would be needed to give rail the role it deserves on transport decarbonisation.

### **Best practice**

**Netherlands:** references to improving the efficiency of the network, improving rail freight transport, rail passenger transport, renewal of part of the rolling stock and further electrification of the tracks.

## **3.10. Public transport and active modes**

The vast majority of member states mention public transport and active modes in their draft NECPs. However, most of them are very vague on what specific measures or strategies they will follow to make a difference. At least the commitment to create a plan, with a specific budget and timeline, would be a good way to improve most draft NECPs.

### **Best practice**

**Netherlands:** many specific measures to improve modal share, around public transport and cycling, such as infrastructure or mobility budgets with bonus-malus system.

## **3.11. Other plans**

Most countries include, to a certain extent, additional plans to try to reduce the impact of transport. However, in most cases they are very generic statements that would heavily depend on how they are implemented. The more comprehensive the list of measures to tackle demand management, modal shift and overall efficiency, the better.

### **Best practice**

**Estonia:** Better spatial and land use planning, congestion charging in Tallinn, promotion of e-work, promotion of eco-driving. Overall good scope, even if it lacks details.

## **3.12. Transport innovation**

Most member states somehow identified transport as one of the key priorities in their innovation policies. Overall the level of detailed provided is scarce and requires additional information. In some cases, countries specified some technologies, such as battery development, EV and grid integration or synthetic fuels. However, there are some cases where technologies that cannot contribute to cleaning up the sector are promoted.

### **Best practice**

**Italy:** covers a wide range of topics within transport: testing of various energy storage systems and batteries of EVs, safety monitoring for 2nd life use, devices for V2H (Vehicle-to-Home); study and experimentation of infrastructures for high power electric charging for local public transport, among others.

**Portugal:** transport is identified as one of the priorities. R&D on batteries and renewable mentioned.

## **4. Conclusions**

This assessment made something clear: all member states need to considerably improve how they deal with transport in their draft NECPs. Otherwise, the overall objectives of competitiveness, decarbonisation and energy sovereignty will not be achieved, neither in the short nor the long term. Additionally, many member states will have serious difficulties to achieve their 2030 targets as well, at the risk of spending public resources on buying surplus of those countries achieving their targets.

However, draft NECPs can still be improved. This study hopes to contribute to national debates and consultations and provide guidance on how individual member states can improve the way they treat with Europe's largest climate change contributing sector.

## **5. Annex: Member state assessments**

# 1. The Netherlands



**Ambition: 100% of new cars being ZE by 2030**  
**Target for transport of -29% by 2030 vs 2005**



**No details regarding biofuels to be used**  
**No focus on transport innovation**

Points given on the basis of measures included in Mobility Chapter of the Draft Climate Agreement (21/12/2018). Proposed measures are likely to be weakened, which would lower Dutch position in ranking.



7/7

Aim of 100% of new cars to be zero-emissions by 2030. Measures proposed in Draft Climate Agreement don't add up to attain it. Fiscal measures and subsidies will stimulate further growth of EV's. Draft Agreement mentions investments in smart charging, plans to reuse batteries, promote second hand EV market, but not concrete on how that will be done.



4/5

Mentions road charging (tolls) and logistics optimization. Biomethane can help in the transition towards electric and hydrogen, being zero-emission zones in city centers also a driver.



5/5

Goal to make them all electric, being zero-emission zones in cities the main driver, in combination with economic incentives.



4/4

All new buses should be zero-emissions from 2025.



4/4

References to improving the efficiency of the network, improving rail freight transport, rail passenger transport, renewal of part of the rolling stock and further electrification of the tracks.



4/4

Many specific measures to improve public transport and cycling, such as infrastructure or mobility budgets with bonus-malus system. But continued spending on car infrastructure hampers modal shift.



1/4

Just a mention to advanced biofuels. Nothing on synthetic fuels, which will be needed in the long-term. Too much trust on what ICAO can deliver. Preparing a specific climate plan on aviation to complement the NECP.



2/4

For inland shipping, at least 150 zero-emissions ships by 2030. Also foresee advanced biofuels. This is negative, as there are not enough (sustainably) produced for both sectors. Too much trust on IMO.



4/7

No mention to a specific target for renewables in transport. EU legislation only mandates 7%, if phase-out of food-based biofuels. On food-based biofuels, they may continue not using soy or palm. On 2nd gen biofuels, mention to use for sectors without an alternative, like aviation or shipping, which is also positive. More details on future biofuels (feedstocks, origin...) should be included.



2/4

No mention to using fossil gas in transport, which is positive. However, LNG in transport is still subsidized. Biomethane used only on trucks, during a transition, but the goal is to electrify



6/8

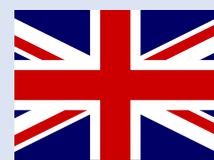
Higher fuel taxes (with an specific calendar), car sharing incentives, but also curbed LEZ. Zero emissions zones for passenger cars and LEZ's for gasoline cars are not allowed



1/2

On innovation policies, they focus too much on biofuels and carbon capture and storage. Not much focus on transport, especially considering the small size of investments so far on batteries.

# 2. United Kingdom



**Cap of 2% of food-based biofuels by 2032**

**Includes a phase-out of conventional petrol and diesel cars by 2040 (2032 Scotland)**



**No definition of what "conventional" cars phase out means or phase out date for conventional buses**

**No details on how to clean up trucks or ships**



5/7

For cars and vans, goal to end sale of "conventional" petrol and diesel by 2040 (Scotland 2032). Positive intent but date too late + definition of "conventional" unclear.

By 2030, at least 50% and as many as 70% of new car sales (and up to 40% of new vans) to be ULEV (ULEV defined as below 75g/km, from 2021 below 50 g/km).

Budget provisions for grants, infrastructure (including all new lampposts), smart ready charging points...



3/5

Ref. to increasing rail freight, a passenger rail taskforce, bifuel trains (batteries+diesel or hydrogen for parts no electrified). Positive to consider decarbonisation option, practical support limited.



3/4



2/4

Grant for future fuels. Additionally, they mention an aviation strategy coming first half of 2019, to tackle emissions from the sector. Unchecked growth in aviation from new runways and terminals.



4/7

No renewable transport target as such. However, the RTFO (biofuel obligation) increased to 9.75% by 2020, 12.4% (in volume) by 2030. Positive food-based biofuels cap of 4% in 2018, down to 3% in 2026 and to 2% by 2032. Advanced biofuels target of 0.1% in 2019, up to 2.8% in 2032. Details future feedstocks missing. If 2.8% advanced, a 2% cap for crops, rest might be UCO and similar but should be specified.



4/4

Nothing on promoting natural gas in transport, which is positive. All biomethane will be injected into the gas grid.



0/8

No additional measures such as fuel taxation, eco-driving, urban planning, car sharing... are mentioned.



2/2

Budget for transport innovation of almost £1 billion, but that runs up to 2021. Unclear afterwards. More details needed. Focusing on low emission HGV technologies and new aircraft technology. Positive, considering their decarbonization pathways are more unclear.



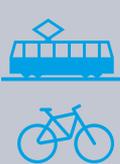
1/5

Generic. Just references to working with industry, but not specific plan. In addition, there is a grant for future fuels for freight. To be improved in final version.



2/4

Buses should "ultimately" be zero-emissions, but no specific target. There is a grant to accelerate the uptake, but no more details. The target needs to be more specific.



3/4

Action to support modal shift, investments in public transport and walking and cycling (including a strategy), to ensure that by 2040 cycling and walking are the "natural choices" for shorter journeys.



2/4

Working with ship owners and ports to identify barriers faced in supplying and using sustainable alternative fuels and cleaner emissions technologies. Preparing a Clean Maritime Plan.

# 3. Spain



**All new cars will be zero-emission vehicles by 2040, but not binding**  
**Embedded transport target of -43.5% by 2030 vs 2005. Beyond 38% for ESR**



**No measures to reduce emissions from trucks**  
**No detailed information on biofuels**



4/7

For cars and vans, it expects all new vehicles would be ZEVs by 2040. However, it doesn't make it mandatory.

Regarding EVs in general (cars, vans, buses and motorbikes), target of 5 millions by 2030. Details needed regarding specific type: BEV, PHEV or Hydrogen. Mentions changing car ownership taxes, in coordination with local authorities. Lacks to mention the role that EVs could play in integrating large amounts of variable renewables through smart charging.



5/5

Mentions to financial instruments to investments that could allow promotion of rail freight, and an increase of electrified rail transport.



2/4



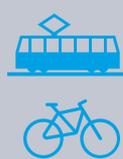
1/5

Trucks are basically omitted. Advanced biofuels are mentioned as the only possible way to start decarbonizing them, which is a big omission of other available technologies. Electrification (electric road system, battery electric, hydrogen) is coming, and some OEMs are starting to sell those.



2/4

Buses are within the "5M EVs", but no details on plans to decarbonise them. More info should be included in the final NECP



2/4

Not many references to public transport or cycling. However, establishment of low emission zones in cities above 50K inhab would be a driver for more public transport utilization or cycling.



1/4

Very generic mention to "promote energy efficiency measures". More details should be provided in the final version.



1/4

Advanced biofuels are the only option presented. As in the draft climate law, the NECP should also mention synthetic fuels. Measures around taxation should be mentioned to manage demand.



2/7

22% renewables in transport target. Wrongly say that 14% is the minimum target, according to the directive. Only 7% is mandatory if food-based biofuels are phased-out. Lacks to specify how that 22% target will be achieved. There are some % mentioned, but unclear what they refer to. More info on feedstocks, origin...needed. Overall, decrease on food-based biofuels, and an increase on advanced.



4/4

Use of natural gas in transport not mentioned, which is positive. Biomethanementioned a few times, but not in transport context. Injecting it to the grid, which is coherent.



4/8

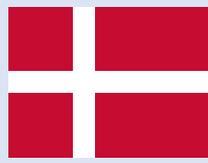
Low emission zones would shift 35% from cars to other modes in urban environments, and 1.5% in interurban environments. Eco-driving and car sharing also mentioned.



2/2

On innovation policy, there are some references to transport, for instance on advanced biofuels, hydrogen or electric vehicles, but it is quite generic.

# 4. Denmark



**Phase-out of ICEs by 2030, and of PHEVs by 2035**

**No strong push for biofuels**



**No mentions to decarbonisation of trucks or vans**

**Aviation is ignored**



6/7

Phase-out of new ICEs by 2030, and no more PHEVs by 2035. Mostly aligned with 2050 decarbonisation.

Accompanied the measures such as no registration tax on cars below 400K DKK, lower taxation on green company cars, higher premium for scrapping of old diesels



0/5

Specific measures for trucks are not included. This is a minus and it should be corrected in the final version.



0/5

No specific measures or targets for vans. This is a minus and it should be amended in the final version



4/4

By 2020, sales of all new buses should be what they call "CO2 neutral" (includes biofuels and biomethane), but in 2025 they all need to be ZEVs. By 2030, only ZEVs can circulate in cities.



0/4

No information provided regarding how to improve or promote the existing rail service or infrastructure in Denmark. This should be included in the final NECP



1/4

No specific cycling targets or measures, which is surprising for Denmark. No specific mentions to public transport, except measures to promote ZE taxis.



-1/4

Aviation is totally ignored. Denmark cannot decarbonise its economy without dealing with the emissions from the sector.



1/4

Just generic reference to more environmentally-friendly cruise tourism in the Baltic Sea and future new initiatives to contribute to a greener future. However, more details are needed.



2/7

Denmark is one of the few countries that doesn't have a transport renewables target as such. Considering that most countries wrote a 14% target, with lots of potentially unsustainable biofuels, it might be positive not to include a target. There is a general statement to include more biofuels in petrol and diesel, but no details on feedstocks, type... This should be corrected in the final version.



4/4

No push for gas in transport. Biomethane should be supported for all sectors, not prioritising transport. Positive as there is no reason why it should be prioritised in transport.



3/8

Moving towards stricter low-emission zones. Promotion of asphalt with lower rolling resistance



2/2

On the innovation side, it is positive that the NECP mentions the links between electric cars and the broader electricity system, as EVs can contribute to broader decarbonisation.

# 5. France



**ESR target (-41%) beyond mandatory (-37%). Transport largest ESR sector**  
**Phase-out of ICEs by 2040. Even if too late, step in the right direction**



**Lacks measures on taxation for aviation and trucks**  
**On fuels, it promotes LNG in shipping and no reduction of 7% of food-based biofuels**



4/7

Sales phase-out of GHG producing cars by 2040. Financial and fiscal incentives to speed up sales of ZEVs are mentioned but are insufficient to meet the objectives. Good to see development regarding ZEV infrastructure.



2/5

Clearly insufficient when it comes to trucks. Just range of 800-2000 hydrogen trucks mentioned. NECP should include detailed plan on how to tackle emissions from trucks. No measures to implement polluter pays principle notably in freight.



2/5

It is not clear if the phase-out by 2040 applies also to vans, as vehicles in general is mentioned. Specifically on vans, only 50K hydrogen vans are mentioned.



1/4

Few details regarding buses, except the mention of a few hydrogen buses and the use of biomethane, even if there is not enough to decarbonise sectors already using gaseous fuels today.



2/4

Recognised as a mode with potential to improve transport of passengers and freight. However, concrete measures to ensure modal shift from road to rail in practice are not specified. More details needed.



2/4

Very generic statements on public transport and modal shift. Details needed. Positive to have a budget to encourage cleaner mobility during commuting although budget allocated to cycling and active modes is quite low.



2/4

Improvement of efficiency is mentioned, but not how to achieve it. 50% biofuels by 2050 is too high to ensure sustainability of the feedstocks. Details needed on feedstocks. No reference to taxation policy to reduce emissions.



-1/4

LNG is shipping. LNG is a fossil fuel, so it is negative that it is perceived as a way forward for the sector. When electricity would be used in ports, it would be produced from LNG, which again, would be dirty electricity.



2/7

Target of 15% of renewables in transport by 2030. Not positive because 14% will be achieved through biofuels. On food-based biofuels, cap of 7% (EU maximum). France decides not to bring it down. Positive to see a "limit to those with high ILUC", but not specific enough. Overall, there is no information on feedstocks or origin, so it is hard to assess the sustainability of the plan.



-1/4

Gas promoted throughout. Negative. Only BioLNG should be promoted, but amounts forecasted are 10% of total gas demand, should be used to decarbonise existing uses.



3/8

No reference to fuel taxation policy, even after recent freeze of increase of carbon component of domestic excise duty for fuels. Mentions to low-emission zones and car sharing,



2/2

Focus on advanced biofuels and the conversion of solar energy into fuels, both important to decarbonize transport. Other innovation priorities are missing, like the next generation of batteries or how to decarbonize freight, aviation and shipping.

# 6. Luxembourg



**Strong push for electromobility**

**5% cap of food-based biofuels, although it could be lower.**



**No details on how to achieve rather high 21.9% renewables transport target**

**No clear commitment to increase fuel taxes (EU minimum)**



3/7

By 2030, indicative target of 49% of the fleet to be either fully electric or plug-in hybrid. In order to achieve that, most sales in the 2020s need to be this type of cars. Mentions to sector coupling between transport and the power sector. Systems like the PRIME Car-e is pushing in this direction. System of charging infrastructure, up to 800 points by 2020



0/5

No information on measures for trucks. This should be corrected in the final version.



0/5

No information on measures for vans. This should be corrected in the final version.



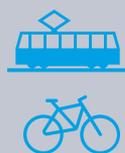
0/4

No information on measures for buses. This should be corrected in the final version.



0/4

On rail, there are positive references to electrification and competitive infrastructure to improve rail transport of passengers and goods



4/4

On public transport, there are some good references to promote it, for instance, making it free. Also references to the construction of a bicycle network and other ways to promote it.



0/4

Even if the impact of the aviation sector is mentioned, there are no references to try to decrease its climate impact.



0/4

Shipping is mostly ignored, which can be explained by being a land-lock country. However, some references to inland waterways and how to clean them up could have been included



3/7

Includes a 21.9% renewables in transport target. However, it doesn't go into the details on how to achieve it. On food-based biofuels, it is positive to include a cap of 5%. However, it could be decreased more. On 2nd gen biofuels, there is no information on amounts, feedstocks, imports vs exports... more details required to assess the sustainability of the policy



3/4

Very positive to see that Luxembourg is not pushing for natural gas in transport



1/8

Review of low fuel excise duties. The NECP mentions "adjustments", but more details are required to assess its adequacy, together with additional measures.



2/2

On innovation, there are some references to transport. For instance, aviation and logistics used to be R&D priorities. Now they also add intelligent transport modes. However, more details would be welcome.

# 7. Ireland



**Phase out of non zero emission cars and vans by 2030, accompanied by many measures**



**Doubling of food-based bioethanol by 2030 compared to today's levels**  
**Promotion of fossil gas in trucks**



7/7

On cars and vans, positive to see a general target of having only new zero-emission vehicles by 2030. They should clarify what meaning of "zero emission-capable". By 2030, there would be 0.5 M EVs,  $\frac{3}{4}$  of which would be BEV and  $\frac{1}{4}$  PHEVs. In order to make this transition happen, the draft plan mentions vehicle registration tax exemptions, purchase grants, grants for home charging, lower benefit-in-kind taxes for clean vehicles, discounts on road tolls, development of charging infrastructure...



-1/5

Only fossil gas (CNG and LNG) and biofuels are mentioned, which is negative. They don't mention other available technologies. This should be corrected in the final plan.



5/5

Rail is only mentioned in the context of implementing existing rail plan for the Greater Dublin area.

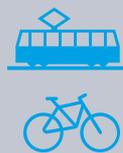


1/4

No diesel-only buses will be bought by public authorities from 2019, but they don't mention the specific alternative. More details should be provided.



2/4



2/4

Some language on public transport, modal shift and investments on cycling and walking infrastructure. However, no details provided.



0/4

Only mention to ICAO's CORSIA. Problematic, as the scheme just covers a small percentage of the emissions, and it is based on dubious offsets.



0/4

Shipping is totally ignored. Ireland cannot decarbonise its economy without dealing with the emissions from the sector.



2/7

It includes a target of at least 14%. EU legislation only mandates 7% (if food-based cap at national level). Moving from 5.5% in 2017 to 14% in 2030 seems risky. 7% will be food based, 7% second generation. Lack of details regarding origin, feedstocks, classification within 2nd generation. All of this should be solved in the final document, including a cap for food-based biofuels. Positive not to include food-based biodiesel.



-1/4

LNG and CNG are mentioned an option for transport. CNG stations and a LNG terminal being built. Also low excise duty for CNG. Gas is a fossil fuel. It doesn't reduce emissions.



1/8

Only congestion charging is mentioned as an additional measure, but no details provided. This should be corrected and further measures included.



0/2

On innovation policy, no direct references to transport.

# 8. Portugal



**Expected ambitious transport emissions of -53% by 2030 (vs. 2005)**  
**Strong push for electromobility**



**No information on types of biofuels**  
**Ignores aviation, and supports LNG in shipping**



2/7

It doesn't include clear targets for EVs. In a presentation by the government, 20% of car fleet electric in 2030 is mentioned, together with 1/3 of new sales by 2030. Insufficient to have an overall fleet of 20% by 2030. Need to clarify if that fleet/car sales would be 100% BEV or PHEV. EVs to be considered when planning the network of the future.



2/5

States that the future will be hydrogen or "other technologies", but their role would be small in the 2021-2030 decade. Specific plans to deal with road freight transport is needed in the final plan.



0/5

No information on measures for vans. This should be corrected in the final version.



2/4

Good electric mobility is identified for heavy passenger vehicles (buses), but no details nor plans are specified. This needs to be corrected in the final version.



2/4

On rail, mentions to increasing use of rail for goods and on further electrification of the network. However, not enough details or mentions to passenger transport.



2/4

Mentions to promoting soft mobility (cycling and walking) and to improving public transport. However, more details are needed.



-1/4

Aviation is totally ignored. Portugal cannot decarbonise its economy without dealing with the emissions from the sector.



-1/4

Focus on LNG, disappointing. It is even defined as "green shipping", even if it is a fossil fuel. Combined with making Portugal an LNG re-exporting hub. Inconsistent with the rest of the plan.



2/7

20% renewables target in transport by 2030. It projects the amounts of biofuel, but it doesn't differentiate between food-based and advanced biofuels. This information, together with feedstocks, origin... should be included in the final plan. Positive to see that the main contribution to the target will come from renewable electricity and, to a minor extent, hydrogen.



3/4

"Gaseous fuels have little or no expression" in road transport. Very positive to include this in the NECP. Available biomethane would be used for heating and cooling, a sector currently using fossil



1/8

Car sharing promotion is mentioned as an additional measure, but many others could be included (fuel taxation, low-emission zones...)



2/2

On innovation, transport is identified as one of the priorities. R&D on batteries and renewable fuels is identified.

# 9. Poland



**Support for electromobility (need to clean power grid as well)**  
**Innovation focus on energy storage and battery recycling**



**Overall push for natural gas in transport**  
**No references to vans, trucks or aviation**



2/7

Target of 1 million electric vehicles (mostly cars) by 2025 (50.000 in 2020). This is accompanied by a charging infrastructure plan. The role of stabilising the grid, lowering peak demand, is included. Industrial plan to play a role on the development of the technology.



-1/5

The measures on trucks focus on promoting LNG, a fossil fuel which doesn't recude emissions. This should be corrected in the final version



0/5

No information on measures for vans. This should be corrected in the final version.



4/4

The focus is on electric buses. There are tools to try to achieve a target of 3.000 urban buses by 2030. A step in the right direction, but not enough. Requires cleaning power supply.



3/4

On rail, there are references to renewing the rolling stock and to improve rail transport of passengers and goods. However, more details are needed.



2/4

There are mentions to the public transport and cycling, but not enough details on how to implement it. Forecasts for bicycles are astonishing, multiplying by 10 by 2040.



-1/4

Aviation is totally ignored. Poland cannot decarbonise its economy without dealing with the emissions from the sector.



1/4

Strong negative push for LNG in shipping. In addition, there are references to constructing vessels on alternative fuels, but without details. If inland waterways are developed, ecosystems could be affected.



2/7

Unclear what the target for renewables in transport is. Some sections say 14%, but annex 2 talks about 15.5%. Poland claims that the 14% in transport is mandatory, but only if no food-based biofuels cap below 7% is not set. No information regarding feedstocks, origin... It seems the 0.5% advanced biofuels target by 2020 will not be achieved.



-1/4

Too much attention to gas (CNG, LNG) vehicles and infrastructure. Biomethane seems to be promoted in transport, when it should be used in sectors already using fossil gas.



3/8

Low-emission zones are mentioned, but it potential is not fully developed. Car sharing also mentioned.



2/2

On innovation, there are references to improving battery technology and battery recycling.

# 10. Estonia



**Focus on electromobility, and recognises that infrastructure for Specific measures for aviation and shipping**



**Not enough measures to start decarbonising vans and trucks Ignores aviation and shipping**



1/7

Focus on electromobility. Several taxation policy measures included to promote it, like registration and circulation taxes. A big minus is the lack of specific dates to phase-out ICEs or specific targets for the sale of zero emission cars.



1/5

Positive introduction of road charging for trucks. If designed properly (including discounts for ZE trucks), it could play a role on decarbonisation. More measures needed.



0/5

No specific measures or targets for vans. This is a minus and it should be amended in the final version



2/4

Buses are hardly mentioned, but there is a measure that includes promoting switching to hybrid and e-buses, which is positive.



3/4

Rail is recognised as a mode with potential to improve transport of both passengers and freight. Mentions to optimization of the network. More details needed.



2/4

References to building pedestrian and cycling infrastructure and establishing convenient and modern public transport.



-1/4

Aviation is totally ignored. Estonia cannot decarbonise its economy without dealing with the emissions from the sector.



0/4

Shipping is totally ignored. Estonia cannot decarbonise its economy without dealing with the emissions from the sector.



2/7

It includes a 14% RES target by 2030. The development of electromobility is the main focus, since "the infrastructure built for the use of biofuels will probably be useless after 2030". Very positive statement. It still includes a 7% first generation biofuels target, which is a maximum, not a minimum. On advanced, most of the target would be achieved with biomethane, which will also be needed in other sectors.



0/4

Positive that CNG or LNG are not being promoted in transport. However, biomethane should be injected into the grid, not promoted in transport.



5/8

Promotion of eco-driving, better spatial and land use planning, congestion charging in Tallinn, promotion of e-work. Overall good scope, even it lacks details.



2/2

Positive to plan to link innovation to specific measures, such as electromobility. It is also positive that innovation policies will link transport and the energy system.

# 11. Sweden



**Emissions target (excluding aviation) of -70% by 2030 compared to 2010**  
**Some good policies to speed up electrification (e.g. bonus/malus taxation)**



**Overreliance on biofuels, combined with lack of transparency on feedstocks**  
**No specific measures for vans or trucks**



2/7

No specific targets to clean up cars. However, it includes some measures to promote electromobility (taxation, fast lanes, charging infrastructure), but no specific goals on number of vehicles or the phase-out of ICEs. Positive to see specific goals for fast charging infrastructure.



0/5

No information on measures for trucks. This should be corrected in the final version. The only reference is to an ecobonus to move from trucks to ships



0/5

No information on measures for vans. This should be corrected in the final version.



2/4

System to promote electric buses. The size of the premium depends on the number of passengers and whether the bus runs on electricity only or is a hybrid. Additionally, targets should be set.



0/4

On rail, there are positive references to electrification and competitive infrastructure to improve rail transport of passengers and goods



2/4

Regarding public transport and modal shift, the references are scarce, relying mostly on urban environmental agreements and premiums for e-bikes.



2/4

A new tax was introduced. Even if positive, it is not enough to decarbonize the sector. Other policies currently being developed, like potential inclusion of a sustainable advanced aviation fuel mandate should be included.



0/4

Shipping mostly ignored in the NECP. It should include measures to ensure that the sector starts transitioning away from fossil fuels, for instance with the right charging infrastructure in ports.



0/7

50% biofuel blending by 2030. Unfortunately, there are no details on how to get there, regarding feedstocks, caps on food-based biofuels... if that target was to be achieved with food-based biofuels, it would be highly problematic. Electricity consumed by road vehicles is not accounted for. Schemes to count it as part of achieving RES in transport could be foreseen.



1/4

Lower taxation for gas vehicles. Considering climate impacts, not justified. Biogas used to produce electricity/heat or in vehicles. When possible, better inject biomethane in the grid.



2/8

Urban environment plans are mentioned, but additional measures such as fuel taxation, eco-driving, car sharing... could be added.



2/2

Transport is mentioned as a priority theme. It allocates SEK 1 billion 2018–2023 to the development of fossil-free transport solutions. The investment will support the switch to an electrified transport sector and develop sustainable solutions for electric cars and other EVs including batteries.

# 12. Finland



**Target of reducing transport emissions by 50% by 2030 compared to 2005**  
**Specific (but insufficient) target for EV fleet by 2030**



**Measures to achieve transport target are questionable (reliance on biofuels)**  
**Ignores aviation, shipping, trucks and vans**



2/7

Policies (charging infrastructure, financial incentives) to promote 250.000 EVs by 2030. That is less than 10% the Finnish fleet. It doesn't include a clearer target regarding the phase-out of ICEs. Recognise EVs contribute to an over-all efficient and advanced energy system.



0/5

No information on measures for trucks. This should be corrected in the final version.



0/5

No information on measures for vans. This should be corrected in the final version.



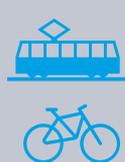
0/4

No information on measures for buses. This should be corrected in the final version.



1/4

There are references to increasing contractual rail transport services and/or rail services subject to the public service obligation. More details are needed.



2/4

Specific budget for development of public transport in large urban regions, together with digitalization of public transport, and promotion of walking and cycling



0/4

Aviation is mostly ignored. It is just mentioned as a sector that needs to reduce mineral oil consumption



0/4

Shipping is totally ignored. Finland cannot decarbonise its economy without dealing with the emissions from the sector.



0/7

Target of 30% biofuel blending by 2030. No details on how to get there, regarding feedstocks, caps on food-based biofuels... potentially problematic if achieved with food-based biofuels, especially as new mandates for other sectors, like machinery or heating (10% blending). Finland uses lots of Palm Fatty Acid Distillates. as an "advance" fuel, while most member states don't consider it to be advance.



0/4

50.000 gas vehicles by 2030. Low amounts of biomethane foreseen. Might use plenty of fossil gas. Biomethane should be used in sectors already using natural gas. Negative



2/9

Better urban planning is mentioned in the report, but more measures could be included.



0/2

On innovation, electric vehicles are mentioned as one of the priority themes

# 13. Slovenia



**Ambitious (but insufficient) 2030 targets for zero-emission cars and vans**  
**Restrictions in city centres for most polluting vehicles**



**Indicative target of +18% GHG emissions from transport by 2030 vs 2005.**  
**Strong push for fossil gas in certain transport modes**



2/7

It refers 20% of cars running on alternative fuels by 2030, without details by type. More specifically, share of new cars sold by 2030: 33% BEVs, 17% PHEVs, 2% Hydrogen. Compared to other member states, it is relatively ambitious, but not enough. Promotion of efficiency of vehicles in the framework of vehicle tax, which is positive.



-1/5

Mostly bet on LNG (21% of new sales by 2030) and LPG (26%) trucks, which are hardly better for the climate, air quality or energy independence



1/5

On vans, similar approach as for cars: 42% by 2030 (40% BEVs and 2% H2).



-1/4

Problematic. By 2030, 62% of all new sales to be CNG, a fossil fuel. It would not contribute to decarbonize nor energy independence. Only 17% of new buses to be electric.



3/4

Plan to improve rail infrastructure, so it could improve for the transport of passengers and goods. More details are needed.



2/4

References to the promotion of public transport, such as public subsidies, integrated public transport system or multimodality. Promoting construction of cycling infrastructure.



-1/4

Aviation is totally ignored. Slovenia cannot decarbonise its economy without dealing with the emissions from the sector.



2/4

Negative: promotes use of LNG.

Positive: recognises benefits of power supply system for fueling ships at port. Includes review of taxes. Calls for EU measures on electricity in ports.



0/7

No renewable energy transport target indicated. However, 7% of biodiesel would be added to diesel. Share of trucks that will be using pure biodiesel (B100) will grow from 0 to 10 %. Negative, considering no information on the feedstocks used, if food-based or advanced, origin... A food-based biofuel cap should be established, and renewable electricity become the main fuel to achieve the 2030.



0/4

Pushes for gas in certain transport modes (trucks, buses, shipping). Negative for emissions and energy independence. No references to biomethane.



3/8

Consideration of low-emission zones in city centres, and promotion of car sharing. Other measures, such as fuel taxation review, would be welcome.



2/2

Mentions to transport supporting the transition to a low carbon circular economy and enable sustainable mobility, also by introducing new concepts of mobility.

# 14. Czech Republic



**Recognises the role of electromobility**

**Good level of details regarding type of biofuels to be used**



**Biofuel use grows considerably, with no sustainability safeguard**

**Focus on natural gas in transport (a fossil fuel)**



0.5/7

Numbers projected for EVs are too low. Basic scenario includes only 21% of new sales being EVs in 2030, 23% in 2030 and 24% in 2040. Completely insufficient Only the high ambition electrification scenario is closer to what is needed.



2/5

It mentions LNG, a fossil fuel. Very negative for the climate and energy dependence. It admit in the longer-term, hydrogen or electric might play a role. However, no enablers.



1.5/5

Scenario include some electric vans by 2030, but numbers are very far to what is required.



1/4

Scenario include some electric buses by 2030, but numbers are very far to what is required.



3/4

Further electrification of rail and gradual shift from road to rail.  
More details needed.



2/4

Mention a Strategic Plan for Sustainability Mobility, with a focus on public transport. However, no more details provided. Cycling development strategy up to 2020.



-1/4

Aviation is totally ignored. The Czech Republic cannot decarbonise its economy without dealing with the emissions from the sector.



0/4

Shipping is mostly ignored, which can be explained by being a land-lock country. However, some references to inland waterways and how to clean them up could have been included



1/7

The 14% renewables target in transport is presented as mandatory, but it is only the case if not food-based biofuel cap is established. Food-based biofuels increase a lot, which will create new competition with food and produce ILUC. Given the projected growth for advanced biofuels, more details are needed regarding feedstocks.



0/4

Promotion of fossil gas promotion. Low taxation at least until 2020. They want the gas fleet to grow considerably. Biomethane promoted, but required for other sectors (heating).



0/9

No additional measures such as fuel taxation, eco-driving, urban planning, car sharing... are mentioned.



2/2

In comparison to the rest of the document where gas has an important focus, on transport innovation the Czech Republic focuses only on electric vehicles.

# 15. Germany



**Main focus on electromobility**

**Cap on food-based biofuels of 5.3% (it should be brought down)**



**Most of the actual content is postponed to the final plan**

**With agreed measures reduce emissions 28% vs 1990. DE has a target of -40/42%**



2/7

Want to further promote electromobility. Agreed on a package (2016), but no new plans: 300 million EUR for improving charging infra (200 fast charging and 100 million normal charging). Purchase premium of €4K for BEVs, with a total of €1.2B. Disappointing not



0/5

Trucks are basically ignored. A big minus in the German NECP. This should be corrected in the final plan.



0/5

Light commercial vehicles are not mentioned in the plan. This is something that should be corrected in the final plan.



2/4

On buses, very generic: funding multiple projects concerning the technological development or procurement of electric and hybrid buses. More details needed.



0/4

No single measure is mentioned for the railways sector. This is something that should be corrected in the final plan.



1/4

It mentions a national cycling plan and the funding of alternative drive systems for local public transport



-1/4

Aviation is totally ignored. Germany cannot decarbonise its economy without dealing with the emissions from the sector.



0/4

Shipping is totally ignored. Germany cannot decarbonise its economy without dealing with the emissions from the sector.



3/7

Renewables target in transport to be defined. Aims at share of food-based biofuels of 5.3% by 2030. It is positive to have it below the EU maximum of 7%. That means DE could bring the 14% target down to 12.3%. Advanced biofuels would be at the EU minimum of 3.5%. No information about technology-specific shares of renewables in transport, nor about imports vs locally produced.



-1/4

Gas tax support until 2026. Exemption from road charging. NECP mentions that fossil gas reduces CO2. This is wrong.



0/8

No additional measures are mentioned in the plan, such as urban planning, low-emission zones, road charging, speed limits, fuel taxation...



2/2

Transport identified as one of the priorities. Want to continue investing in hydrogen. Already agreed a research program until 2025. Supports industry moves to establish domestic battery cell production facilities. Battery cell research must be stepped up to support these developments.

# 16. Slovakia



**Relative high level of detail on biofuels**  
**Push for electromobility in passenger cars**



**Even with additional measures, emissions continue to grow throughout to 2040**  
**Strong push for fossil gas in transport**



2/7

Push towards electromobility. Targets or phase-out of ICEs missing. Building and upgrading of infrastructure, special lanes for EVs, access to low-emission zones, support to purchase them. Upcoming action plan for the Development of Electromobility is also mentioned.



1/5

Exemption from toll payments is mentioned for alternative fuels. However, that could also include CNG and LNG trucks, which would be negative. To be clarified. More measures needed in any case.



0/5

No information on measures for vans. This should be corrected in the final version.



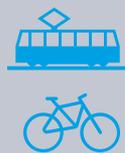
1/4

Only reference to buses is regarding the renewal of trolleybuses in certain cities. More measures are needed.



2/4

Goal to transfer passengers from cars to rail is positive. However, it lacks details on how to achieve it. Same situation regarding road freight to rail.



2/4

On public transport, mentions to environmentally friendly are included, but again, it is not defined. It is also positive to read references to cycling infrastructure, but it is not detailed at all.



0/4

Emissions from aviation are mentioned, but the plan doesn't include a single measure on how to reduce them



0/4

Positive: a "refitting of obsolete ships' propulsion units, including auxiliary units, with low-emission replacements". Lacks details on specific technologies. References to LNG in ports (negative)



1/7

Renewables transport target of 14% by 2030. It is only mandatory as long as the food-based biofuels cap is not lowered below 7%. No decrease in food-based biofuels observed. Projections included a high level of detail. No biofuels will be imported. Unclear if it refers to the end product or the feedstocks. More information about the feedstocks foreseen and their sustainability should be included.



-1/4

Gas is mentioned as a "transition" fuel throughout the document. A big minus, as gas in transport doesn't reduce emissions nor improve energy independence.



4/8

Ending tax differential between petrol and diesel. Considering to increase taxation for company cars and creating low-emission zones. A calendar should be included.



1/2

On innovation, transport is mentioned as part of the development of new technologies and materials, but details are missing. The statement is too generic.

# 17. Italy



**NECP with the most references to rail**

**Clear links in innovation between EVs and the power sector**



**Strong promotion of natural gas in transport**

**No decrease of food-based biofuels, even if most of them are palm oil related**



2/7

Apart from promoting CNG (a fossil fuel), there is a push for EVs. The fleet projected to 6M by 2030, (1.6M BEVs / 38M cars in 2016). Emphasis on PHEVs too high. Intention to gradually review the taxes (registration, ownership, fuel) and study further financing methods to favor low emission vehicles. Also clear details on charging infrastructure.



-1/5

Only gas (LNG) is mentioned, which is negative. No contribution to decarbonisation or energy independence. They don't mention other available technologies. This should be corrected in the final plan.



0/5

No information on measures for vans. This should be corrected in the final version, but hopefully not pushing for CNG vans.



-1/4

Even if electric buses are mentioned, the focus is on gas buses (CNG and LNG). Gas doesn't contribute to decarbonisation nor energy independence.



3/4

Rail is promoted for transport of goods and passengers. Several references to intermodality. Further development of infrastructure and replacement of rolling stock



2/4

Promotion of cycling and integration with other modes, for instance providing parking for bikes. Upgrading of rapid mass transit systems also included.



0/4

Aviation is mostly ignored. There are only references to biofuels in the sector, but no details on amounts or sustainability considerations.



-1/4

On shipping, there is a strong promotion of LNG, including constructing infrastructure, providing incentives in ports, promoting construction of ships... very negative



1/7

Target of renewables in transport of 21.6%. Negative. It claims a decrease of first generation biofuels, but the projected numbers don't show a decrease. Most biofuels produced in Italy today are palm related, either crude palm oil or palm fatty acid distillates. Advanced biofuel targets will be achieved through biomethane, claiming almost all biomethane produced, which is also needed for other sectors.



-1/4

It promotes gas in almost all transport modes, deploying infrastructure. Biomethane allocated to transport, even if needed for other sectors using gas. Not a way to decarbonise transport.



2/8

References to limited traffic zones, but no details provided. Also includes the development of a plan for sharing mobility. More details and measures needed.



2/2

Covers a wide range of topics within transport: testing of various energy storage systems and batteries of EVs, safety monitoring for 2nd life use, devices for V2H (Vehicle To Home); study and experimentation of infrastructures for high power electric charging for local public transport., among others.

# 18. Romania



**Some mentions to promote electromobility**

**No promotion of natural gas in transport**



**Focuses on biofuels to achieve the renewables transport target**

**Ignores vans, trucks, aviation and shipping decarbonisation.**



1/7

It lacks specific targets. It mentions the reinsertion of a pollution tax to reduce GHG and NOx emissions caused by imports of old cars, the development of a plan for public charging networks, apply tax reductions and exemptions for the purchase of EVs, special parking space, use of bus lanes



0/5

No information on measures for trucks. This should be corrected in the final version.



0/5

No information on measures for vans. This should be corrected in the final version.



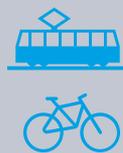
0/4

Mentions to extend and modernise trolleybuses, but without more details. More should be included in the final version.



3/4

Mentions to developing the TEN-T rail network and to inverting the trend of reducing the rail transport and developing intermodal terminals' restructuring and modernizing the rail system.



2/4

On public transport includes increasing the efficiency of urban transport, including the extension of the metro network and modernizing trams and trolleybuses. Developing Cycling infrastructure is also



-1/4

Aviation is totally ignored. Romania cannot decarbonise its economy without dealing with the emissions from the sector.



0/4

Shipping, both maritime and internal, is mentioned merely in the context of intermodality. However, it includes no measures on reducing the impact of the sector.



0/7

It includes a 17.6% renewables in transport target by 2030. Most of the target will be achieved through food-based biofuels, a negative development. Instead, Romania should include a food-based biofuels cap. The NECP lacks information about type of biofuels, feedstocks, origin... both for food-based and advanced biofuels. This should be corrected in the final version.



3/4

Natural gas (CNG or LNG) is not promoted at all in the Romanian NECP. That is a very positive development, considering it doesn't reduce emissions nor improve energy independence.



3/8

Limiting the circulation of conventional vehicles in city centers is mentioned. Taxation instruments are mentioned, but without providing details.



1/2

Electromobility is identified as one of the research priorities, together with smart grids.

# 19. Belgium



**Flanders includes targets for clean vehicles, although clearly insufficient**  
**Specific measures for aviation and shipping**



**Excessively high targets for biofuels (both food-based and "advanced")**  
**Wallonia seems obsessed with the use of natural gas in transport**



1/7

Flanders has a target of having all new cars by 2030 being “clean”, while half should be zero emissions. Under “clean” they include hybrids and biofuels, which are not clean. Not enough, but at least half need to be zero emissions. Wallonia is not as specific.



1/5

Flanders mentions 5% of trucks being “clean” by 2030. Positive but Insufficient. Wallonia, LNG trucks as “imperative”. Very negative.



1/5

Flanders indicates that 30% of new vans should be “clean” by 2030. Wallonia talks about “diversification”. Clearly insufficient in both cases.



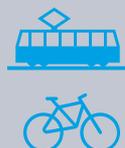
1/4

Flanders: only “clean” buses in urban environments by 2025 (including hybrids), while only ZE in city centers. In Wallonia, majority of the fleet being hybrid, ZE, gas... very unspecific. However, from 2025 all new buses bought will be ZE.



2/4

Rail is recognised as a mode with potential to improve transport of both passengers and freight. Mentions to optimization of the network. More details needed.



1/4

Goal to have biking share of 20% on commuting travel. However, no details on how to get there



2/4

Elaboration of a roadmap to reduce emissions from the sector, and the possibility of fuel or passenger taxes in aviation. Not enough, but steps in the right direction



3/4

Mentions to promote more efficient ships (more details needed) and on-shore electricity use. Not enough, but steps in the right direction



0/7

Target of at least 14% biofuels (in real energy terms): 7% will be food-based, 7% advanced. EU legislation only mandates 3.5% in real energy terms ("advanced" with double-counting). Moving from 5.5% in 2017 to 14% in 2030 seems unrealistic and not advisable. Considering renewable electricity planned for 2030, REDII obligations could be met without food-based biofuels and with only 3.5% of "advanced" biofuels.



0/4

Wallonia obsessed with natural gas (CNG and LNG). It will not contribute to reduce emissions nor improve energy independence



1/8

Federal government will assess company car policies adequacy for climate objectives. Some mentions to urban planning improvement.



0/2

Not much said about transport, but some worrying aspects, like innovation on power-to-gas (inefficient) or even natural gas (fossil fuel) vehicles is mentioned.

# 20. Cyprus



**Overall push for electromobility in cars and vans.  
Link between EVs, renewables and the power sector is included.**



**Lack of details on transport. At time of submission, Cyprus was "exploring" further measures. Aviation and shipping are ignored**



2.5/7

Overall push for electromobility in cars and vans. Reference to have 25-50% of the fleet electric by 2040. It is an expectation and not a target. It should be improved by making it binding and making the timeline earlier.

Positive link between EVs, power sector and renewables included. In an isolated power system, this is particularly relevant.

Infrastructure for EVs promoted and plan to modify the tax regime, to ensure that clean vehicles are promoted.



1/5

Toll charging could be implemented, which is positive. However, as such, it is not enough to decarbonize the sector and further measures would be required.



0.5/5

Infrastructure for EVs promoted and plan to modify the tax regime, to ensure that clean vehicles are promoted.



2/4

There are mentions to promote e-buses. However, an specific plan and measures are needed.



1/4

Rail is mentioned in the context of exploring railways connections between cities. More details are required.



2/4

Mentions promoting cycling and walking, with the goal to increase modal shares to specific levels. Potential construction of a tram in Nicosia



-1/4

Aviation is totally ignored. Cyprus cannot decarbonise its economy without dealing with the emissions from the sector.



0/4

Shipping is totally ignored, despite the sector being very important for the economy of Cyprus.



0/7

It seems to indicate a renewables target in transport of 10% by 2030. However, that would need to be combined with a cap on food-based biofuels in order to meet the obligations of the RED. There is no information whatsoever on how the target would be achieved, neither the split between biofuels and electricity, nor between types of biofuels.



0/4

Natural gas is mentioned as a potential alternative in transport, if gas resources are exploited. Gas does not reduce emissions.



4/8

Potential review of fuel taxes (tax shift)  
Congestion charging in cities  
Low-emission zones  
Promoting eco-driving



1/2

Innovation policies are very generic. There is only a specific reference to transport and shipping, but with no details whatsoever

# 21. Lithuania



**Short term indicative target for electric cars**

**Biomethane would be injected into grids, reaching 1%.**



**Even with additional measures, 2030 transport emissions above today's level**

**Promotion of LNG in transport**



3/7

Indicative electric cars sales target of 5% in 2020 and 10% in 2025. Some measures mentioned: charging infrastructure, free parking, use of bus lanes, no restrictions to access some city centers... however, it is unfortunate that no ambitious 2030 target is mentioned, nor the ban of ICEs after a certain date.



1/5

Only measures mentioned are e-tolling and intermodality. On this last measure, it is supposed to deliver large GHG reductions, even if the measure includes no budget. Probably overestimated, but more information needed.



0/5

No information on measures for vans. This should be corrected in the final version.



0/4

No specific references to buses, just to a purchase plan to lower emissions in urban areas. Difficult to assess, as it might lock in cities into potentially non-carbon free alternatives.



1/4

On rail, there are mentions to electrification of railways. More detailed on timing and scope would be welcomed, together with more measures to promote this mode.



2/4

Mentions to promote alternative modes of transportation, like cycling and walking. Sustainable Mobility Plans of municipalities would also promote public transport. Overall, more details needed.



-1/4

Aviation is totally ignored. Lithuania cannot decarbonise its economy without dealing with the emissions from the sector.



0/4

Shipping is totally ignored. Bulgaria cannot decarbonise its economy without dealing with the emissions from the sector.



0/7

Overall target of 15% renewables in transport by 2030. 7% would come from first generation biofuels, which is the very maximum included in the directive. No information about the type of feedstocks used, which is problematic. Above current levels, could contribute to deforestation and other environmental problems.



0/4

Promotion of LNG in transport. The NECP modelling itself shows no GHG reductions as a consequence of such measure. Biomethane injected into grids, reaching 1% of demand.



2/8

Mention to "assess" the impact of tax measures on fossil fuel consumption. A commitment needed. Also mentions to eco-driving trainings.



1/2

On innovation, they only references to transport are regarding charging infrastructure development. It is surprising to find such references under that section, as it is not really innovation related. More references to actual transport innovation related policies would be welcome.

# 22. Austria



**Overall focus on electromobility**

**Specific targets for cycling modal share and rail electrification**



**Lack ICEs phase-out or targets. Language on “shifting focus” towards ZEVs is too lax**

**No details at all on how to achieve renewables targets in transport**



1/7

The wording focuses on "shifting the focus" towards zero-emission vehicles by 2030. This is neither clear nor measurable.

The final NECP should introduce a specific and measurable target for zero-emission vehicles (cars and vans) as well as a date to achieve it plus an action plan on how to get there.



1/5



2/4

Includes further electrification of rail, from 73 to 85%, and strengthening of rail-bound public transport



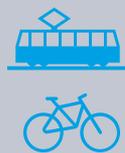
5/5

It foresees a large increase on ZEV trucks by 2040. The recently implemented cheaper LKW Maut for such vehicles is a positive measure. New investment for e-Trucks is also mentioned.



2/4

A push for e-buses and trolleybuses is mentioned. Unclear if it is beyond the obligations of the Clean Vehicles Directive. Infrastructure for e-buses mentioned



1/4

Goal to have biking share from 7 to 13%. However, no details on how to get there



-1/4

Aviation is totally ignored. Austria cannot decarbonise its economy without dealing with the emissions from the sector.

Expanding airports will not help



0/4

Shipping is ignored. Although Austria is a land-lock country, something on how to decarbonize inland shipping should be included



0/7

It includes a target of “at least” 14% renewables in transport by 2030. It is impossible to assess the adequacy of such a target. In comparison to many other NECPs, it lacks to specify how it will be achieved. Many other NECPs project the amount of biofuels (differentiating by type), electricity... summarised in a table.



0/4

Biomethane could be used in transport. However, small potential amounts will be needed for sectors already using fossil gas today



1/8

Public procurement will be based on Total Cost of Ownership, which is positive. However, it should incorporate external costs



1/2

Positive to have transport as a key theme within innovation policies, but lacks to include details on specific technologies or transport modes

# 23. Greece



**Electrification emphasis for light and heavy-duty vehicles (trucks and vans)**  
**Power supply of ships during berthing through the necessary infrastructure**



**Includes a very high renewables transport target (20%) without providing details**  
**Strong push for natural gas in transport**



2/7

Some tools (taxation, infrastructure) to promote EVs. However, no specific targets for new sales. Estimate to achieve a 10% of the fleet to be electric by 2030, going up to 26% by 2040. However, if transport is to decarbonize, that is clearly insufficient. Additionally, there is no differentiations



1/5

On one hand, an electrification emphasis is mentioned for heavy-duty vehicles, even if no mention on how to do it. On the other, they promote the use of natural gas, a fossil fuel, for trucks. This should be corrected.



2/5

An electrification emphasis is mentioned for commercial vehicles (vans), but no mention whatsoever on how to do it. More details needed.



-1/4

Strong emphasis on fossil gas, even if it doesn't deliver air quality nor climate change nor energy independence benefits.



1/4

Rail is only superficially mentioned, focusing on the complete electrification of the network. More details on how to promote it for passengers and goods should be included.



2/4

Public transport is mentioned, but with no specific plan. Same regarding cycling. The only mention is to “sustainable urban mobility plans in cities”



-1/4

Aviation is totally ignored. Greece cannot decarbonise its economy without dealing with the emissions from the sector.



2/4

Not much detail, but positive to include the power supply of ships during berthing through the development of the necessary infrastructure



0/7

The renewables target in transport seems to be 20% by 2030. It says that the goal is to exceed 14% mandatory target included in the Directive. However, the 14% included in the Directive is not mandatory, unless the food-based biofuels cap is not lowered below the maximum 7%. impossible to know what type of biofuels would be used, feedstocks, origin... this should be corrected in the final version



-1/4

Fossil gas mentioned as having environmental benefits, even if that is not the case. Biomethane promoted in transport, when makes more sense to use it in sectors using fossil gas today.



1/8

Apart from car sharing, no additional transport decarbonisation measures are mentioned.



1/2

The innovation section is very generic regarding transport. It says it should be one of the priorities, but without any further detail. Hydrogen is the only technology that is specifically mentioned.

# 24. Malta



**Exploring a phase-out of diesel and petrol cars**  
**The existence of a National Electromobility Action Plan**



**Exploring the use of natural gas in transport**  
**No references to aviation nor shipping**



2/7

In the process of establishing a cut-off date for ICEs. Pity not included in the NECP. Hopefully it will be compatible with 2050 decarbonisation. Also exploring using hydrogen in transport. Due to limited RES electricity resources, it would be imported.

Infrastructure is being built (118 medium-fast chargers, and 22 fast chargers), EVs will not have congestion charges, no registration fee, no circulation fee for some years... the role of EVs to avoid curtailment of renewable electricity is not mentioned, relevant in Malta



0/5

Malta doesn't have railway infrastructure. Not mentioned in the NECP, even if there are discussions in the country to build a metro.



N.A.



0/5

Lack of details regarding trucks. It could be assumed that they would be part of the mentioned Low Emission Zone, but it is unclear.



2/4

The introduction of 8 e-buses in Gozo is positive, but more details are needed to clean up the whole fleet.



3/4

Positive measures in the field of public transport, such as promotion among young people, local public transport hubs, real-time journey planner, sharing of e-cars ... Also in the field of cycling, such as infrastructure of e-bikes sharing schemes.



-1/4

Neither aviation nor shipping are mentioned in the NECP. For a country highly dependent on both transport modes, it is surprising that both are left aside.



0/4

Neither aviation nor shipping are mentioned in the NECP. For a country highly dependent on both transport modes, it is surprising that both are left aside.



2/7

Includes a 14 % renewables transport target, presented as mandatory. This is not correct. The directive establishes a mandatory target of 7% of renewables. The other 7% is optional, if a food-based biofuel cap is set, which would make sense considering they are imported. In general, the document lacks details on how the target would be achieved, feedstocks, origin of biofuels... to be corrected in the final version.



0/4

Natural gas not promoted. However, recently commissioned a study to explore the role of CNG/ LNG in transport. It should conclude that cannot contribute to decarbonization nor energy security.



1/8

Exploring the option of establishing a low emission zone. It should be implemented, together with additional measures.



0/2

On innovation, the priorities are still pending to be defined.

# 25. Latvia



**Specific plans on fast charging infrastructure**

**Opens the door to establish a food-based biofuel cap below EU maximum**



**Push for natural gas in transport**

**No references to vans, trucks or aviation**



2/7

No specific targets to clean up cars. However, it includes some measures to promote electromobility (taxation, fast lanes, charging infrastructure), but no specific goals on number of vehicles or the phase-out of ICEs. Positive to see specific goals for fast charging infrastructure.



0/5

No information on measures for trucks. This should be corrected in the final version.



0/5

No information on measures for vans. This should be corrected in the final version.



0/4

Reference to buy or rebuild 50 buses, to make them environmentally friendly. However, it is not defined what an environmentally friendly bus is. More details and measures needed.



3/4

On rail, there are positive references to electrification and competitive infrastructure to improve rail transport of passengers and goods



2/4

On public transport, mentions to environmentally friendly are included, but again, it is not defined. It is also positive to read references to cycling infrastructure, but it is not detailed at all.



-1/4

Aviation is totally ignored. Latvia cannot decarbonise its economy without dealing with the emissions from the sector.



1/4

Reference to performing a study about the proportionality of demand and costs for electricity supply to ships in ports in comparison with environmental benefits". Positive development, but not enough.



0/7

Contradictory information regarding the renewables target in transport. In some tables 14% is mentioned. However, in other section it is mentioned that a cap for food-based biofuels could be included, which would be very positive. No further details regarding other RES sources, feedstocks, imported vs domestic... more details are needed in the final version.



-1/4

It includes facilitating the purchase of CNG and LNG vehicles, together with infrastructure development. Biomethane used in transport, while it should be used in sectors using gas today



0/8

No additional measures such as fuel taxation, eco-driving, urban planning, car sharing... are mentioned.



1/2

On innovation, there are very few references to transport, only one mention to hydrogen and advanced biofuels, but more details should be provided.

# 26. Croatia



**Non-ETS emissions would go down -32% by 2030 (vs. 2005). However, measures seem insufficient to get there**



**Lack of details on biofuel policy  
Ignores aviation and shipping**



2/7

EVs are subject to incentives, that should stop once they reach 1% of the fleet. Charging infrastructure will also be promoted. However, no specific quantitative targets or phase out of ICEs . Not enough details



0/5

No information on measures for trucks. This should be corrected in the final version.



0/5

No information on measures for vans. This should be corrected in the final version.



0/4

No information on measures for buses. This should be corrected in the final version.



1/4

Some mentions to promote intermodality, including incentives for combined transport of goods by rail.



1/4

Introduction of public city bicycles system and construction of the accompanying cycling infrastructure. More details needed.



-1/4

Aviation is totally ignored. Croatia cannot decarbonise its economy without dealing with the emissions from the sector.



0/4

Aviation is totally ignored. Croatia cannot decarbonise its economy without dealing with the emissions from the sector.



0/7

Renewables transport target by 2030 of 13.2%. Surprising that a decrease in the food-based biofuel cap is not mentioned. Otherwise it would not meet the requirements of the Directive. Very poor level of detail. It doesn't differentiate food-based biofuels vs 2nd generation, nor the feedstocks, nor the origin... Really surprising that biofuel volumes would multiply by 10 between 2020 and 2021.



0/4

Gas mentioned as a possibility for transport, subject to incentives. It will not contribute to reduce emissions nor energy dependence



4/8

Sustainable mobility plans would be promoted in cities, but no detail provided. Promoting car-sharing and eco-driving are also mentioned.



1/2

Transport is mentioned, but without a particular focus. The only priority mentioned, with clear links to transport, is information and communication technologies. However, ICTs as such can contribute to a very minor extent to transport decarbonization.

# 27. Bulgaria



**Overall promotion of electromobility**  
**Positive references to public transport**



**Focus on what they have done, not what they are planning to do**  
**Ignores trucks, vans, aviation, shipping...**



0/7

No targets or info on deployment of electric vehicles. Very generic statements on promotion of electromobility, together with “other” clean vehicles. Total lack of details that should be improved in the final version.



0/5

No information on measures for trucks. This should be corrected in the final version.



0/5

No information on measures for vans. This should be corrected in the final version.



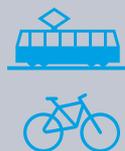
0/4

No information on measures for buses. This should be corrected in the final version.



1/4

Mentions to rail transport rehabilitation and modernisation, but more details are required



2/4

Mentions to improving public transport, and increasing the share of public transport. Promotion of cycling, but no details included



-1/4

Aviation is totally ignored. Bulgaria cannot decarbonise its economy without dealing with the emissions from the sector.



0/4

Shipping is totally ignored. Bulgaria cannot decarbonise its economy without dealing with the emissions from the sector.



0/7

It includes a 14% of renewables in transport. No information on how it will be achieved whatsoever. As many other member states, they take it as an obligation, but it is not. The revised Renewable Energy Directive establishes a mandatory target of 7% of “renewables” in transport, if combined with a food-based biofuel phase-out.



3/4

The NECP pushes for the use of natural gas, but mostly for heating, not so much on transport, which is positive.



2/8

Positive to introduce road charging in 2019, but not related to 2021-2030 policy.



0/2

Innovation in the field of transport is basically not mentioned.

# 28. Hungary



**Electromobility seems to be the main focus, but lacks details on implementation**

**No promotion of natural gas in transport**



**Caps transport emissions at 15.66 Mt by 2030 (+30% compared to 2005 levels)**

**No information on types of biofuels**



2/7

There is a promotion to use electricity in transport, such as taxation policies, improvement of charging network or legal environment in the long term, which is positive. 450.000 electric cars expected by 2030 (13% of current fleet). However, no end of ICE vehicles is foreseen.



1/5

Only mentions once investments to electrify small trucks, but with no details. More should be included in the final plan.



0/5

No specific mentions to light commercial vehicles (vans), which is an omission of the plan



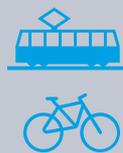
2/4

Electric buses are mentioned as playing a role in electrification. However, no details are provided. This should be corrected in the final plan.



1/4

There is a very general statement about developing rail and other public transportation vehicle fleets. No details provided, nor rail freight mentioned



1/4

Only a very general statement about developing public transportation vehicle fleets. No details provided. Cycling is not mentioned in the NECP.



-1/4

Aviation is totally ignored. Hungary cannot decarbonise its economy without dealing with the emissions from the sector.



0/4

Shipping is ignored, which can be explained by being a land-lock country. However, some references to inland waterways and how to clean them up could have been included.



0/7

Target of renewables in transport of 15%. Lack of detail on how this will be achieved (no differentiation between food-based and advanced biofuels, no info on feedstocks, origin...), which makes it problematic. The Directive mandates a target of 7%. The other 7% is optional as a food-based biofuels cap can be established. More details should be included in the final plan, together with a cap of food-based biofuels.



2/4

No mention to increase of natural gas in transport (positive). However, in a figure, the amount used in transport increases. Hopefully, no further policies to steer that change.



1/8

No additional measures are mentioned in the plan, such as urban planning, low-emission zones, road charging, congestion charges, fuel taxation...



0/2

On innovation, there seems to be little focus on transport, and clear priorities in the field are missing.