

EU to transform its entire transport system

The transport sector is the largest GHG emitter in Europe and worldwide. Although in many other sectors, the level of generated emissions dropped, the transport system released more greenhouse gas emissions. EU's ambitious plan is to significantly cut emission and transport decarbonisation is the solution proposed and debated on. The Communication on decarbonising the transport sector will be presented soon and the promotion of railway transport, as well as the increase in the railway transport share is a vital element for reaching the EU objective.

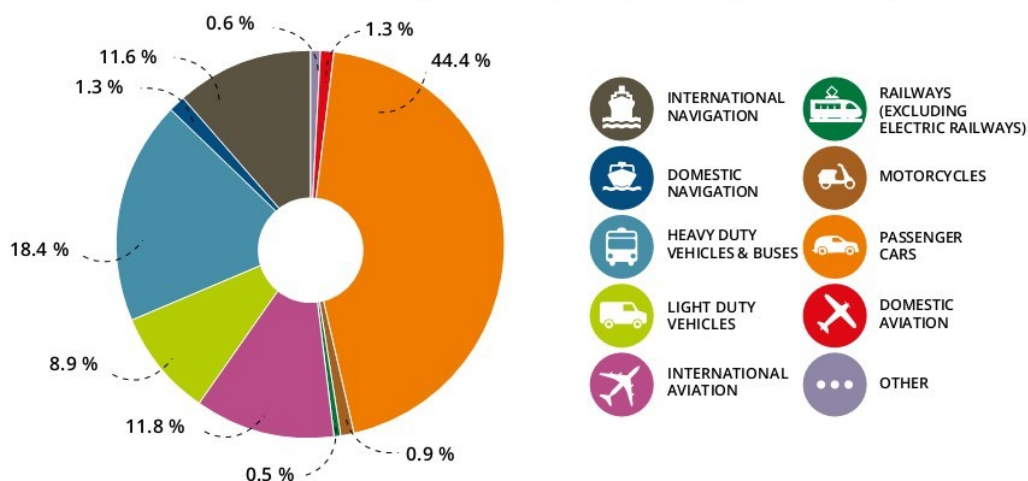
by Pamela Luica

In the EU, transport generates a quarter of greenhouse gas emissions, being the second largest sector with high emissions level, after energy. According to the latest date of the European Environment Agency (EEA), in 2014, the GHG emissions continued to drop by 4.1% up to 24.4% below the 1990 level. From 1990 to 2014, the level of emissions dropped in most sectors, the most significant cuts being in the constructions sector and the processing industry (-372 Mt), electricity and thermal energy (-346 Mt) and households (-140 Mt). "It is positive that Europe has been able to reduce greenhouse gas emissions substantially since 1990. It is an important step towards reaching our 2030 and 2050 climate targets. To accelerate the transition towards a low-carbon society, we need to further boost our investments in technology and innovation aimed at reducing our dependence on fossil fuels," Hans Bruyninckx, EEA Executive Director said. However, not all sectors have managed to contribute to cutting emissions, road transport being responsible for the highest CO2 growth with 124 Mt in 1990-2014 and with 7 Mt in 2013-2014.

At present, Europe's transport demand is much higher compared to 2000 levels and is expected to grow. By 2050, the European Commission estimates passenger transport growth to over 50%, while freight transport growth to 80% compared to 2013. Under the circumstances, EU set

several objectives to reduce environmental impact and create a sustainable economy. For the transport sector, the EU plans to cut emissions by 60% until 2050, a very ambitious and difficult to achieve objective seeing that the EU transport sector is 94% oil-dependent of which 90% is imported, while the mix of transport modes is not sustainable. Oil dependence makes the transport system vulnerable to instability and changes in the global energy market. An energy supply disruption could significantly undermine the economy and affect the increase of life quality. Cutting on transport emissions has made EU adopt the decarbonisation concept, a very important challenge that can only be tackled through new policies and new solutions aimed to create accessible, clean and coherent mobility systems. Also, new transport models will be launched to ensure higher freight volumes and more passengers reaching their destination with the help of the most efficient transport modes. "The EU's transport sector depends on oil for 94 % of its fuel. It is clear that decarbonising Europe's transport sector will take time. It requires a combination of measures, including better urban planning, technological improvements, and a wider use of alternative fuels. But it can be done and we know how we can make it happen. Cleaner and smarter transport can actually meet Europe's need for mobility and at the same time deliver many public health benefits, >

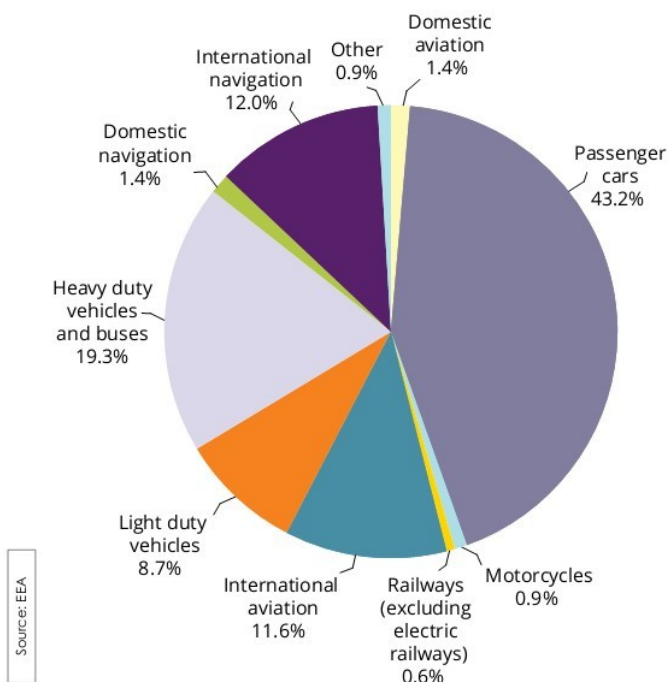
GHG emissions from transport in EU-28, 2014 (based on provisional data)



Source: EEA

> including cleaner air, fewer accidents, less congestion and less noise pollution,” EEA Executive Director said.

Contributions of the different modes of transport to EU transport GHG emissions in 2013



Railways are the answer

In April 2016, the European Commission published the draft “Communication on decarbonising the transport sector” aimed to identify the way in which the transport system can contribute with a 30% cut of emissions by 2030. The EU actions on transport decarbonisation have been announced through policy documents, such as the Roadmap for the Energy Union, reformed regional policy and the European Structural and Investment Funds 2014-2020. These documents have different objectives and

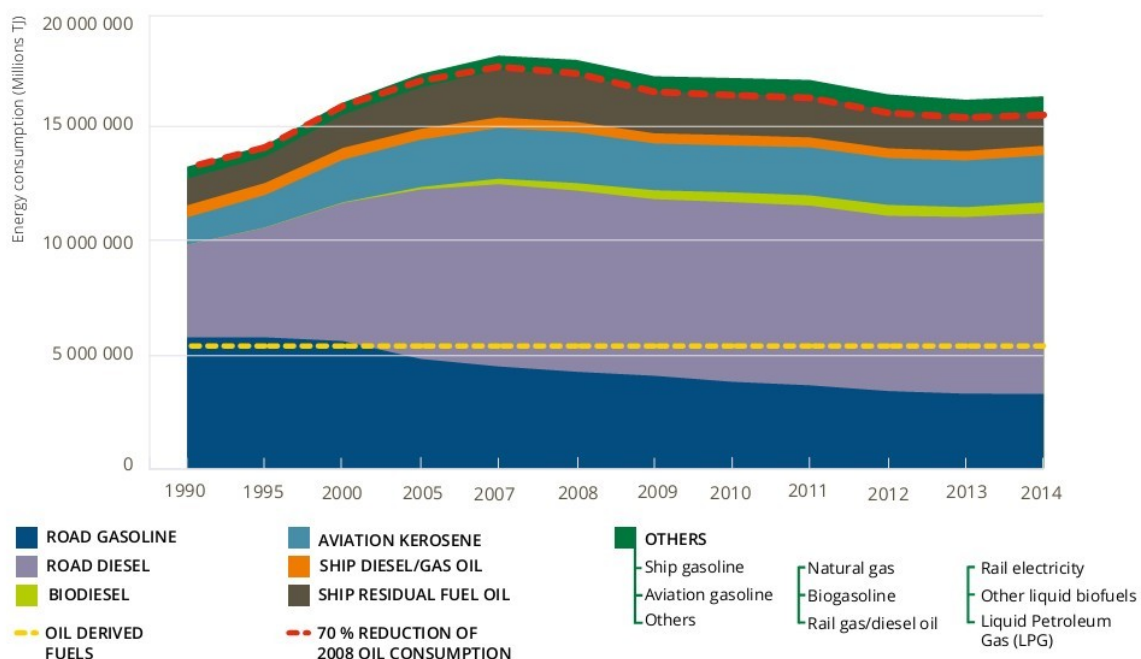
cover different planning horizons.

In order to meet the objectives, the “Roadmap for the Energy Union” sets a series of actions that need to be implemented in Europe among which the review of the Regulations that set the performance standards after 2020 for cars and trucks; establishing a monitoring and report system for heavy vehicles; review of the Directive on the availability of information for consumers regarding fuel consumption and CO₂ emissions; development of an action plan for alternative and sustainable fuels, including the second and the third generation of biofuels; review of market access rules for road transport.

Almost one third of the GHG in the non-ETS (Emission Trading Scheme) sector comes from transport; the evaluation of the 2030 energy and climate framework impact shows that an efficient contribution of transport costs, based on the measured adopted until 2020, requires that transport emissions should be reduced by 17-20% below the 2005 level. Especially for road transport, which amounts to 95% of non-ETS transport emissions, the same simulation model shows that substantial emission cuts are necessary until 2030. The future range of road transport contribution will be provided by the modelling underpinning the future Effort Sharing Decision (ESD) that will be adopted at the same time as the communication. Regarding the ESD, reduction efforts for non-ETS sectors (transport, buildings, agriculture, small industry and waste) will be distributed between member states by reviewing the ESD. There are two different levels that contribute to this reduction effort: the contribution guaranteed by the EU legislation and the policies and actions that member states can implement to reduce emissions from their own transport system.

Railway transport plays a vital part in meeting the EU emission cutting objective since railway transport generated emissions are the lowest and the fuel used

Energy consumption by fuel type



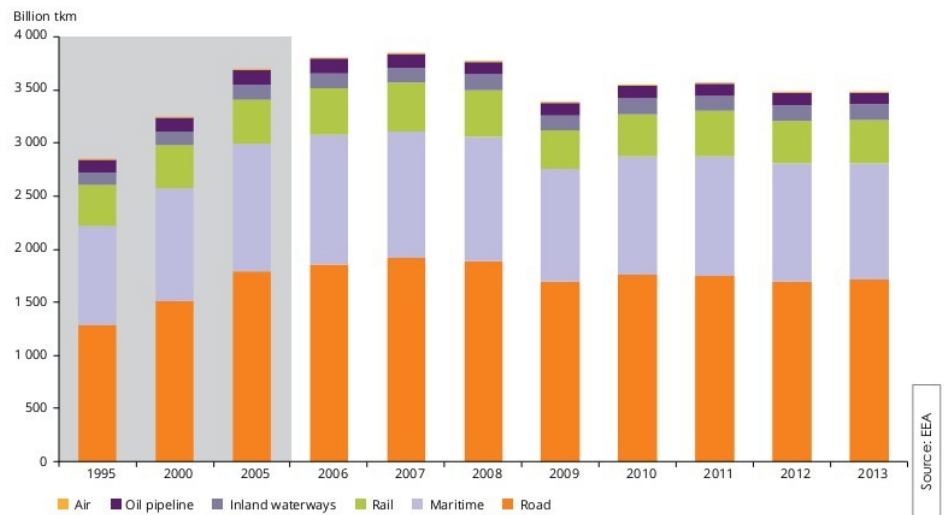
could not be compared to the fuels used by other transport modes. The electric railway transport is the only transport mode that uses a significant part of renewable energies and determines their continuous growth. "Europe must reduce its dependence on imported fossil fuels and move towards a low-carbon economy with high energy efficiency. The transport sector has an untapped potential to achieve energy savings and emission reductions. Rail, as a low-oil and low-carbon transport mode, is central to deliver massive cuts in transport emissions, reduce oil dependence and mitigate congestion in cities," CER Executive Director Libor Lochman said.

The railway sector has proved its energy efficiency and its contribution to creating a sustainable transport system. In the EU, the energy consumption share of railway transport is 1.3% despite a market share of 8.7%. By comparison, road transport in the EU is responsible for two thirds of transport-generated emissions with a 20% contribution to CO2 emissions.

Railway transport is the only environmentally friendly transport mode for both passenger and freight transport. For example, the energy consumption of vehicles has improved by 20% from 1990 to 2010, while in the case of some type of vehicles, savings amount to 50%. "Following strong performance achieved towards the sector's 2020-2030 targets for CO2 emissions, in 2015 the European railways decided to further tighten their targets. They have committed to reducing their specific CO2 emissions from train operations by 40% until 2020 compared to 1990. They have also committed to a 30% reduction of the total CO2 emissions by 2030 relative to 1990, despite the envisaged modal shift in line with the White Paper goals", CER and UNIFE said in a position paper.

Also, the railway sector will reach new thresholds in energy savings by developing vehicles of lighter materials and energy recovery devices, such as recovery technologies and/or energy storage. The latest and most important research and innovation programmes in the EU railway transport is REFRESCO and Roll2Rail, that

Freight transport volume (tkm) and modal split in the EU-28



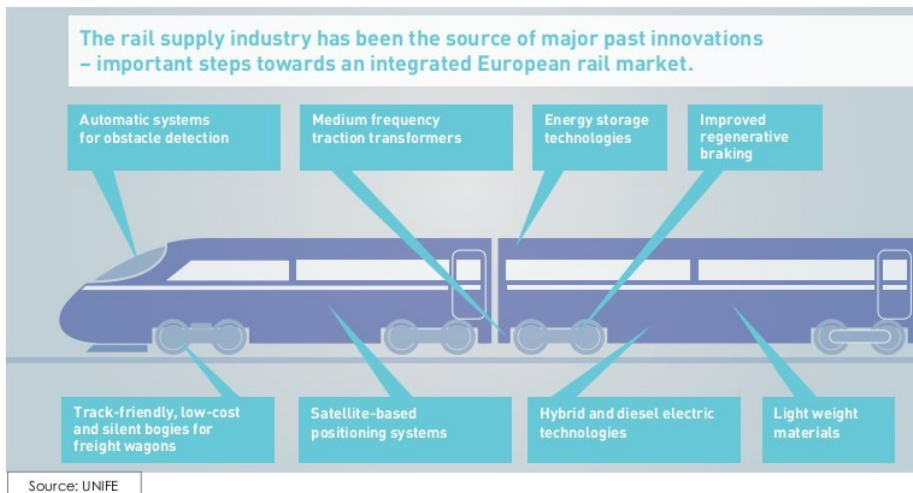
Source: EEA

will contribute to the development of vehicles with very low energy consumption and, therefore, lower emissions. Due to these characteristics, the increase in the railway transport share is the most important method of increasing the use of renewable transport energies that significantly reduces GHG emissions.

In the next period, EC will draft the final version of the Communication on decarbonising the transport sector. In this context, CER and UNIFE have asked the Commissioners responsible for Energy Union, Climate Action & Energy, Vice-President Maroš Šefčovič and Commissioner Miguel Arias Cañete, as well as Commissioner for Transport, Violeta Bulc, to promote railway transport as the backbone of a sustainable transport system.

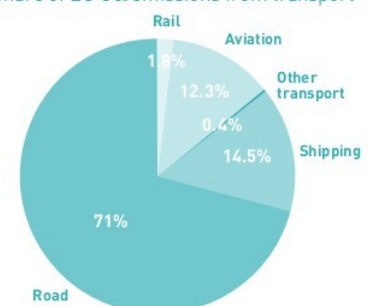
Also, the two institutions are inviting the decision factors to follow a "win-win" strategy by correlating climate, energy and transport policies since shifting freight and passenger traffic to rail will lead to the decarbonisation of transport and increase of energy security.

"The rail industry fully supports the European Commission's objective of reducing transport emissions and looks forward to ambitious targets and policy measures in the upcoming Communication. A modal shift to rail as the most sustainable mode of transport should be at the backbone of any transport sector strategy to reduce CO2 emissions," UNIFE Director General Philippe Citroën said.



The rail industry has the lowest share of EU transport CO2 emissions with only 1.8%.

Share of EU CO2 emissions from transport



policies & strategies