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COMMISSION STAFF WORKING DOCUMENT

Report on the Assessment of the Member States National Policy Frameworks for the development of the market as regards alternative fuels in the transport sector and the deployment of the relevant infrastructure pursuant to Article 10 (2) of Directive 2014/94/EU

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Disclaimer

This updated version includes the evaluations of the National Policy Frameworks submitted by Greece, Malta, Romania, and Slovenia. These National Policy Frameworks could not be taken into account for the initial version of this Staff Working Document (SWD/2017/0365 final). The developments in other Member States occurred since the date of the adoption of this SWD (8 November 2017) have not been taken into account.

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1.2 Fostering the deployment of alternative fuels vehicles and vessels in the EU

Electric vehicles

Electric vehicles seem to be a priority for most Member States, but the estimates for future deployment vary a lot across Member States, with estimated 2020 shares ranging between 0.06% and 9.22% of the vehicle stock in the different Member States, with Luxembourg having the highest estimated share in the future. The current attainment level for these estimates, calculated as the ratio between current status and 2020 estimate, ranges for the NPFs that provided EV estimates from 0.2% to 82.5%. The map in Figure 4-11 shows the 2020 estimated shares of electric vehicles according to the NPFs.

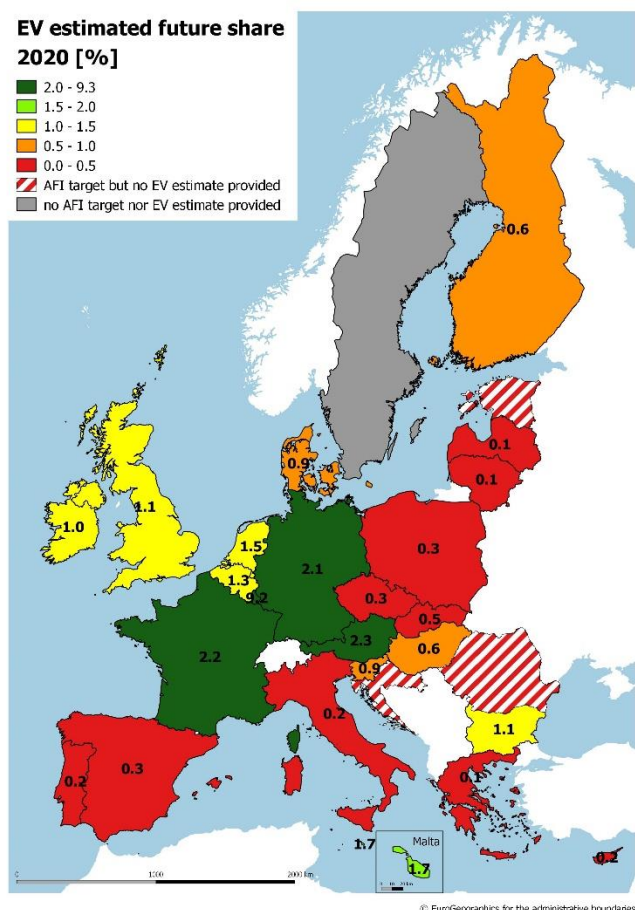


Figure 4-11: NPFs' 2020 estimated shares of electric vehicles

Support measures are an important enabler to ensure the achievement of NPF targets and objectives are reached. They are very diverse across the NPFs. Also their adoption status varies a lot. As a good example, France can be mentioned in the field of electro-mobility as it has defined a very comprehensive portfolio of support measures, most of them already in place with a high likelihood to impact market actors' decisions towards electro-mobility. In some Member States, the adopted measures or the ones in process of adoption may not create the impact necessary to achieve the NPF targets and objectives. Eleven NPFs (Denmark, Estonia, Finland, Croatia, Hungary, Lithuania, Luxembourg, Malta, Poland, Sweden, and Slovakia) have not considered any measures to also encourage and facilitate the deployment of recharging points not accessible to the public. The maps in Figure 4-12 provide an overview of the support measures that aim at ensuring that the national targets and the objectives contained in the NPF are reached by displaying the assessment results for the measures targeting the deployment of recharging

points accessible to the public and for the measures to encourage and facilitate the deployment of recharging points not accessible to the public.

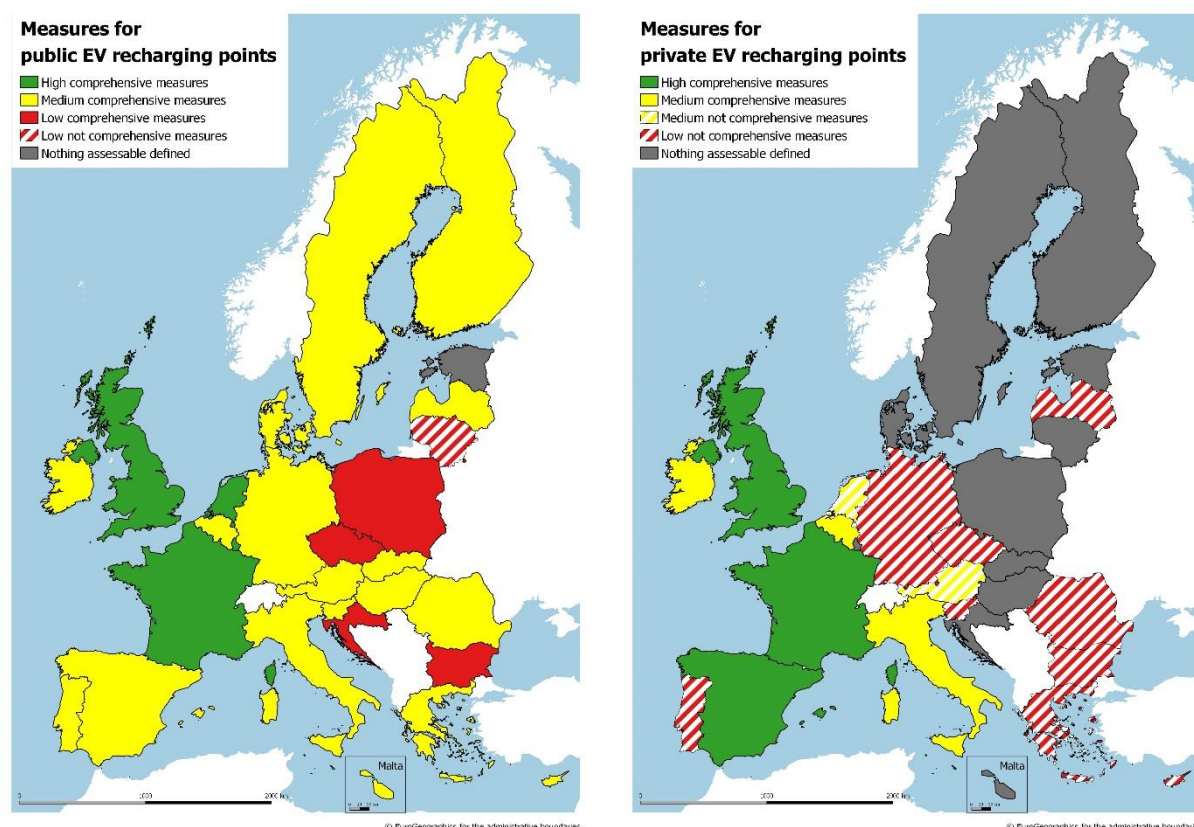


Figure 4-12: Support measures for recharging points (left map: measures targeting the deployment of recharging points accessible to the public; right map: measures to encourage and facilitate the deployment of recharging points not accessible to the public)

Natural gas vehicles and vessels

For CNG vehicles, the divergence across Member States is even more evident than in the case for electric vehicles. Many NPFs do not give any numbers for future estimates and for the ones that provide estimates, the future share varies between 0.04% and 3.27% in 2020, with Italy having the highest projected share. For some Member States, this effectively means a reduction in CNG vehicles on the road versus today. The current attainment level for the future CNG estimates, calculated as the ratio between current status and 2020 estimate, varies between 0.2% and 100%. The map in Figure 4-13 shows the NPFs' 2020 estimated shares of CNG vehicles and the support measures for the deployment of CNG refuelling points accessible to the public. The score and comprehensiveness of the support measures are more or less consistent with the view that the Member States express vis-à-vis the viability of CNG vehicles.

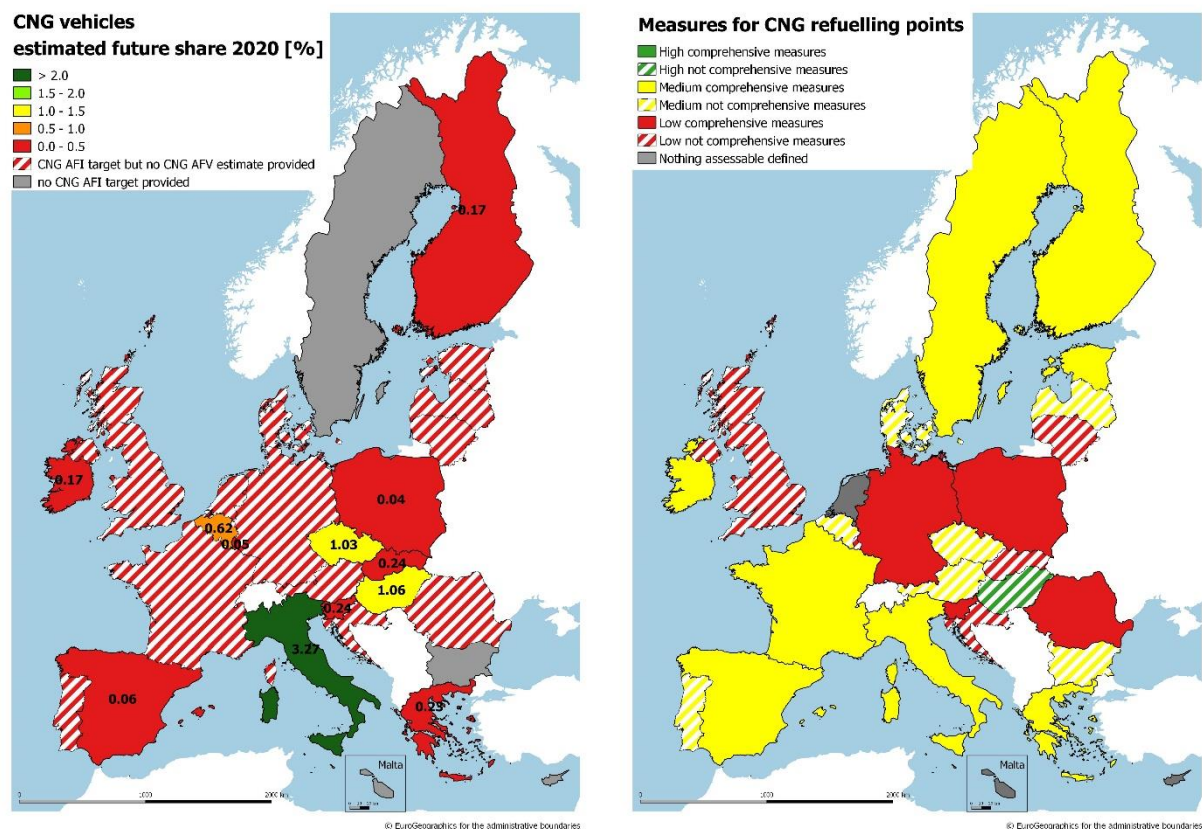


Figure 4-13: NPFs' 2020 estimated shares of CNG vehicles (left map); support measures for the deployment of CNG refuelling points accessible to the public (right map)

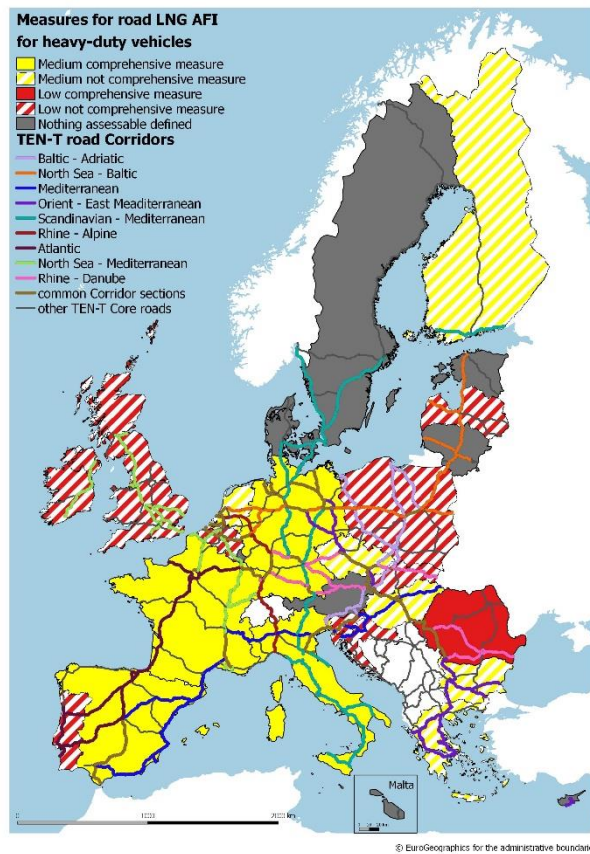


Figure 4-14: Support measures for the deployment of LNG refuelling points for heavy-duty vehicles

Only eight of the NPFs contain estimates for LNG heavy-duty vehicles, and only Italy provides these for LNG vessels. Figure 4-14 shows the score and comprehensiveness of the support measures targeting the deployment of LNG refuelling points for heavy-duty vehicles.

Figure 4-15 shows the overall assessment score and comprehensiveness of the support measures targeting the deployment of LNG refuelling points in maritime ports and inland ports.

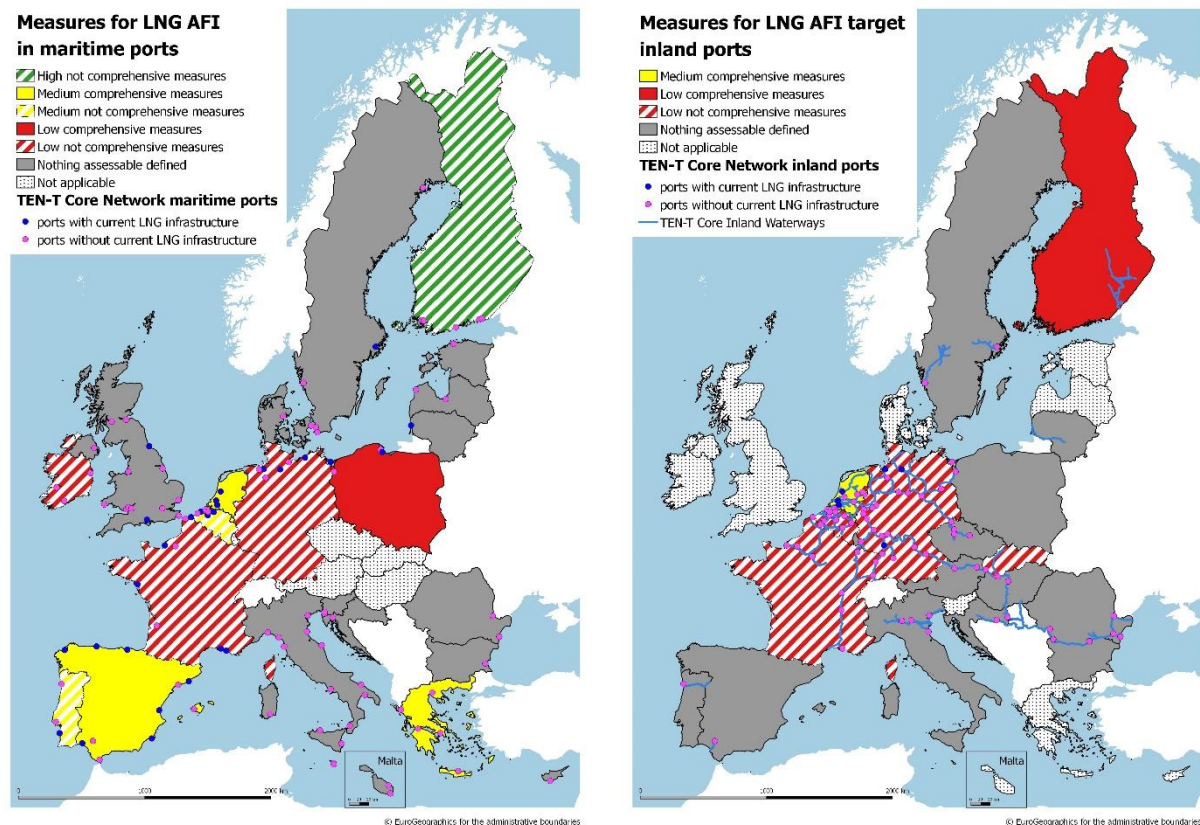


Figure 4-15: Support measures for the deployment of LNG refuelling points in maritime ports (left map) and inland ports (right map)

Many Member States did either define no measures or defined only measures with a likely low impact on the deployment of LNG refuelling points. This indicates, as also explicitly expressed in various NPFs, reliance on EU funds (for example Connecting Europe Facility (CEF)) for the deployment of an appropriate network of LNG refuelling both for heavy-duty vehicles and ships.

Hydrogen vehicles

Deployment of hydrogen vehicles will be linked to the availability of refuelling points. Only Bulgaria, Spain, Hungary, Italy, the Netherlands and Slovenia provide numbers for future estimates and for those the future share will be around 0.01% in 2025, with Slovenia having the highest projected share of 0.10%.

1.3 Promoting the deployment of alternative fuels infrastructure in public transport services

Most of the NPFs contain the definition of measures that can promote the deployment of alternative fuels infrastructure in public transport services. Depending on the Member States, they target different fuels, for example covering electricity, natural gas, hydrogen, and biofuels. They also target different modes, for example, rail, buses, taxis, and car sharing. The support measures promoting the deployment of alternative fuels infrastructure in public transport services contained in the Dutch, French, and UK NPF can be considered as good examples. Two Member States (Cyprus, Lithuania) did not consider any measures to promote the deployment of alternative fuels infrastructure in public transport services. Figure 4-16 shows the results of the assessment for the supporting measures that can promote the deployment of alternative fuels infrastructure in public transport services.

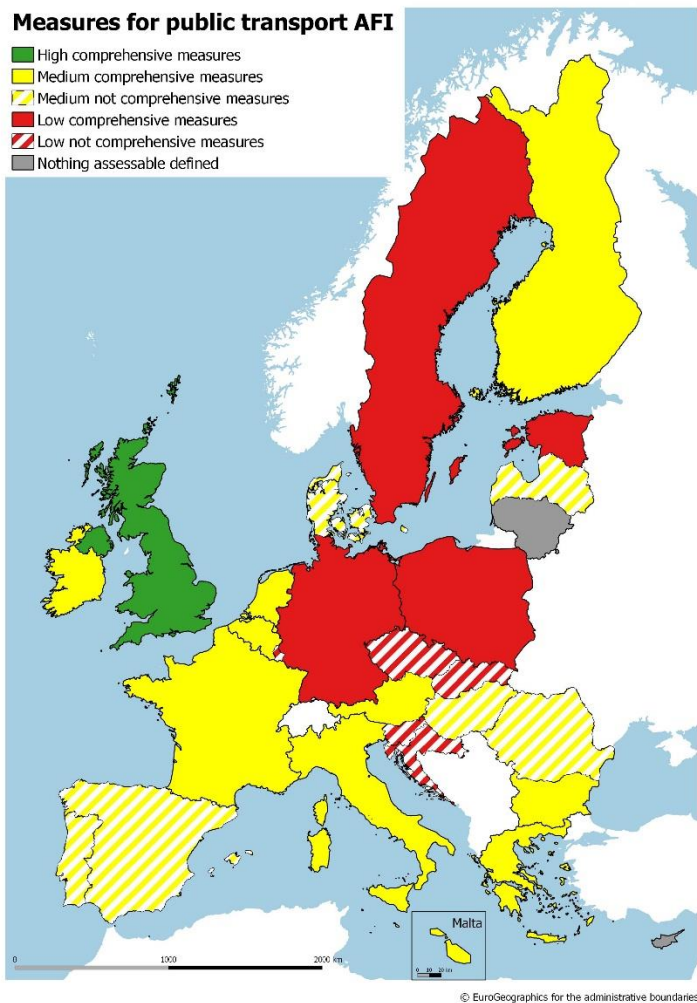


Figure 4-16: Support measures that can promote the deployment of alternative fuels infrastructure in public transport services

1.4 Increasing the EU energy security supply

The analysis of the NPFs reveals that, by 2020, 0.4% of fossil oil-based fuels could be displaced by alternative fuels relative to a scenario without NPFs. By 2030, this number would increase to 1.4%. MSs with ambitious NPFs can reduce their fossil oil use much more. For instance, a reduction of 13% could be achieved in Austria by 2030 relative to a scenario without NPF.

1.5 Contribution to the reduction of CO₂ emissions from transport

Given the overall low ambition level of the AFI targets and corresponding AF vehicle/vessel (AFV) estimates contained in the NPFs, the contribution of the NPFs to the 2030 energy and climate policy objectives is low. Several NPFs do not provide AFV estimates beyond 2020. As a consequence of the NPFs, CO₂ emissions from transport could be reduced by 0.4% by 2020 and 1.4% by 2030 compared to a scenario without NPFs. Action is needed to put the contribution of alternative fuels back on track for a meaningful impact on GHG emissions reductions from transport and minimising the EU's dependence on oil. MS with ambitious medium to long-term plans can serve as a proxy for showing what is possible. For

Austria, for example, the CO₂ emissions improvements caused by its NPF could lead to a 13% transport CO₂ emissions reduction by 2030 relative to a scenario without NPF.