- **Latvia (LV)**

- ***Main messages from the Commission assessment of the NPF***

In its original assessment of the Latvian NPF the Commission concluded:

The Latvian NPF addresses only part of the requirements of Article 3 of the Directive. It does not contain any target for LNG refuelling points to be put in place along the TEN-T Core Network, neither for heavy-duty vehicles nor for its two maritime ports in the core network.

The Latvian NPF considers that the deployment of an appropriate EV recharging infrastructure has a high priority for fostering electro-mobility. Latvia centres on deploying a comprehensive publicly accessible high power recharging infrastructure. The NPF lacks sufficient information on electricity supply for stationary airplanes. For vessels, two studies were carried out, concluding that the costs for the deployment of shore-side electricity supply for the ports of Riga and Ventspils outweigh the benefits.

The Latvian NPF admits that the absence of a national policy plan has jeopardised the use of natural gas and hydrogen in transport. The NPF does not provide future estimates thereof. The Latvian NPF indicates that a revision of the excise duty would be a candidate measure to promote natural gas use. It has established targets for the deployment of CNG refuelling points accessible to the public. The targeted number of CNG refuelling points could support a significant increase of CNG vehicles. The coverage of the TEN-T network with CNG refuelling points is unclear.

As indicated in the NPF, Latvia has no plans for the deployment of LNG refuelling points in its ports.

The NPF does not consider hydrogen for transport.

The Latvian NPF expects that the purchase price of 'green' vehicles will remain in the near-term higher than that of conventional vehicles. However, the government of Latvia considers it has "few instruments available to influence this". Notwithstanding, the NPF mentions the possibility of financial support between 2018 and 2020 to reduce the current 7,000 EUR financial differential between internal combustion engine vehicles and EVs on sale in Latvia. Three levels of support are under discussion: 7,000 EUR for 2018, 5,000 EUR for 2019 and 3,000 EUR for 2020.

- ***Overview of requirements' fulfilment from Annex I of the Directive***

Table ***Error! No text of specified style in document.****-1 Checklist Table*

Part of the Directive 2014/94/EU	Requirement	Mode of Transport / Alternative Fuel (provided in the NIR)		Yes / No
ANNEX I: 1. Legal measures	Information on legal measures, which may consist of legislative, regulatory or administrative measures to support the build-up of alternative fuels infrastructure, such as building permits, parking lot permits, certification of the environmental performance of businesses and fuel stations concessions.	Road, combination / Electricity, combination		Y
ANNEX I: 2. Policy measures supporting the implementation of the national policy framework	Information on those measures shall include the following elements: • direct incentives for the purchase of means of transport using alternative fuels or for building the infrastructure, • availability of tax incentives to promote means of transport using alternative fuels and the relevant infrastructure, • use of public procurement in support of alternative fuels, including joint procurement, • demand-side non-financial incentives, for example preferential access to restricted areas, parking policy and dedicated lanes, • technical and administrative procedures and legislation with regard to the authorisation of alternative fuels supply, in order to facilitate the authorisation process.	Road, water-maritime / Electricity, CNG, LNG		Y
	• consideration of the need for renewable jet fuel refuelling points in airports within the TEN-T Core Network	Air	Biofuels	N
ANNEX I: 3. Deployment and manufacturing support	• Annual public budget allocated for alternative fuels infrastructure deployment, broken down by alternative fuel and by transport mode (road, rail, water and air).	Road / Electricity, CNG		Y
	• Annual public budget allocated to support manufacturing plants for alternative fuels technologies, broken down by alternative fuel and by transport mode.			N
	• Consideration of any particular needs during the initial phase of the deployment of alternative fuels infrastructures.			N
ANNEX I: 4. Research, technological development and demonstration	• Annual public budget allocated to support alternative fuels RTD&D, broken down by fuel and by transport mode.			N
ANNEX I: 5. Targets and objectives	• Estimation of the number of alternative fuel vehicles expected by 2020, 2025 and 2030	Road / Electricity		Y
	• Level of achievement of the national objectives for the deployment of alternative fuels in the different transport modes (road, rail, water and air)	Road / Electricity, CNG, LNG, LPG		Y
	• Level of achievement of the national targets, year by year, for the deployment of alternative fuels infrastructure in the different transport modes	Road, water-maritime / Electricity		Y
	• Information on the methodology applied to take account of the charging efficiency of high power recharging points	Road	Electricity	N
ANNEX I:6 Alternative fuels infrastructure developments	Changes in supply (additional infrastructure capacity) and demand (capacity actually used)	Road, water-maritime / All		Y

The checklist shows that the LV NIR covers only some of the requirements of Annex I from the Directive and mostly for electricity as fuel and road as transport mode. All the other AF and

transport modes are either absent in the report or the level of information provided is such that it does not allow any assessment.

The Latvian NIR reports 29 measures. Under the Policy and Deployment & Manufacturing sections it was possible to identify six AF/transport mode clusters of measures, of which three were assessable.

- ***Quantitative assessment: Vehicles and infrastructure***

*Table **Error! No text of specified style in document.**-2 National AFV estimates and AFI targets established in the NIR at the horizon 2020, 2025 and 2030 and their comparison with the NPF situation*

Alternative fuel / Transport mode		2018		2020		2025		2030	
		AFV	AFI public	AFV	AFI public	AFV	AFI public	AFV	AFI public
Electricity / road	NIR	549	231	980	379	2,650	466	7,200	466
	Change NIR vs NPF [%]			31.19%	152.67%				
	Attainment [%]			56.02%	60.95%	20.72%	49.57%	7.63%	49.57%
CNG / road	NIR	187	0	NA	2	NA	NA	NA	NA
	Change NIR vs NPF [%]				-60.00%				
	Attainment [%]								
LNG / road	NIR	11	0	NA	NA	NA	NA	NA	NA
	Change NIR vs NPF [%]								
	Attainment [%]								
LNG / water (maritime)	NIR	NA	NA	NA	1*	NA	2*	NA	NA
	Change NIR vs NPF [%]								
	Attainment [%]								
Shore-side electricity supply / water (maritime)	NIR	NA	2	NA	2	NA	3	NA	4
	Change NIR vs NPF [%]								
	Attainment [%]				100.00%		66.67%		50.00%
LPG / road	NIR	18,202	240**	NA	NA	NA	NA	NA	NA
	Change NIR vs NPF [%]								
	Attainment [%]								

Legend:	
	not applicable
	the value could not be computed
NA	no value/information provided/available in the NIR

*The values with asterisks are reported as such in the LV NIR without explanation why there is the asterisk; ** Value taken from EAFO

- Road transport
    - Electricity

Vehicles

Latvia recorded 549 battery-electric and plug-in hybrid vehicles in use in 2018 (of which 531 were passenger cars, 13 LCVs and 5 buses and coaches). The LV NIR provides for 2020 a new and higher estimate of electric vehicles compared to the NPF (980 vs. 747) and presents for the first time EV estimates for 2025 and 2030 (2,650 and 7,200 EVs, respectively). These estimates for 2025 and 2030 seem to refer only to the passenger cars, as the values for LCVs and buses and coaches are indicated only for the 2020 (i.e. 14 LCVs and 6 buses and coaches). There is no mention of electrified Heavy Commercial Vehicles in the LV NIR.

The 2018 ***attainment*** of future EV estimates is 56.02% for 2020 and 7.63% for 2030. According to the assessment methodology described in Section 2.1, the 2018 situation corresponds to an ***adequate progress*** towards reaching the envisaged EV estimates. The calculated ***average annual growth rate*** corresponding to the period 2016-2030 for the EV fleet evolution is equal to 26%.

Infrastructure

Latvia recorded 231 publicly accessible recharging points in 2018 (see Table Error***! No text of specified style in document.***-*2*). Like for the electrified vehicles, the LV NIR provides for 2020 a new and higher AFI target compared to the NPF (379 vs. 150) and presents for the first time AFI targets for 2025 (466 recharging points) and 2030 (the same value of 466 is reported in the LV NIR, but with the clarification that the number refers only to the approved and known projects) . The LV NIR clearly states that all these values of recharging points refer to the number of connectors, not to the number of recharging points, which therefore will probably be lower. It also states that the reported numbers of recharging points might not be comprehensive because "*owners of these points are not obliged to provide the Road Safety Directorate with information on station deployment*". Concerning the recharging power, the LV NIR reports that those with a power below 22 kW will remain limited to a total of 30 recharging points until 2030, while those with higher power will increase (141 AC recharging points below 44 kW, 293 DC below 100 kW and 2 DC above 100 kW are foreseen in 2030).

Although the most relevant effort made by Latvia for the uptake of AF vehicles and infrastructure is for the pair electricity/road, the LV NIR still declares that "*the existing measures are not yet sufficient to ensure rapid increase in EVs in Latvia*".

The 2018 ***attainment*** of future publicly accessible recharging infrastructure targets is 60.95% for 2020 and 49.57% for 2030. According to the assessment methodology described in Section 2.1, the 2018 situation corresponds to a ***fast progress*** towards reaching these envisaged targets. The calculated ***average annual growth rate*** corresponding to the period 2016-2030 for publicly accessible recharging infrastructure evolution planned by Latvia is equal to 23%.

Ratio

Based on the LV NIR, the following table shows the ratio between number of vehicles and publicly accessible recharging points (i.e. sufficiency index) for the pair electricity/road. As it

can be seen, the number of recharging points was insufficient in 2016 and 2017 (and the sufficiency index was inadequate), but has grown considerably in 2018. Although the sufficiency index increases again above 10 in 2030, it can be considered adequate, because more than 90% of the recharging points are planned to be high power (>22kW) ones.

Sufficiency Index		2016	2017	2018	2020	2025	2030
Road	Electricity	15.50	18.24	2.38	2.59	5.69	15.45

Information on charging efficiency

Information is not available in the Latvian NIR.

- CNG

Vehicles

Latvia recorded 187 CNG vehicles in use in 2018 of which 177 were passenger cars, 8 LCVs and 2 HCVs. The Latvian NIR does not report any CNG vehicle estimate for 2020, 2025 and 2030, thus it is not possible to calculate the ***attainment,*** the ***progress*** or the ***average annual growth rate*** until 2030.

Infrastructure

Concerning CNG refuelling infrastructure (Table 2), the Latvian NIR reports nothing in 2018, but presents a target of two public refuelling points for 2020, which represents a decrease of 60% compared to the NPF target of five refuelling points. The NIR also mentions the plan to build a third public CNG refuelling point within 2020 and the presence of one private CNG refuelling point already in service. Like in the NPF, the Latvian NIR does not provide any target for 2025 and 2030.

As there was no CNG refuelling point in use in 2018, the ***attainment*** of future publicly accessible CNG infrastructure targets has not been computed. According to the assessment methodology described in in Section 2.1, the 2018 situation corresponds to a ***slow progress*** towards reaching these envisaged targets. The ***average annual growth rate*** corresponding to the period 2016-2030 for publicly accessible refuelling infrastructure could not be computed due to the zero value from 2016 to 2018.

Ratio

Due to the lack of data, it is not possible to calculate the sufficiency index for the pair CNG/road.

- LNG

Vehicles

Latvia recorded 11 LNG vehicles in use in 2018 (of which eight were LCVs, two HCVs and one bus/coach). The Latvian NIR does not report any LNG vehicle estimate for 2020, 2025 and

2030. For this reason, it is not possible to calculate the ***attainment,*** the ***progress*** or the ***average annual growth rate*** until 2030.

Infrastructure

The Latvian NIR does not report any information on infrastructure for the pair LNG/road in 2018, nor any target for 2020, 2025 and 2030, thus it is not possible to calculate the ***attainment,*** the ***progress*** or the ***average annual growth rate*** until 2030.

Ratio

Due to the lack of data, it is not possible to calculate the sufficiency index for the pair LNG/road.

- Hydrogen

Vehicles

Similarly to the NPF, the Latvian NIR does not report any information related to hydrogen-fuelled vehicles.

Infrastructure

Although the Latvian NIR mentions hydrogen refuelling points as being in the scope of some measures, there is no specific information on hydrogen infrastructure target until 2030.

Ratio

Since there are no vehicle estimates nor infrastructure targets in the Latvian NIR, it is not possible to calculate the sufficiency index for the pair hydrogen/road.

- Biofuels

Vehicles

Information is unavailable in the LV NIR.

Infrastructure

Information is unavailable in the LV NIR.

- LPG

Vehicles

Latvia recorded 18,202 LPG vehicles in use in 2018 of which 17,749 were passenger cars, 373 were LCVs and 80 were HCVs. The Latvian NIR does not report any LPG vehicle estimate for 2020, 2025 and 2030. For this reason, it is not possible to calculate the ***attainment,*** the ***progress*** or the ***average annual growth rate*** until 2030.

Infrastructure

Although there are clearly LPG refuelling points in Latvia (for example EAFO reports 220 LPG refuelling points for 2016 and 240 for 2018), the Latvian NIR does not provide any information regarding LPG infrastructure in 2018, nor any target for 2020, 2025 and 2030, thus it is not possible to calculate the ***attainment,*** the ***progress*** or the ***average annual growth rate*** until 2030.

Ratio

The following table shows the ratio between vehicles and publicly accessible LPG refuelling points (i.e. sufficiency index) for the pair LPG/road. The sufficiency index could only be computed for 2016 and 2018 by using data from EAFO.

Sufficiency Index		2016	2017	2018	2020	2025	2030
Road	LPG	34.09*		75.84*			

* Calculated from EAFO values

- Rail transport
- Electricity

Vehicles

Information is unavailable in the LV NIR.

Infrastructure

The Latvian NIR confirms the plan, already presented in the NPF, to complete the electrification of railway lines Daugavpils - Krustpils, Rezekne - Krustpils and Krustpils - Riga by 2023. The LV NIR also mentions the plan to construct the European standard gauge rail line "Rail Baltica", but does not provide any further information.

- Waterborne transport (maritime)
  - Electricity

Vessels

Information is unavailable in the LV NIR.

Infrastructure

According to the LV NIR, two shore-side electricity supply installations were available in 2018 for use by vessels. The NIR also reports the target of one additional shore-side electricity supply installation in 2025 and one in 2030, but it states that this plan is subject to the outcome of the ongoing assessment of the necessity and economic feasibility of setting up shore-side electricity supply, due to be completed by 31 December 2020.

The 2018 ***attainment*** of future targets for shore-side electricity supply for seagoing ships in maritime ports is 100% for 2020 and 50% for 2030 (if the plan to build two additional installations is confirmed). According to the assessment methodology described in Section 2.1,

the ***progress*** obtained by Latvia from 2016 until 2018 for the deployment of shore-side electricity supply in maritime ports is 50% of the overall planned deployment during the period 2016-2030.

- LNG

Vessels

Information is not available in the Latvian NIR, apart from a generic mention of the development of shipbuilding with engines using only LNG as fuel (it is not clear whether this mention refers to Latvia specifically or to the EU in general).

Infrastructure

As it can be seen in Table Error***! No text of specified style in document.****-2*, the LV NIR reports the target of one LNG refuelling point in 2020 and another one in 2025, but it specifies that this plan is subject to the outcome of the ongoing assessment of the necessity and economic feasibility of setting up LNG refuelling points in ports (in TEN-T Core Network), due for completion by 31 December 2020. This could be the reason for the presence of the asterisk next to the numbers.

- Waterborne transport (inland)

Not applicable since Latvia has no inland ports in the TEN-T Core Network.

- Air transport
  - Electricity

Airplanes

Information is not available in the LV NIR.

Infrastructure (for stationary airplanes)

The LV NIR reports that *"most of the aircraft parking lots at Riga Airport that serve commercial passenger flights already have Fixed Power Units (FPUs), which provide power to aircraft systems during ground-handling services…. In the future, Riga Airport will also provide the construction of fixed power supply connection points".*

- Biofuels

Airplanes

Information on flights / airplanes powered by biofuels is unavailable in the Latvian NIR.

Infrastructure

Information is not available in the LV NIR.

- ***Measures assessment***

As a general statement, it has to be anticipated that the description of the measures in the LV NIR is not sufficient to allow a complete assessment according to the methodology described in Section 2.2. In many instances the description is not clear as to what it applies to, furthermore the Policy and Deployment & Manufacturing measures do not provide quantitative information (budget per AF/vehicle/infrastructure) which makes the results of the assessment and of the clustering quite uncertain.

- Legal measures

The LV NIR presents a list of 11 Legal measures, however only four of them can be considered strictly as Legal measures, while the other 7 are either Policy or Deployment & Manufacturing measures (and some of them are actually repeated in the Policy measures section). Overall, the Legal measures listed in the LV NIR do not appear to bring a different level of ambition compared to the NPF.

- Legislative & Regulatory

The first and probably most important Legal measure is the Transport Energy Law, which will regulate the future transport sector in Latvia. Due to its importance, however, this measure is subject to a very lengthy procedure (presented to the LV Parliament in May 2018, expected to be adopted by December 2020), so it is currently still under discussion.

The second Legal measure is the Cabinet Regulation No 78 of 6 February 2018, laying down requirements for electric vehicle recharging points, natural gas refuelling points, hydrogen refuelling points and shore-side electricity supply facilities. The other two Legal measures, both adopted in 2017, amend respectively the previous law on circulation tax and company car tax, and the previous law on excise tax.

- Administrative

The LV NPF does not provide specific information on administrative measures.

- Policy measures

The LV NIR lists a series of 16 measures under the heading “Policy Measures”, however according to the classification adopted in the Guidelines for the reporting of the national implementation reports, only 13 measures can be considered Policy measures while the other three are Deployment measures and are described in the corresponding section.

- Measures to ensure national targets and objectives

Ten out of the 13 Policy measures are intended to ensure the achievement of national targets and objectives. Eight measures focus on road transport and two on waterborne transport.

Road transport

Compared to the Policy measures already present in the NPF (and still in place), the new Policy measures presented in the NIR refer to studies and analysis that are seen as the necessary basis for future decisions. For example, two measures aim to "*conduct, in accordance with the 'Tax Policy Guidelines 2017-2021', an evaluation of tax incentives for CNG, LNG and FCEV, biofuel, paraffinic and synthetic fuels from RES, and the possibility of changing the excise tax rate for diesel to approximate the currently highest rate for gasoline*". One measure aims to "*conduct an assessment in accordance with the Tax Policy Guidelines 2017-2021 of options for reducing the tax burden on eco-friendly vehicles (PHEV, FCEV, vehicles using biofuels, paraffinized and synthetic fuels derived from RES, hybrid vehicles, low-carbon vehicles, etc.) emitting less than 50 gCO_2/km*". Another measure is under discussion (deadline 31 December 2020) to "*examine options to facilitate purchases of EVs*". Another measure is under discussion (deadline 31 December 2020) to discuss "*the possibility of increasing taxes on new non-ecological vehicles and, if necessary, amending laws and regulations*".

Waterborne transport

Two Policy measures in the LV NIR address waterborne transport, one concerning the assessment of the potential use of LNG in ports, the other dedicated to studying the economics of shore-side electricity supply. The deadline for the conclusion of these analyses is 31 December 2020.

- Measures that can promote AFI in public transport services

Two Policy measures are aimed at promoting AFI in public transport service. The first relates to supporting the deployment of environmentally friendly buses. This measure mentions six projects with a total budget (2018-2025) of around 16 million €, but there is no indication of the number of buses to incentivise. On the other hand, in the AFV Estimate section, there is only a mention of 6 Buses (BEV) for 2020 and no other type of bus. This however would be quite strange, because the average cost of an E-Bus is between €300,000 and €500,000, thus the budget would largely exceed the total cost.

The second measure is dedicated to the rail sector in cities (replacement of trams, rail lines, rolling stock). Total budget for the period 2017-2025 is slightly above 30 million €, but there is no indication regarding the number AFV nor AFI, so once again the measure is not assessable.

- Measures that can promote the deployment of private electro-mobility infrastructure

The LV NIR presents a measure to support the deployment of private electro-mobility infrastructure, i.e. "*consider simplifying administrative procedures for the deployment of EV recharging points that are not publicly accessible*". The outcome of this analysis is expected by end of 2020.

- Deployment and manufacturing support

  - AFI deployment

The Latvian NIR contains 5 AFI deployment support measures. One is a planning document developed between 2014 and 2016 that was the basis for the first round of deployment of EV recharging points. Three other Deployment measures relate to the actual construction of

recharging points, firstly on the TEN-T roads or near them (total budget 3.75 million €), secondly on urban areas with more than 5,000 inhabitants and on secondary roads (total budget 7.80 million €). As these three measures have achieved the objective in 2018 of more than 50% of the infrastructure target for 2020, they get a score of high according to the assessment methodology (see Section 2.2). The fifth Deployment measure is related to the construction of the first three CNG refuelling points in Latvia (no indication of the budget in the LV NIR).

- Support of manufacturing plants for AF technologies

Information is not available in the Latvian NIR.

- Consideration of any particular needs during the initial phase of the deployment of alternative fuels infrastructures

Information is not available in the Latvian NIR.

- Quantitative assessment of Policy and Deployment & Manufacturing measures

Table Error*! **No text of specified style in document.**-3* presents an overview of the analysis of all the Policy and Deployment & Manufacturing measures, carried out according to the assessment methodology described in Section 2.2. As it can be seen, six clusters of measures could be identified, of which only three were assessable. The pair electricity/road is the only one having a score of high and can be considered to be comprehensive. Support measures get a low/medium score for CNG/road and low score for LNG/road and are not comprehensive. Those for the pairs electricity/water, LNG/water and electricity/rail are not assessable, although for the last pair a budget is mentioned (around 30 million € for the period 2016-2025). In terms of the expected impact of these measures to support the realisation of the AFV/AFI objectives as presented in the NPF and revised in the NIR, the lack of future targets and estimates for several pairs coupled with the lack of information related to the measures makes the assessment almost impossible, with the only exception of the pair electricity/road, for which the expected impact is high.

Compared to the NPF, the level of ambition of the Policy and Deployment & Manufacturing support measures is substantially the same.

*Table **Error! No text of specified style in document.**-3 Quantitative assessment of Policy and Deployment & Manufacturing support measures*

AF	Transport mode	Score	Comprehensiveness		Impact		Ambition (NIR vs NPF)
Electricity	Road	H	C		**H**		=
CNG	Road	L/M	N		**L**		-
LNG	Road	L	N		**L**		=
	Water-maritime	X					=
Electricity	Water-maritime	X					=
	Rail	X					=

Legend: Score: H = high; M = medium; L = low; X = not assessable. Comprehensiveness: C = comprehensive; N = Not comprehensive. Ambition level: '+' means 'higher'; '=' means 'comparable'; '-' means 'lower'.

- Research, Technological Development & Demonstration

The Latvian NIR does not mention any RTD&D measure. It should be noted though that several measures presented in the LV NIR as either Legal or Policy measures could be considered as RTD&D measures (i.e. studies and analyses).

- ***Additional information on alternative fuels infrastructure developments***

The Latvian NIR provides information on the changes in fuel use (see Table Error***! No text of specified style in document.****-4*). As it can be seen, LPG, CNG and LNG are expected to play a role in 2030, however this forecast is not accompanied by vehicle estimates and infrastructure targets for these fuels. No real increase in LNG use in maritime transport is expected.

Table ***Error! No text of specified style in document.****-4 Changes in fuel use in transport sector (2016-2030)*

MODE OF TRANSPORT	FUEL	Fuels use [%]			Estimated fuels use [%]		
		2016	2017	2018	2020	2025	2030
Road	Gasoline	20%	19%	17%	21%	18%	16%
	Diesel	69%	73%	72%	69%	65%	58%
	Electricity*	0%	0%	0%	1%	1%	2%
	CNG			0%	0%	4%	7%
	LNG				0%	1%	2%
	LPG	6%	6%	5%	7%	10%	14%
	Biofuels	1%	1%	3%	2%	1%	1%
	Other AF	3%	2%	2%			
	Total Road	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Maritime	Marine gas oil						
	Marine diesel oil	97%	97%	99%			
	LNG						

*Note: including trolleybuses and trams

- ***Summary of the assessment***

Tabular overview

*Table **Error! No text of specified style in document.**-5 Overview of the NIR assessment*

		Indicators	Alternative fuel / transport mode				
			Electricity / road	CNG / road	LNG / road	LNG / water (maritime)	Electricity / shore-side (maritime)
AF Vehicles / Vessels		Past situation (2016)	279	84	3	NA	NA
		Situation (2018)	549	187	11	NA	NA
		Estimate (2030)	7,200	NA	NA	NA	NA
		Future share (2030) [%]	0.81%				
		Estimate attainment (2018 vs 2030) [%]	7.63%				
		Progress (2018)	adequate				
Publicly accessible AF Infrastructure		Past situation (2016)	18	0*	NA	NA	NA
		Situation (2018)	231	0	0	NA	2
		Target (2030)	466	NA	NA	NA	4
		Target attainment (2018 vs 2030) [%]	49.57%				50.00%
		Progress (2018)	fast	slow			
Sufficiency Index		2016	15.50				
		2018	2.38				
		2020	2.59				
		2025	5.69				
		2030	15.45				
Measures	Legal measures	Ambition (NIR vs NPF)	=	=	=		
	Policy measures + Deployment & manufacturing support	Score	H	L/M	L	X	X
		Comprehensiveness	C	N	N		
		Impact	H	L	L		
		Ambition (NIR vs NPF)	=	-	=	=	=
	RTD&D	Ambition (NIR vs NPF)	-	-	-		

Legend:

	not applicable
	the value could not be computed
NA	no value/information provided/available in the NIR

* Value taken or calculated from LV NPF.

With the only exception of the pair electricity/road, for which both vehicle estimates and infrastructure targets are provided until 2030, the Latvian NIR does not provide assessable information concerning the strategy for the uptake of alternative fuels for transport in the next decade. Several studies and analyses are being carried out, most of them with an expected deadline of December 2020, which will constitute the basis of the Latvian strategy for transport for the following years. This, on the other hand, implies that the NIR brings limited progress compared to the NPF and only for the pair electricity/road. Also, the Latvian NIR does not provide information on the methodology applied to take account of the charging efficiency of high power recharging points or on any particular needs during the initial phase of AFI deployment.

The main outcomes of the technical assessment of the Latvian NIR on vehicles/vessels estimates and infrastructure targets can be summarised as follows:

Road transport

- **Electricity** – With 549 electric vehicles and 231 publicly accessible recharging points recorded in 2018, Latvia's progress is adequate for the deployment of EVs and fast in terms of recharging infrastructure. The sufficiency index indicating the ratio between number of EVs and number of recharging points, which was quite low in 2018 (2.38), increases progressively over time but in 2030 it can be still considered adequate, thanks to the relevant share of high power recharging points compared to the normal power recharging points. As for the heavy-duty sector, the LV NIR does not present any estimate for 2025 and 2030.
- **CNG** – There were 187 CNG vehicles in Latvia in 2018, the vast majority being passenger cars (plus 8 LCVs and 2 HCVs) and zero refuelling infrastructure. The Latvian NIR does not provide road vehicle estimates for the period 2020 – 2030. As for CNG refuelling points there is a target only for 2020, which is 60% lower than in the NPF (two versus five). The progress of infrastructure deployment results slow.
- **LNG** – The Latvian NIR only reported 11 LNG vehicles in use in 2018 (of which eight LCVs, two HCVs and one bus/coach) and zero refuelling points, but does not provide road vehicle estimates or LNG infrastructure targets for the period 2020 – 2030
- **Hydrogen** – The Latvian NIR does not provide road vehicle estimates or hydrogen road infrastructure targets for the period 2020 – 2030.
- **Biofuels** – The Latvian NIR foresees a decrease of biofuels market share from 3% in 2018 to 1% in 2030, but does not provide any specific information on biofuels for road transport.
- **LPG** – Despite the presence of an important number of LPG vehicles in Latvia in 2018 (17,749 passenger cars, 373 LCVs and 80 HCVs) and of the relevant forecast regarding the LPG market share as fuel in 2030 (14%), the Latvian NIR does not provide the infrastructure state of play in 2018 nor vehicle estimates/infrastructure targets for the period 2020 – 2030. According to EAFO there were 240 LPG refuelling points in use in 2018.

Rail transport

- **Electricity** - The Latvian NIR confirms the plan, already presented in the NPF, to complete the electrification of railway lines Daugavpils - Krustpils, Rezekne - Krustpils and Krustpils - Riga by 2023.

Waterborne transport (maritime)

- **Electricity** - In addition to the existing two shore-side electricity supply, two more shore-side electricity supply points are foreseen by 2030.
- **LNG** - There is a provisional plan to build two LNG refuelling points at maritime ports, one in 2020 and one in 2025, but this plan has to be confirmed by the outcome of an ongoing analysis of its economic feasibility.

Air transport

- **Biofuels** – The Latvian NIR does not provide information related to the need of renewable jet fuel refuelling points in airports within the TEN-T Core Network.

As regards to the **measures**, their description in the LV NIR is not sufficient to allow a complete assessment according to the methodology described in Section 2.2. Furthermore the Policy and Deployment & Manufacturing measures do not provide quantitative information (budget per AF/vehicle/infrastructure) which makes the results of the assessment and of the clustering quite uncertain. Six clusters of measures could be identified, of which only three were assessable.

Tangible results during the implementation period and potentially high impact for the future could be seen only for the pair electricity/road, while for all the other fuels and transport modes the concretisation and quantification of supporting measures will depend on the outcome of the several studies and analyses on tax, incentives, feasibility, etc., undertaken by the Latvian authorities.

- ***Final remarks***

The Latvian NIR provides a rather limited report on the efforts to implement the Directive. The NIR complies, to a certain extent, with the requirements of Annex I to the Directive. However, the report does not provide estimates on CNG vehicles and LNG vehicles and vessels. Furthermore, targets on natural gas infrastructures are only provided for CNG refuelling points in 2020 and LNG infrastructure in ports by 2025 and 2030. A certain number of the measures included in the Latvian NIR are not well described in terms of their objectives and timelines for policy implementation, in particular for waterborne transport.

With regard to electricity for road transport, the NIR estimates that approximately 7,200 electric vehicles could be on the roads by 2030, representing about 0.81% of the fleet by that time. Taking into account the current situation and expected trends, this level of ambition appears very low compared to the pace of deployment of electric vehicles considered necessary for a full transition to carbon neutrality by 2050. Further, in line with the low estimates for electric vehicles take up, there are only 466 recharging points estimated by 2030. An increase in ambition would contribute to better meeting the needs of realising a dense, wide-spread and easy to use network of recharging and refuelling infrastructure throughout the EU. No information on charging efficiency is provided. The NIR reports that the four major ports of Latvia will supply shore - side electricity by 2030. The report states that electricity is already supplied to stationary aircraft in the Riga airport. Further information should be provided on the current and future planned share of electrified rail network.

For hydrogen, the NIR does not report any information on existing or future FCHVs and the relevant infrastructure. It would be relevant that Latvia provides more information on how to ensure EU-wide connectivity for HCEV.

With regard to natural gas, the NIR shows that Latvia already had fleets of 187 CNG vehicles and 11 LNG vehicles in 2018. The NIR does not provide any estimates for natural gas vehicles for 2020, 2025 and 2030 and has only reported two public CNG refuelling points in 2020 and no information on LNG on roads. Two Latvian ports in the TEN-T Core Network might have LNG refuelling points by 2025 and thus complying, in this respect, with the requirements of the Directive.

With regard to LPG, the NIR shows that Latvia already had a medium LPG vehicle fleet and infrastructure, but the Latvian NIR does not provide any estimates of vehicles and infrastructure targets by 2020, 2025 and 2030. In this respect, Latvia should provide information on whether it intends to support LPG as a vehicle fuel in the future.

Further information should be provided on biofuels consumption in Latvia in road and air transport. Latvia should provide more information in future reporting on efforts to promote the use of renewable fuels in transport, and particularly in aviation.

- ***ANNEX - Description of the Member State***

On a surface area of 64,600 km², Latvia has a population of 1.934 million people in 2018, which makes up for a population density of 30 inhabitants/km².

Number of main urban agglomerations

- 4 urban agglomerations > 50,000 inhabitants

In 2018, Latvia achieves a per capita gross domestic product at market prices of €15,080, which represents a per capita gross domestic product in purchasing power standards of 69 if expressed in relation to the EU-28 average set to equal 100.

Length of the road networks

The length of the road TEN-T Core Network in Latvia is 835 km. The total road network length is 7,130 km.

The following lengths of the TEN-T Road Corridors are present in Latvia: 9% (378 km) of the North Sea - Baltic Corridor.

Through the TEN-T Road Corridors, Latvia is connected with the following Member States:
- Estonia (through the North Sea - Baltic Corridor),
- Lithuania (through the North Sea - Baltic Corridor)

Number of registered road vehicles

At the end of 2018, Latvia accounts for 854,737 registered road vehicles of which 707,841 are categorized as passenger cars, 57,146 as light goods vehicles, 32,065 as heavy goods vehicles and 4,885 as buses and coaches. The motorisation rate is 366 passenger cars per 1,000 inhabitants.

Number of ports in the TEN-T Core Network

- 2 maritime ports in the TEN-T Core Network (Riga, Ventspils)
- 1 maritime port in the TEN-T Comprehensive Network
- No inland ports

Number of airports in the TEN-T Core Network

- 1 airport in the TEN-T Core Network (Riga)
- 3 airports in the TEN-T Comprehensive Network