



MINISTRY OF TRANSPORT AND COMMUNICATIONS OF THE REPUBLIC OF LITHUANIA

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To: the European Commission

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In reply to No

SUBMISSION OF THE REPORT REQUIRED UNDER ARTICLE 10(1) OF DIRECTIVE 2014/94/EU

Pursuant to Article 10(1) of Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure, we hereby submit a report on the implementation of our national policy framework.

By letter No 2-368 of 2 February 2017 concerning the submission of information pursuant to Article 3(7) of Directive 2014/94/EU, the Ministry of Transport and Communications submitted to the European Commission information on Lithuania's national policy framework for the development of the market as regards alternative fuels in the transport sector and the deployment of the relevant infrastructure, as provided for in Article 3(1) of the above-mentioned Directive and set out in the National Transport Development Programme for 2014-2022¹ (<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.463278/asr>).

Information about legal (regulatory and administrative) measures for the creation of alternative fuels infrastructure is provided on page 1 of the attached Excel table ('Legal Measures'). The main document setting out the policy for the development of alternative fuels is the National Transport Development Programme for 2014-2022 (subparagraph 10.3 'Task 3: to increase energy efficiency by promoting the use of alternative energy sources (fuels) in transport, developing the necessary infrastructure and renewing the public transport fleet'). The implementation plan provides for measures such as the purchase of electric trains, the installation of electric vehicle charging points and the installation of liquefied and compressed natural gas refuelling points. It should be pointed out that a draft law on alternative fuels is currently being prepared with a view to clearly regulating in one place the issues relating to alternative fuels, alternative fuel vehicles and refuelling/recharging infrastructure for alternative fuels. This document is expected to be adopted in 2020. A draft Lithuanian national energy and climate plan was also prepared in 2019 which sets out a series of measures relating to the use of alternative fuels (such as railway electrification, implementation of sustainable urban mobility plans, the development of electromobility, green public procurement and the upgrading of inland waterway transport and inland waterways) aimed at reducing GHG emissions in the transport sector.

Work has also begun on the preparation of the Lithuanian Transport Development Strategy up to 2050, which aims to set long-term goals and priorities for the development of the transport sector. Preparation of the strategy is expected to be completed in 2020. In developing the strategy, various possible scenarios for the development of the

¹ Resolution of the Government of the Republic of Lithuania No 86 of 1 February 2017 amending Resolution of the Government of the Republic of Lithuania No 1253 of 18 December 2013 approving the National Transport Development Programme for 2014-2022.

country's transport will be modelled, good practices from abroad will be examined and the long-term recommendations of international organisations (OECD, WEF, WB, UN, etc.) in the field of transport will be taken into consideration. Account will also be taken of the Lithuanian transport sector's strategic planning documents, the anticipated trends in transport development and the proposals of the social partners of the Ministry of Transport and Communications.

Information about the policy measures supporting the implementation of the national policy framework is provided on page 2 of the attached Excel table ('Policy measures'). Financial measures to encourage the purchase of alternative-fuel transport covered the upgrading of public transport, the installation of public electric vehicle charging points along national roads and in municipalities, etc. In 2019, a subsidy was introduced for having an old vehicle deregistered (and recycled) and purchasing a less polluting vehicle (powered by only petrol, (natural or liquefied) gas, ethanol or electricity, or by petrol and gas, ethanol or electricity; such vehicles are required to have been registered for the first time in the EU no earlier than 1 January 2013. CO₂ emissions must not exceed 130 g/km).

To date, there has been no vehicle tax or other traffic restriction linked to car pollution in Lithuania. From 2020, a car registration or re-registration tax linked to the pollution caused by the car will be introduced. If the tax is not paid, the car will not be registered in the road traffic registry. The amount of tax will depend on the type of fuel used in the vehicle (diesel, petrol, gas) and the amount of carbon emissions produced (grams per kilometre); it will range between EUR 13.5 and EUR 540. Both the type of fuel and the total CO₂ value will be indicated on the vehicle registration certificate. Where there is no information on the CO₂ emissions, the tax will be calculated using special formulae. It was previously calculated that such a tax would contribute approx. EUR 20 million to the budget, but since it will be introduced as of 1 July, the figure is now expected to be around EUR 10 million for 2020.

Table 1. Registration tax for motor vehicles

CO ₂ emissions, g/km		Amount of tax depending on the type of fuel used by the motor vehicle, EUR		
from	to	Diesel	Petrol	Gas
0	115	0	0	0
116	130	0	0	0
131	140	30	15	13.5
141	150	60	30	27
151	160	90	45	40.5
161	170	120	60	54
171	180	150	75	67.5
181	190	180	90	81
191	200	210	105	94.5
201	210	240	120	108
211	220	270	135	121.5
221	230	300	150	135
231	240	330	165	148.5
241	250	360	180	162
251	260	390	195	175.5
261	270	420	210	189
271	280	450	225	202.5
281	290	480	240	216

CO ₂ emissions, g/km		Amount of tax depending on the type of fuel used by the motor vehicle, EUR		
291	300	510	255	229.5
301 and above		540	270	243

At present there are only two basic incentives for choosing electric vehicles: the possibility of using specially marked traffic lanes in Vilnius and reduced parking and toll fees in Lithuanian cities. In order to make them easier to identify, electric vehicles are also assigned registration plates (number plates) consisting of a combination of two letters and four digits, the first of which must be the letter 'E'.

A dedicated inter-institutional working group set up in 2018-2019 examined the current situation in Lithuania and the possibilities for promoting the use of electric vehicles and developing charging infrastructure, and proposed long-term objectives and possible national and municipal development measures.

A target has been set whereby M1 class electric vehicles (i.e. first registration and re-registration of new and second-hand vehicles) should account for at least 10% of annual vehicle purchases and N1 (light commercial vehicles) for at least 30% by 2025; by 2030, M1 class electric vehicles should account for at least 50% of annual purchases, and no N1 class vehicles with internal combustion engines (ICEs) should be registered.

In order to reach this target, additional measures will be needed in the form of: taxes on vehicles with ICEs; reductions/subsidies for purchasing pure electric vehicles and for purchasing/installing charging points; tightening up national legislation to promote the use of electric vehicles and develop the necessary infrastructure by making it obligatory to install electric vehicle charging points at new or refurbished buildings and parking areas; a requirement for new/upgraded refuelling networks alongside national roads to feature such charging points; broad social spread, awareness-raising, habit-building, pilot projects, introduction of green/zero emission zones in cities, etc.

Information on deployment and manufacturing support is provided on page 3 of the attached Excel table ('Deployment and manufacturing support').

The charging infrastructure for electric vehicles has been developed in Lithuania within the core trans-European road network (TEN-T Core network), i.e. along international traffic arteries (national roads) E85 and E67 and alongside other roads belonging to the TEN-T network to ensure that electric vehicles may be recharged approximately every 50 kilometres between cities.

In the period 2014–2019, 25 public high-power charging stations were installed along the Vilnius–Klaipėda and Vilnius–Panevėžys motorways and along other national roads. Information on the type, status and real-time occupancy of these electric vehicle charging points is provided in the information system [www.eismoinfo.lt](https://eismoinfo.lt) (<https://eismoinfo.lt/#/>).

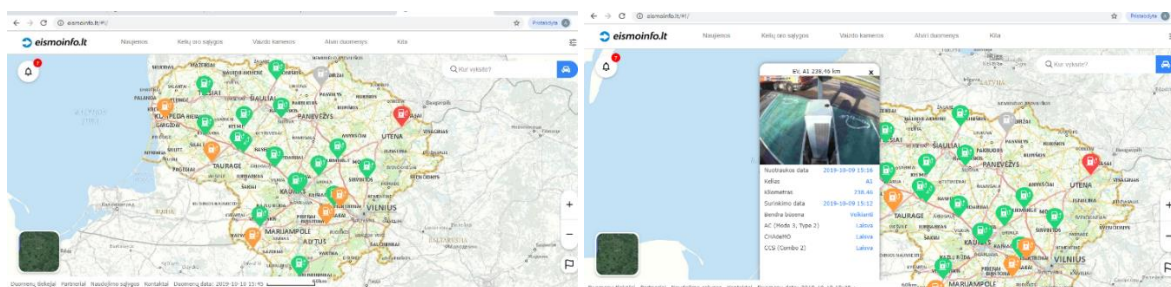


Fig. 1 Information system [www.eismoinfo.lt](https://eismoinfo.lt)

Many Lithuanian municipalities have provided for electric vehicle charging points in their sustainable urban mobility plans (some of which are under preparation).

A total of 17 Lithuanian municipalities have made use of the EU investment opportunity to install electric vehicle

charging points by the end of 2020 (a total of 56 electric vehicle charging stations have been planned, 33 of them high power and 23 normal power).

This public charging infrastructure for electric vehicles (along national roads and in municipalities) is being created and developed in line with approved European Union standards, but also permits other types of electric vehicles to be charged (combined stations with three types of connectors – AC, DC (Combo 2) and DC (CHAdeMO)).

There are currently already around 130 electric vehicle charging points in the capital. In view of the growing number of electric vehicles and the need for charging points, Vilnius has planned to install 59 publicly accessible charging points for electric vehicles by 2020 in accordance with the charging point plan approved by Vilnius City Council.

Of these 59 points, one provides normal power, one very high power (272 kW) and the remaining points supply high power (two electric vehicles can be charged at the same time at these points).

The price of charging electric vehicles is calculated on the basis of duration of use of the charging point. The majority of them (50) are already up and running.

The private sector is also planning to develop electric vehicle charging infrastructure not only in towns but also along national roads. The biggest challenge at present remains the installation of electric vehicle charging infrastructure in dormitory towns outside large cities and along national roads in commercially unviable places (complex/expensive installation). For this reason, consideration is being given to the possibility of subsidising the installation/purchase of electric vehicle charging equipment in such places.

Information on support for research, technological development and demonstration is provided on page 4 of the attached Excel table ('Research, technological development and demonstration').

Lithuania participates - together with France, the Netherlands, Poland, Austria, Belgium, Croatia, Luxembourg, Germany, Spain, Slovenia, Czechia, Portugal, Greece and Hungary - in the multilateral pilot project initiated by the European Commission entitled "Data collection related to recharging/refuelling points for alternative fuels and the unique identification codes related to e-Mobility actors".

The most important actions under the project are the creation at European Union level of a system for identifying electric vehicle charging points and their operators and an information system for users where they can access information on electric vehicle charging points.

Information on the planned targets and objectives is provided on pages 5a and 5b of the attached Excel table ('Targets and objectives').

It should be noted that the previously planned targets and measures are currently being reviewed in the light of the EU's GHG reduction targets for the transport sector.

The vehicle fleets of classes M1 and N1 by fuel type and the entire Lithuanian fleet by fuel type are presented below.

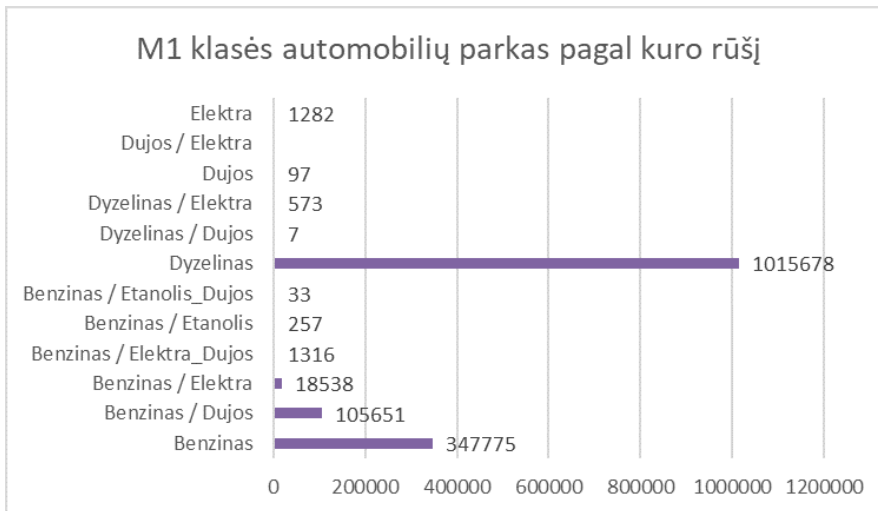


Fig. 2 M1 class vehicle fleet by fuel type (units)

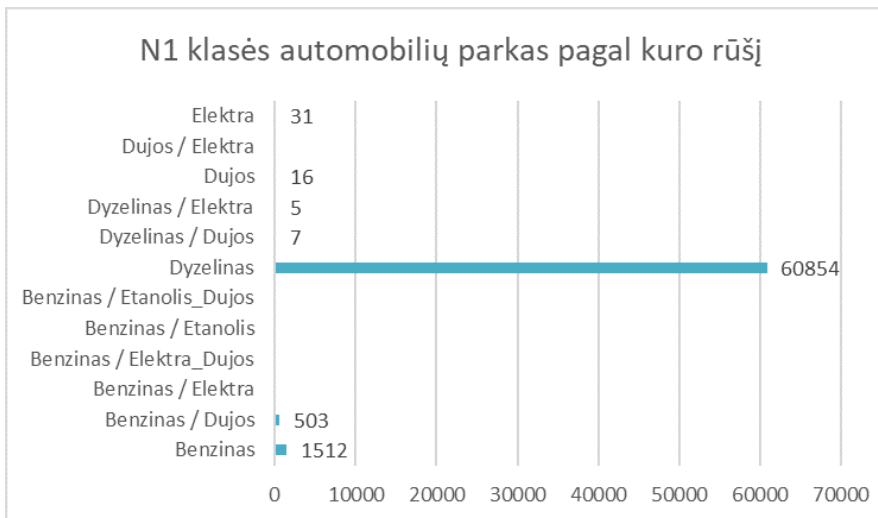


Fig. 3 N1 class vehicle fleet by fuel type (units)

Key: *benzinas* – petrol; *dyzelinas* – diesel; *dujos* – gas; *elektra* – electricity; *etanolis* – ethanol.

Table 2. Data for the entire Lithuanian transport fleet by fuel type (data as at 1 December 2019)

Transporto priemonių parko duomenys pagal degalų rūšį (2019 m. gruodžio 1 d. duomenys)																								
PAVADINIMAS	Transporto priemonės kategorija																							Bendroji suma
	56	60	66	70	GK	L1	L2	L3	L4	L5	L6	L7	M1	M2	M3	N1	N2	N3	O1	O2	O3	O4		
--	20	1	2		5		3	462	125	5			7704	10	14	339	371	211	1E+05	15465	595	54581	189621	
Benzinas	7				11	13259	6	36247	737	360	24	1352	349688	7	9	1499	939	15					404160	
Benzinas / Dujos	1								1				105591	5	12	501	608	4					106723	
Benzinas / Elektra							1						19133										19135	
Benzinas / Elektra_Dujos													1411			1							1412	
Benzinas / Etanolis													261										261	
Benzinas / Etanolis_Dujos													33										33	
Dyzelinas	6		1			1	3	6		3	286	31	1021163	3451	4016	61173	11796	65710					1167646	
Dyzelinas / Dujos													7			7	1	5					20	
Dyzelinas / Elektra													602		6	5	1						614	
Dujos								1					98	6	270	14	4	22				1	416	
Dujos / Elektra									1				10										10	
Elektra						179	12	25		5	2	22	1346	5	493	35							2124	
Bendroji suma	34	1	2	1	5	11	13443	21	36742	863	373	312	1405	1507037	3484	4830	63574	13720	65967	1E+05	15465	595	54582	1892175

Key: PAVADINIMAS – type; *transporto priemonės kategorija* – vehicle category; *bendroji suma* – total.

According to the State enterprise Regitra (VĮ Regitra), as at 1 November 2019, there were 1,313 pure electric and 20,432 hybrid (of which 1,078 were off-vehicle charging hybrids (plug-ins)) M1 and N1 class vehicles registered in Lithuania.

Pure electric vehicles account for around 0.09% of the whole fleet, which numbers approximately 1.5 million. The majority of electric vehicles registered in the country are used electric vehicles. There has been a strong upward trend in the number of electric vehicles in Lithuania since 2017. The figures showing the increase in electric and hybrid vehicles are given below.

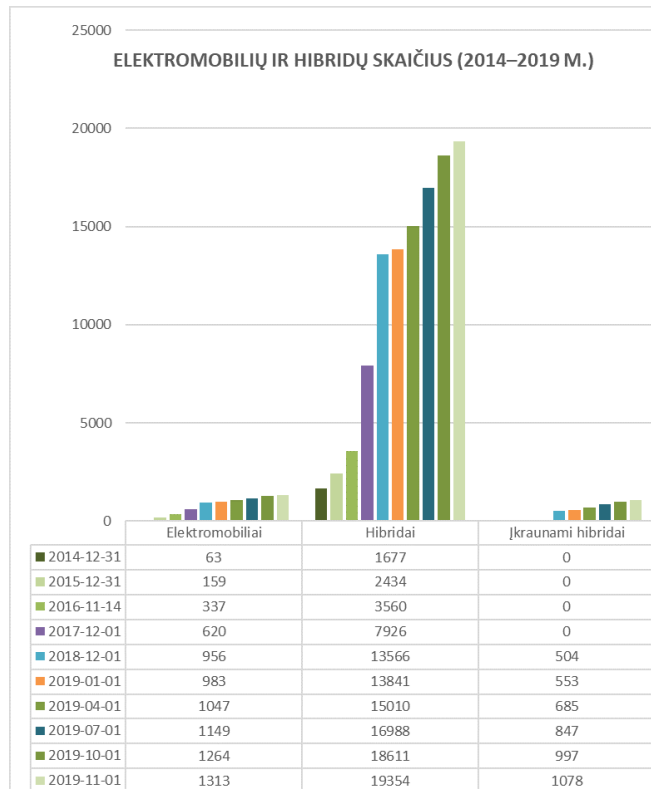


Fig. 4 Increase in M1 and N1 class electric and hybrid vehicles (units)

Based on the recommendations of the working group on electromobility, an ambitious electromobility development target was set of registering in Lithuania a total of 46,066 M1 class and 5,469 N1 class electric vehicles by 2025; a total of 230,332 M1 class and 18,231 N1 class electric vehicles by 2030, and registering no vehicles with ICEs after 2030.

Information on alternative fuels infrastructure developments is provided on page 6 of the attached Excel table ('Alternative fuels infrastructure developments').

There are currently 25 combined charging stations along national roads (three types: AC, DC CHAdeMO and DC Combo). Two electric vehicles can be charged at the same time at one station (AC and DC connectors). The number of connections to individual stations ranges between 195 and 40,533 per month (as observed in the period from May 2019 to October 2019); for October, for instance, the average number of connections was 5,095 and the average electricity consumption was 2,217 Kwh. Further information is provided below:

Table 3 Number of connections to charging stations

	IRENGINYS	KEL_NUMERIS	RNG_KM	'2019-05-01'	'2019-06-01'	'2019-07-01'	'2019-08-01'	'2019-09-01'	'2019-10-01'	Vidurkis
1	Vievio EV, A1 38,14 km	A1	38,14	1596	1769	1164	2483	3432	2227	2111,833
2	Elektrėnų EV, A1 45,78 km	A1	45,78	996	1451	1184	1111	737	1168	1107,833
3	EV, A2 80 km	A2	80	1433	1452	2085	2082	2485	934	1745,167
4	EV, A1 93,02 km	A1	93,02	1596	1807	1847	2186	2883	1758	2012,833
5	EV, A1 141,54 km	A1	141,54	745	673	903	1062	637	526	757,6667
6	EV, A1 142,38 km	A1	142,38	680	1095	974	1668	1252	791	1076,667
7	EV, A1 185,24 km	A1	185,24	723	947	1303	1541	1497	983	1165,667
8	EV, A1 96,62 km	A1	96,62	2269	2487	2060	2898	3242	5422	3063
9	EV, A1 192,72 km	A1	192,72	884	1052	1195	2223	1693	1691	1456,333
10	EV, A1 238,46 km	A1	238,46	867	807	1355	1339	1281	1250	1149,833
11	EV, A1 238,6 km	A1	238,6	1013	1078	1022	1547	1625	1913	1366,333
12	EV, A1 292,92 km	0001085005	0,03	342	1637	870	1809	1767	1441	1311
13	Jonavos EV, A6 42,156 km	A6	42,156	304	632	696	290	1283	429	605,6667
14	Marijampolės EV, A5 65,82 km	A5	65,82	256	195	1370	1784	2570	708	1147,167
15	Dubingių EV, A14 46,18 km	A14	46,18	893	1527	1142	1931	2530	767	1465
16	Aukštadvario EV, A16 54,611 km	A16	54,611	755	1162	1183	1446	3012	1598	1526
17	Joniškio elektromobilių įkrovos stotelė, A12, 20,313 km	A12	20,31	388	238	1808	1045	1380	588	907,8333
18	Druskininkų EV, A4 125,695 km	A4	125,7	7695	12504	13864	7140	35291	12463	14826,17
19	Telšių elektromobilių įkrovos stotelė	A11	75,38	7278	9663	16846	14069	35826	16780	16743,67
20	Zarasų elektromobilių įkrovos stotelė	A6	165,73	1321	7699	10495	11382	25281	8508	10781
21	Kalvarijos elektromobilių įkrovos stotelė	A5	95	4072	8294	10178	9225	25651	16597	12336,17
22	Kelmės elektromobilių įkrovos stotelė	A12	91,43	8518	9229	11904	14695	20579	13407	13055,33
23	Radviliškio elektromobilių įkrovos stotelė	A9	47,3	11981	10433	11444	17477	36890	26209	19072,33
24	Tauragės elektromobilių įkrovos stotelė	A12	152	5353	7656	16090	15987	40533	8978	15766,17
25	Pasvalio elektromobilių įkrovos stotelė	A10	47,44	2058	7208	5812	4149	1570	228	3504,167

Key: *Irenginys* – facility; *elektromobilių įkrovos stotelė* – electric vehicle charging station; *kel_numeris* – road number; *vidurkis* – average; *spalio mėn suvartojimas* – electricity consumed in the month of October.

Table 4. Electricity used at charging stations

	IRENGINYS	KEL_NUMERIS	RNG_KM	Spalio mėn suvartojimas, Kwh
1	Vievio EV, A1 38,14 km	A1	38,14	8789
2	Elektrėnų EV, A1 45,78 km	A1	45,78	3030
3	EV, A2 80 km	A2	80	2631
4	EV, A1 93,02 km	A1	93,02	3884
5	EV, A1 141,54 km	A1	141,54	2029
6	EV, A1 142,38 km	A1	142,38	1522
7	EV, A1 185,24 km	A1	185,24	1488
8	EV, A1 96,62 km	A1	96,62	5363
9	EV, A1 192,72 km	A1	192,72	675
10	EV, A1 238,46 km	A1	238,46	1315
11	EV, A1 238,6 km	A1	238,6	1075
12	EV, A1 292,92 km	0001085005	0,03	1000
13	Jonavos EV, A6 42,156 km	A6	42,156	1000
14	Marijampolės EV, A5 65,82 km	A5	65,82	500
15	Dubingių EV, A14 46,18 km	A14	46,18	1000
16	Aukštadvario EV, A16 54,611 km	A16	54,611	1340
17	Joniškio elektromobilių įkrovos stotelė, A12, 20,313 km	A12	20,31	3900
18	Druskininkų EV, A4 125,695 km	A4	125,7	1501
19	Telšių elektromobilių įkrovos stotelė	A11	75,38	500
20	Zarasų elektromobilių įkrovos stotelė	A6	165,73	636
21	Kalvarijos elektromobilių įkrovos stotelė	A5	95	1049
22	Kelmės elektromobilių įkrovos stotelė	A12	91,43	1037
23	Radviliškio elektromobilių įkrovos stotelė	A9	47,3	1508
24	Tauragės elektromobilių įkrovos stotelė	A12	152	1617
25	Pasvalio elektromobilių įkrovos stotelė	A10	47,44	7024

Up to now the Lithuanian market for alternative fuels transport has been dominated by the use of liquefied petroleum gas (LPG) and biofuels, and a network of LPG filling stations has been fully developed in Lithuania. Biofuels are used for blending in petrol and diesel strictly in the manner provided for in national legislation. Lithuania aims to gradually transition to advanced biofuels produced from secondary waste. The ratios of biofuel blending in fossil fuels are increasing. Compressed natural gas (CNG) is the main fuel used by public transport fleets in large cities in Lithuania. Liquefied natural gas (LNG) is mainly used in water transport. The liquefied natural gas (LNG) terminal is located in the southern part of Klaipėda Seaport in the Curonian Lagoon off Kiaulės Nugara island. The LNG terminal has been in operation since December 2014. It comprises the 'Independence' LNG carrier, a jetty

and a gas pipeline. The LNG carrier 'Independence' is permanently moored to the jetty. The terminal is connected to the natural gas transmission system. The Liquefied Natural Gas Distribution Station (LNG DS) is an above-ground LNG terminal operated on a third-party access basis. The LNG DS is designed to receive LNG from small-scale carriers, to store it temporarily and to tranship it to LNG tank vehicles or vessels.

LNG may also be loaded in ISO-compliant standard-sized containers which can be transported by rail and road. LNG may be imported to the LNG DS from the Klaipėda LNG Terminal or from other terminals in the Baltic Sea or North Sea.

The LNG supply chain in Klaipėda consists of the LNG distribution station, the LNG terminal and the LNG transport and bunkering vessel 'Kairos'.

By 2030, at least 10 publicly accessible LNG refuelling points will be available on the main road network.

Klaipėda State Seaport (KSS) and some of the country's inland ports are already equipped with shore-side electricity supply facilities that can be used by operators of ships berthed off shore, so there is no additional need to deploy such facilities.

Since Lithuania's international airports already have the necessary infrastructure to supply electricity to stationary airplanes, there is no additional need for electricity supply facilities at airports.

Synthetic and paraffinic fuels are not used in Lithuania. There are currently no hydrogen cars in Lithuania and hydrogen refuelling is only possible for the time being in the hydrogen test laboratory in Pabradė.

This report was prepared on the basis of information and data received from departments/groups of the Ministry of Transport and Communications, the Ministry of Energy, the Ministry of the Environment, the Lithuanian Roads Directorate under the Ministry of Transport and Communications, the public body Lithuanian Airports, the Klaipėda State Seaport Authority, the Inland Waterways Directorate, AB Lietuvos geležinkeliai (Lithuanian Railways), VĮ Regitra, the Lithuanian Petroleum Trade Association, UAB SG Gas Autotak, etc. Should you have any questions please contact the author of the letter, who will provide the contact details of the relevant expert if necessary.

Gytis Mažeika

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