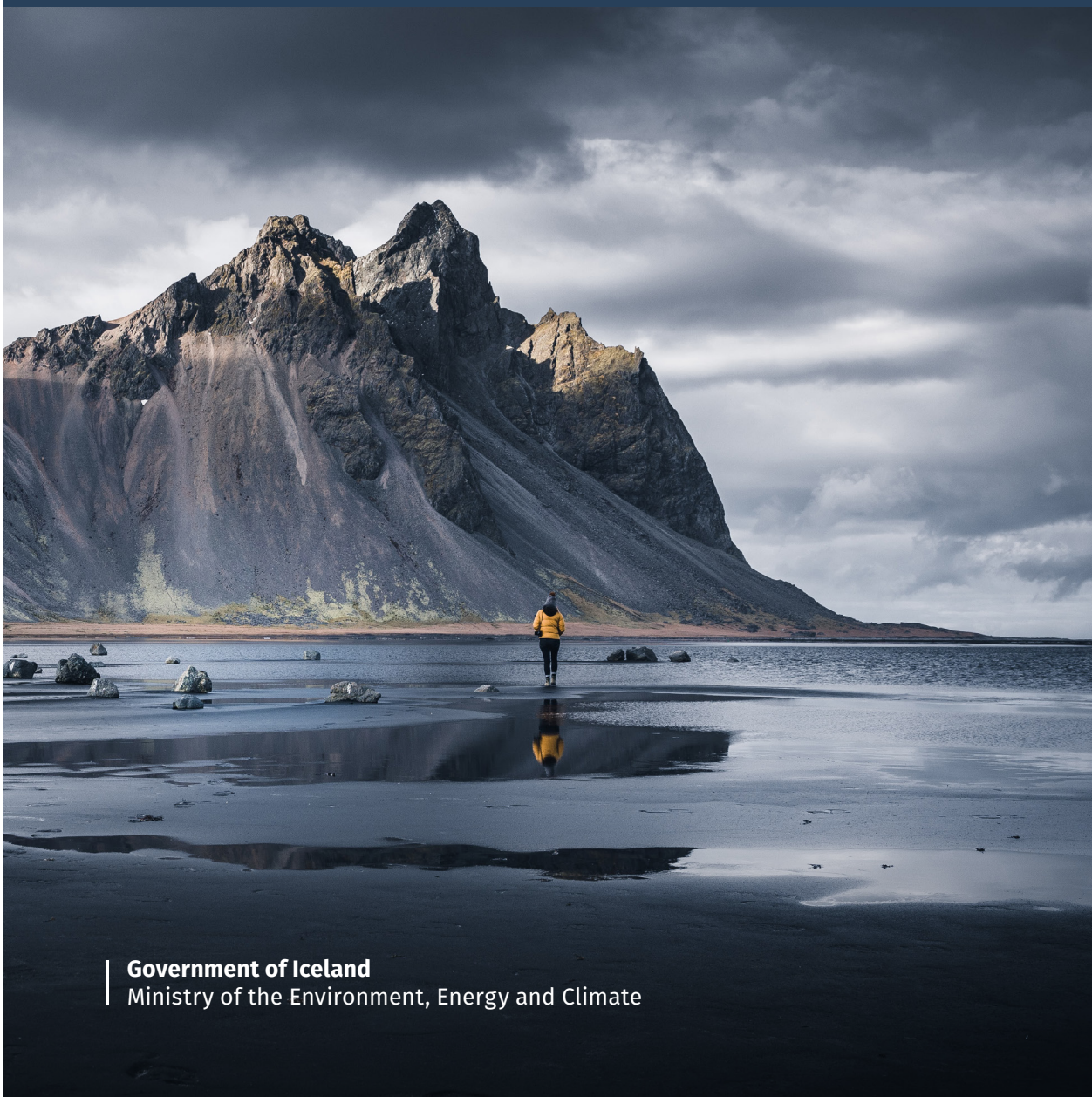
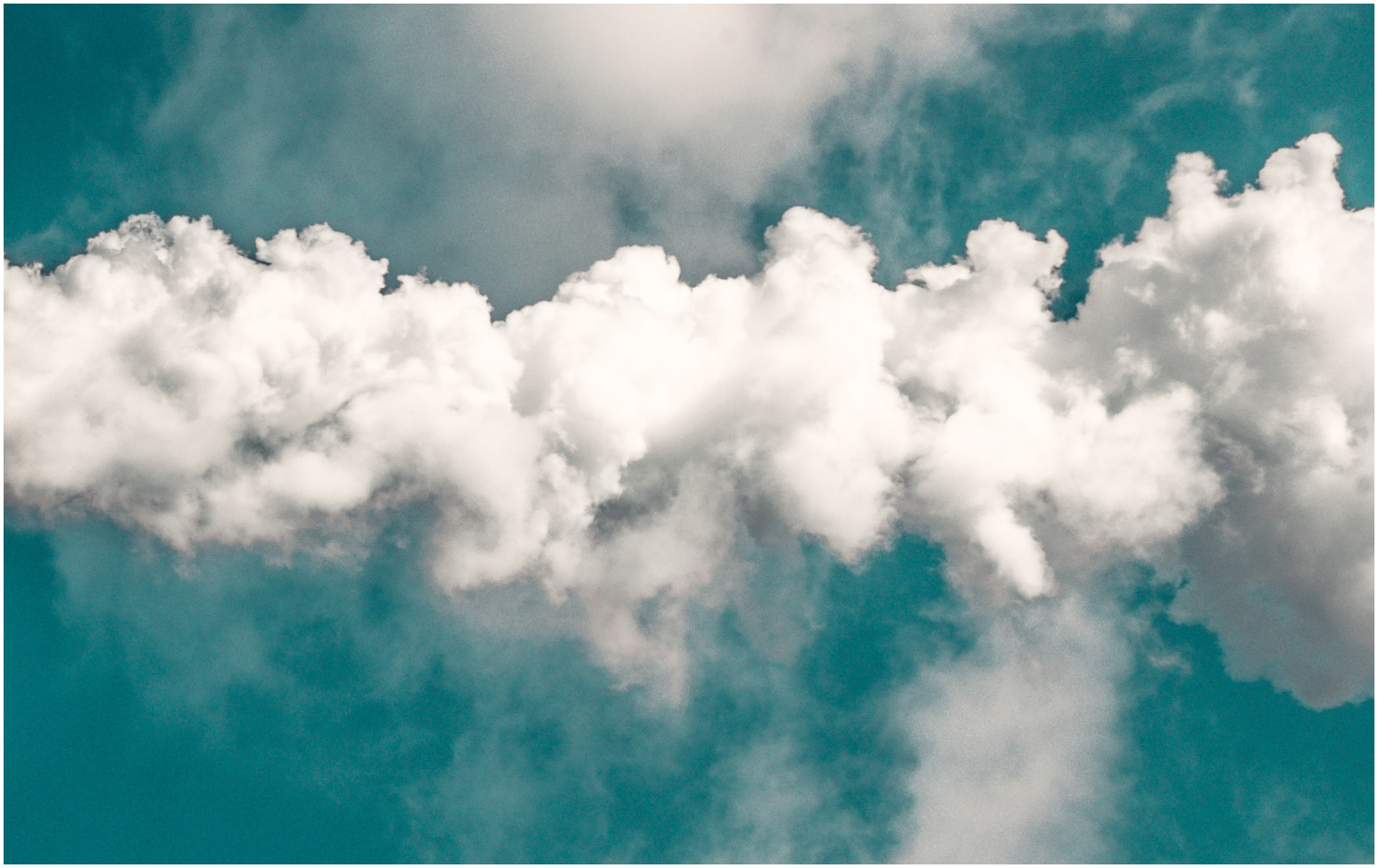
Júní 2024

Report on Alternative Fuels Infrastructure Build-up in Iceland

National policy framework — Directive 2014/94/EU



Government of Iceland
Ministry of the Environment, Energy and Climate



Introduction

The Icelandic Government has taken several measures the last decade to expediate the energy transition in Iceland. First, the focus was set on electrification of road transport. Main steps were taken with VAT exemptions for purchases of electric vehicles and grants awarded to build-up of electric charging infrastructure. In the year 2023 half of all new registrations of passenger vehicles were battery electric. More recent measures also cover heavier energy transition sectors, such as heavy-duty trucks, infrastructure in harbours and production of e-fuels. This report on alternative fuels infrastructure build-up in Iceland covers the measures that have been taken and an outlook what Iceland aims at regarding future build-up.

Legal Measures

Table 1 shows legal measures that support the build-up of alternative fuels infrastructure. See table in attached excel file. Several the measures listed in table 1 are still under consideration and have not been enacted yet or implemented. It should be noted that there is considerable overlap between the legal and policy measures in tables 1 and 2 respectively.

Policy Measures

Table 2 shows the policy measures support the implementation of the national policy framework.

Deployment and manufacturing

Table 3 shows the support measures for deployment and manufacturing connected to alternative fuels. See table in attached excel file. Measures in this category could not be separated from the measures listed in table 2. Therefore, measure listed in table 3 links to a similar measure in table 2.

Research, technological development and demonstration

Table 4 shows the measures connected to research, technological development, and demonstration. See table in attached excel file. Measures in this category could not be fully separated from the measures listed in table 2. Therefore, a measure listed in table 4 links to a similar measure in table 2.

Alternative fuels vehicles estimates

Table 5 shows estimated number of alternative fuels vehicles for the year 2025 and 2030 in addition to historical numbers. See table in attached excel file. The forecasted numbers are received from the Energy Use Forecasting model from the National Energy Authority.

Alternative fuels infrastructure targets

Table 6 shows estimated number of alternative fuels infrastructure for the year 2025 and 2030 in addition to historical numbers. See table in attached excel file. The targets for <22kW in 2025 and 2030 are based on the same ratio as in 2023. The ratio is based on number of EVs and PHEVs for passenger vehicles and light commercial vehicles. The targets for >22kW in 2025 and 2030 is based on the same ratio as in 2023. The ratio is based on numbers of all BEVs and PHEVs in all vehicle categories.

The number of shore-side electricity supply for seagoing ships in maritime ports are listed and reference made to connection larger than 300A.

Number of CNG refuelling stations are not expected to increase during this period.

Number of H2 refuelling stations will double during this period.

Electricity available for aircrafts will increase during this period as shown in the attached excel file.

Alternative fuels infrastructure development

Table 7 shows the ratio of alternative fuels vehicle for each alternative fuels infrastructure. See table in attached excel file.

Also shown are the forecasted changes in fuels use for road and maritime separated by share of each fuel type.

Legal measures

Category	No.	Denomination	Description	AF Field	Alternative Fuel	Type	Transport Mode	Application Level	Start Year	Stop Year	Observations
Legislative & Regulatory	**1**	National Energy Fund Law	Infrastructure and alternative fuel production grants	Combination	Combination	National targets	Combination	National	1967	N / A	The National Energy Fund has evolved over time in accordance with the goals and priorities of the Icelandic Government
Legislative & Regulatory	**2**	National Energy Fund Regulation	Specific rules on governance and grant appliactions etc.	Combination	Combination	Norms & Requirements	Combination	National	2016	N / A	As the goals and priorities of the Government develop so does the regulation concerning the fund
Legislative & Regulatory	**3**	Regulation under consideration set to implement the Law on Electricity no 65/2003	Regulation concerning technical requirements of fast charging stations for BEVs	Combination	Electricity	Norms & Requirements	Road	National	N / A	N / A	Law on Electricity no 65/2003 mandates a regulation be set concerning technical requirements of fast charging stations for BEVs
Legislative & Regulatory	**4**	Law on multi-unit residential buildings no 26/1994, with subsequent amendments	Amendment to clarify rules and requirments to charging stations set up in multi -unit buildings	Combination	Electricity	Norms & Requirements	Road	National	2020	N / A	The fast uptake of BEVs promted changes in the law as well as building requirements and standards
Legislative & Regulatory	**5**	Law on renewable fules in road transport no 45/2013	The law requires licenced suppliers of fuel to stockpile and sell renewables fules and additives	AF	Synthetic& paraffinic fuels	Norms & Requirements	Road	National	2013	N / A	The goal of the law is to increase the uptake of renewable fuels in road transport and reducing GHGs. The law is technologically agnostic
Administrative	**1**	EU/2023/1791 will be implemented	EU Energy Efficiency Directive	Select:	Electricity	Certification of the environmental performance of businesses	Select:	Select:	The Review Process began in 2023 and is ongoing	N / A	The Icelandic Goverment is in the process of a thorough review of how best to strategically implement this important Directive
Administrative	**2**	Climate Action Plan	Comprehensive Government plan to reduce GHG emissions	Combination	Electricity	Other	Combination	National	2020	N / A	The plan sets out a wide ranging set of policy measures aimed at phasing out fossil fuel in a range of sectors - Including mobility
Administrative	**3**	Hydrogen Road Map	Wide ranging Government study of ways to accelerate the hydrogen economy take-off	AFI	Hydrogen	Other	Combination	National	2024	N / A	The Road Map contains a suite of possible policy measures that the Government will study and may implement in the near future
Administrative	**4**			Select:	Select:	Select:	Select:	Select:			
Administrative	**5**			Select:	Select:	Select:	Select:	Select:			

Policy measures supporting the implementation of the national policy framework

Category	No.	Denomination	Description	AF Field	Type	Indicator	Alternative Fuel	Transport Mode	Application Level
M1 - Measures to ensure national targets and objectives	M1.1	National Energy Fund	Infrastructure and alternative fuel production grants.	Combination	Financial incentives	Other support schemes	Combination	Road	National
	M1.2	VAT exemptions	VAT exemptions for purchases of BEV, PHEV, Hydrogen vehicles	AFV	Financial incentives	Taxes reduction / exemption	Combination	Road	National National National
	M1.3	Registration tax	Registration fees based on co2 emissions.	AFV	Financial incentives	Taxes / penalties	Combination	Road	National
	M1.4	Governmental fleet	All vehicles (M1 and N1) in the governmental fleet will be ZEVs 2030	AFV	Non-financial incentives	Select:	Combination	Road	National Local
	M1.5	National Energy Fund - ZEV grants	Grants for purchases of ZEVs	AFV	Financial incentives	Subsidies	Combination	Road	
	M1.6	Fuel Tax exemptions	Exemptions for sustainable fuels	AF	Financial incentives	Taxes reduction / exemption	Combination	Road	
M2 - Measures that can promote AFI in public transport services	M2.1	Borgarlínan - Rapid bus transit system	Governmental investment in the new rapid bus transit system	Combination			Electricity	Road	
	M2.2			Select: Select:			Select: Select:	Select: Select:	
M3 - Measures that can promote the deployment of private electro-mobility infrastructure	M3.1	VAT subsidy for EV home chargers	VAT exemptions for purcases and installment of home chargers for Evs	AFI			Electricity	Road	
	M3.2			Select: Select:			Select: Select:	Select: Select:	

Category	Denomination	*Current and Past Annual Budget [K€]* 2019	2020	2021	2022	*Future Estimated Budget [K€]* 2019	2020	2021	2022	Total Estimated Budget [k€]	Start Year	Stop Year	Observations
M1 - Measures to ensure national targets and objectives	National Energy Fund	€ 2,009	€ 1,517	€ 3,128	€ 7,141	€ 8,667	€ 5,333	€ 5,333	€ 16,000	€ 49,128			Budget only covers 2028
	VAT exemptions	€ 19,800	€ 34,333	€ 55,667	€ 62,553	€ 70,600	€ 2,800	€ -	€ -	€ 245,753			
	Registration tax									€ -			N/A
	Governmental fleet	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -			
	National Energy Fund - ZEV grants	€ -	€ -	€ -	€ -	€ 6,667	€ 50,000	€ 50,000	€ 100,000	€ 206,667			Budget only covers 2028
	Fuel Tax exemptions	€ 14,000	€ 15,333	€ 16,667	€ 13,333	€ 13,333	€ 13,333	€ 12,667	€ 34,000	€ 132,667			
M2 - Measures that can promote AFI in public transport services	Borgarlínan - Rapid bus transit system									€ 346,667			15 year budget from 2020. Capital area.
M3 - Measures that can promote the deployment of private electro-mobility infrastructure	VAT subsidy for EV home chargers	€ -	€ 333	€ 547	€ 1,180	€ 1,333	€ -	€ -	€ -	€ 3,393			

Deployment and manufacturing support

Category	No.	Denomination	Description	AF Field	Alternative Fuel	Transport Mode	Application Level
AFI deployment	**1**	National Energy Fund	Deployment of infrastructure and manufactoring support included in Policy Measures	AFI	Combination	Combination	National
	2			AFI	Select:	Select:	Select:
				AFI	Select:	Select:	Select:
				AFI	Select:	Select:	Select:
Support of manufacturing plants for AF technologies	**1**			Select:	Select:	Select:	Select:
	2			Select:	Select:	Select:	Select:
				Select:	Select:	Select:	Select:
				Select:	Select:	Select:	Select:

Category	Denomination	*Current and Past Annual Budget [K€]* 2019	2020	2021	2022	*Future Estimated Budget [K€]* 2019	2020	2021	2022	Total Estimated Budget [k€]	Start Year	Stop Year	Observations
AFI deployment	National Energy Fund												Deployment of infrastructure and manufactoring support included in Policy Measures for the National Energy Fund.
Support of manufacturing plants for AF technologies													

Research, technological development and demonstration (RTD&D)

No.	Denomination	Description	AF Field	Alternative Fuel	Transport Mode
1	National Energy Fund	RTD&D support included in Policy Measures	Combination	Combination	Combination
2	Rannis (The Icelandic Cetnre for Research)	Funding for energy research related to alternative fuels.	Combination	Combination	Combination
			Select:	Select:	Select:
			Select:	Select:	Select:
			Select:	Select:	Select:
			Select:	Select:	Select:
			Select:	Select:	Select:
			Select:	Select:	Select:

No.	Denomination	*Current and Past Annual Budget [K€]* 2019	2020	2021	2022	*Future Estimated Budget [K€]* 2019	2020	2021	2022	Total Estimated Budget [k€]	Start Year	Stop Year	Observations
1	National Energy Fund												RTD&D support included in Policy Measures
2	Rannis (The Icelandic Cetnre for Research)	10	575	1200	467	unknown	unknown	unknown	unknown	unknown			The separation of funding of the specified projects is not specified from other possible projects funded by Rannis.

Alternative Fuels Vehicles (AFV) estimates

Transport Mode	Alternative Fuels Vehicles	*Rrent and Past Number of AFV* 2021	2022	2023	*Number of AFV Expected to be Registered* 2025	2030
	Electricity					
Road	**Electric Vehicles, EV (total road)**	**22,061**	**33,991**	**44,696**	**65,266**	**123,673**
	Powered Two Wheelers (PTW)					
	Electric Vehicles, EV (excl.PTW)	22,061	33,991	44,696	65,266	123,673
	Electric Passenger Cars (BEV+PHEV)	21,761	33,528	43,834	63,351	116,456
	• BEV	8,451	14,223	22,068	36,946	82,327
	• PHEV	13,310	19,305	21,766	26,405	34,129
	Electric Light Commercial Vehicles	284	447	829	1,793	6,353
	• BEV	276	439	817	1,779	6,336
	• PHEV	8	8	12	14	17
	Electric Heavy Commercial Vehicles	0	0	14	77	614
	• BEV	0	0	14	77	614
	• PHEV	0	0	0	0	0
	Electric Buses and Coaches	16	16	19	45	250
	• BEV	16	16	19	45	250
	• PHEV	0	0	0	0	0
Water	Inland Waterway Vessels					
	Seagoing Ships	1	1	1	1	1
Air	Aircraft	0	0	0	0	0
Rail	Locomotives	0	0	0	0	0
	CNG (including Biomethane)					
Road	**CNG Vehicles (total road)**	**1,855**	**1,828**	**1,791**	**1,716**	**1,256**
	Powered Two Wheelers					
	CNG Vehicles (excl. PTW)	1,855	1,828	1,791	1,716	1,256
	CNG Passenger Cars	1,586	1,558	1,518	1,467	1,075
	CNG Light Commercial Vehicles	245	240	234	210	140
	CNG Heavy Commercial Vehicles	17	20	30	30	33
	CNG Buses and Coaches	7	10	9	9	8
Water	Inland Waterway Vessels	0	0	0	0	0
	Seagoing Ships	0	0	0	0	0
Air	Aircraft	0	0	0	0	0
Rail	Locomotives	0	0	0	0	0

Transport Mode	Alternative Fuels Vehicles	*Rrent and Past Number of AFV* 2021	2022	2023	*Number of AFV Expected to be Registered* 2025	2030
	LNG (including Biomethane)					
Road	**LNG Vehicles (total road)**	**0**	**0**	**0**	**0**	**0**
	Powered Two Wheelers	0	0	0	0	0
	LNG Passenger Cars	0	0	0	0	0
	LNG Light Commercial Vehicles	0	0	0	0	0
	LNG Heavy Commercial Vehicles	0	0	0	0	0
	LNG Buses and Coaches	0	0	0	0	0
Water	LNG Inland Waterway Vessels	0	0	0	0	0
	LNG Seagoing Ships	0	0	0	0	0
Air	Aircraft	0	0	0	0	0
Rail	Locomotives	0	0	0	0	0
	Hydrogen					
Road	**Fuel Cell Vehicles, FCEV (total road)**	**31**	**31**	**27**	**48**	**210**
	Powered Two Wheelers	0	0	0	0	0
	Hydrogen Passenger Cars	31	31	27	27	22
	Hydrogen Light Commercial Vehicles	0	0	0	0	0
	Hydrogen Heavy Commercial Vehicles	0	0	0	16	152
	Hydrogen Buses and Coaches	0	0	0	5	36
Water	Inland Waterway Vessels	0	0	0	0	0
	Seagoing Ships	0	0	0	0	0
Air	Aircraft	0	0	0	0	0
Rail	Locomotives	0	0	0	0	0
	LPG					
Road	**LPG Vehicles (total road)**	**0**	**0**	**0**	**0**	**0**
	Powered Two Wheelers	0	0	0	0	0
	LPG Passenger Cars	0	0	0	0	0
	LPG Light Commercial Vehicles	0	0	0	0	0
	LPG Heavy Commercial Vehicles	0	0	0	0	0
	LPG Buses and Coaches	0	0	0	0	0
Water	Inland Waterway Vessels	0	0	0	0	0
	Seagoing Ships	0	0	0	0	0
Air	Aircraft	0	0	0	0	0
Rail	Locomotives	0	0	0	0	0

Transport Mode	Alternative Fuels Vehicles	*Rrent and Past Number of AFV* 2021	2022	2023	*Number of AFV Expected to be Registered* 2025	2030
	Other AF					
Road	**Other AF Vehicles (total road)**	**0**	**0**	**0**	**0**	**0**
	Powered Two Wheelers	0	0	0	0	0
	Passenger Cars	0	0	0	0	0
	Light Commercial Vehicles	0	0	0	0	0
	Heavy Commercial Vehicles	0	0	0	0	0
	Buses and Coaches	0	0	0	0	0
Water	Inland Waterway Vessels	0	0	0	0	0
	Seagoing Ships	0	0	0	0	0
Air	Aircraft	0	0	0	0	0
Rail	Locomotives	0	0	0	0	0

Alternative Fuels Vehicles (AFV) estimates

Transport Mode	Alternative Fuels Vehicles	*Current and Past Number of Recharging/Refuelling Points* 2021	2022	2023	*Target Number of Recharging /Refuelling Points* 2025	2030
	Electricity					
Road	**Total recharging points (public* + private)**	**0**	**0**	**1,370**	**2,319**	**5,316**
	Recharging points (publicly accessible)	**0**	**0**	**1,370**	**2,319**	**5,316**
	Normal power recharging points, P ≤ 22kW (public)	0		1,100	1,861	4,262
	High power recharging points, P > 22kW (public)	0	0	270	458	1,055
	• AC fast charging, 22kW < P ≤ 43 kW (public)					
	• DC fast charging, P < 150 kW (public)	0		100		
	• DC ultrafast charging, P ≥ 150 kW (public)			170		
	Recharging points (private)	0	0	0	0	0
	Normal power recharging points, P ≤ 22kW (private)					
	High power recharging points, P > 22kW (private)	0	0	0	0	0
	• AC fast charging, 22kW < P ≤ 43 kW (private)					
	• DC fast charging, P < 150 kW (private)					
	• DC ultrafast charging, P ≥ 150 kW (private)					

Transport Mode	Alternative Fuels Vehicles	*Current and Past Number of Recharging/Refuelling Points* 2021	2022	2023	*Target Number of Recharging /Refuelling Points* 2025	2030
	Electricity					
Water	Shore-side electricity supply for seagoing ships in maritime ports	2	5	7	9	13
	Shore-side electricity supply for inland waterway vessels in inland ports	N/A	N/A	N/A	N/A	N/A
Air	Electricity supply for stationary airplanes			29	35	39
	Natural Gas (including Biomethane)					
Road	**CNG refuelling points (total)**	**4**	**4**	**4**	**4**	4
	CNG refuelling points (public)	4	4	4	4	4
	CNG refuelling points (private fleet operators)					
	LNG refuelling points (total)	0	0	0	0	0
	LNG refuelling points (public)					
	LNG refuelling points (private fleet operators)					
Water	Maritime Ports - LNG refuelling points					
	Inland Ports - LNG refuelling points					
	Hydrogen					
Road	**H2 refuelling points (total)**	**2**	**2**	**2**	**2**	**4**
	H2 refuelling points – 350 bar (total)	2	2	2	2	4
	H2 refuelling points – 350 bar (public)	2	2	2	2	4
	H2 refuelling points – 350 bar (private fleet operators)					
	H2 refuelling points – 700 bar (total)	0	0	0	0	0
	H2 refuelling points – 700 bar (public)					
	H2 refuelling points – 700 bar (private fleet operators)					
	LPG					
Road	**LPG refuelling points (total)**	**0**	**0**	**0**	**0**	**0**
	LPG refuelling points (public)	0	0	0	0	0
	LPG refuelling points (private fleet operators)					
	Other AF					
All	**AF refuelling points (total)**	**0**	**0**	**0**	**0**	**0**
	AF refuelling points (public)	0	0	0	0	0
	AF refuelling points (private fleet operators)					

Government of Iceland
Ministry of the Environment, Energy and Climate