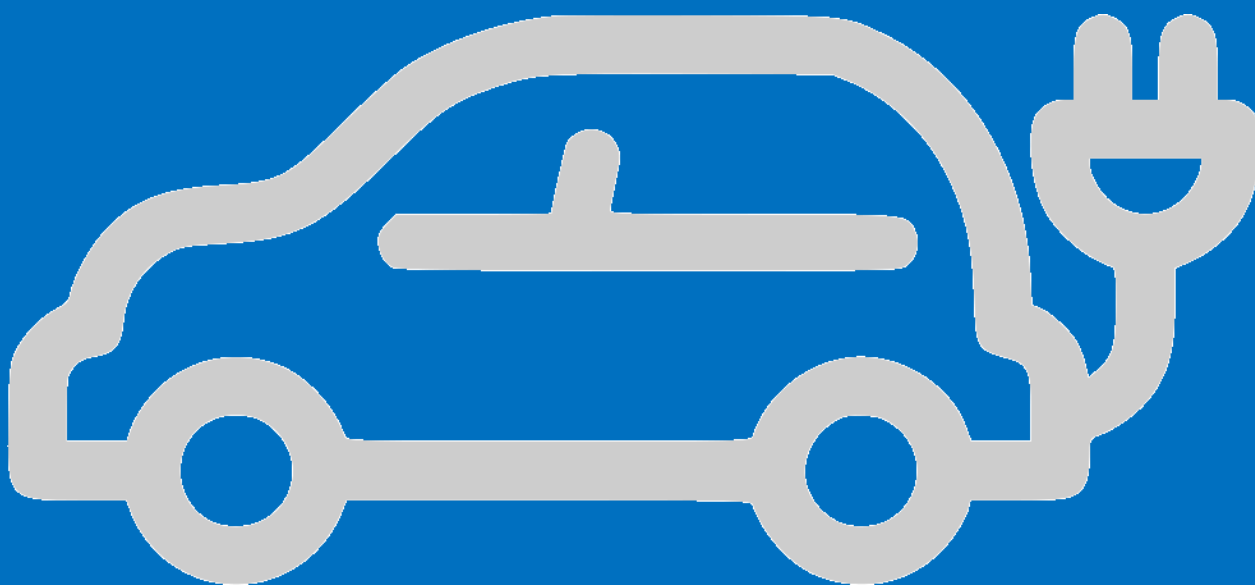


HELLENIC REPUBLIC

MINISTRY OF INFRASTRUCTURE AND TRANSPORT



NATIONAL REPORT

IMPLEMENTATION OF THE NATIONAL POLICY FRAMEWORK FOR THE
DEVELOPMENT OF THE MARKET AS REGARDS ALTERNATIVE FUELS
INFRASTRUCTURE IN THE TRANSPORT SECTOR AND THE DEPLOYMENT
OF THE RELEVANT INFRASTRUCTURE

14/11/2019

CONTENTS

1	Introduction.....	4
1.1	National policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector and the deployment of the relevant infrastructure	4
1.2	Contents of the implementation report of the national policy framework	4
2	Legal measures	6
2.1	Introduction - data.....	6
2.2	Legislative, regulatory & administrative measures.....	19
2.2.1	Existing legislative and regulatory measures	19
2.2.2.	Envisaged legal and regulatory measures	35
3	Policy measures to support the implementation of the national policy framework.....	38
3.1	Introduction - data.....	38
3.2	Measures to ensure that the national targets and objectives are reached	42
4	Infrastructure deployment and support	45
4.1	Introduction - data.....	45
5	Research, technological development and demonstration (RTD&D)	46
5.1	Introduction - data.....	46
5.2	ELEMED	47
5.3	POSEIDON MED	47
6	Targets and objectives	48
6.1	Introduction - data.....	48
7	Deployment of alternative fuels infrastructure	54
7.1	Introduction - data.....	54

TABLES

Table 1.1:	Contents of the implementation report of the national policy framework	4
Table 2.1:	Legal measures	6
Table 3.1:	Policy measures.....	38
Table 4.1:	Manufacturing deployment and support	45
Table 5.1:	Research, technological development and demonstration	46
Table 6.1:	Targets and objectives for vehicles and other transport modes	48
Table 6.2:	Targets and objectives for the deployment of alternative fuels infrastructure in the different transport modes	52
Table 7.1:	Deployment of alternative fuels infrastructure	54

1 Introduction

1.1 National policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector and the deployment of the relevant infrastructure

Directive 2014/94/EU was transposed into Greek law by means of Law 4439/2016[(Government Gazette Series I, No 222) drawn up by the Ministry of Infrastructure and Transport. Among other things, Article 8 of that law requires the adoption of a national policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector and the deployment of the relevant infrastructure.

Law 4439/2016 (Government Gazette, Series I, No 222) of the Ministry of Infrastructure and Transport provided for the establishment of the national policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector and the deployment of the relevant infrastructure, which was issued in September 2017.

Subsequently, Decision No οικ. 77226/1 of October 2017 (Government Gazette, Series II, No 3824/31.10.2017) laid down and specified the detailed implementing measures of the national policy framework for the development of the transport infrastructure market and the deployment of the relevant infrastructure.

1.2 Contents of the implementation report of the national policy framework

In the context of the implementation of the national policy framework, the Ministry of Infrastructure and Transport is submitting this report with the relevant data to the Commission. This report will be re-submitted every three years.

The report contains a description of the national measures taken to support the creation of infrastructure for alternative fuels, as well as the following sections also in accordance with Annex I of Directive 2014/94/EU.

Table 1.1: Contents of the implementation report of the national policy framework

SECTION	CONTENTS
1 Introduction	This section refers to the national policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector and the deployment of the relevant infrastructure, and also presents the other sections and the structure of the report.
2 Legal measures	This section contains information on legal measures, which may consist of legislative, regulatory, or administrative measures to support the creation of infrastructure for alternative fuels, such as building permits, car park permits, certification of the environmental performance of businesses and fuel station

SECTION	CONTENTS
	concessions.
3 Policy measures to support the implementation of the national policy framework	This section includes information on the policy measures supporting the implementation of the national policy framework.
4 Development of and support for manufacturing	This section refers to the annual public budget.
5 Research, technological development and demonstration (RTD&D)	This section refers to the annual public budget allocated to support alternative fuels RTD&D, which may differ depending on the type of fuel and the transport mode.
6 Targets and objectives	<p>This section refers to the following:</p> <ul style="list-style-type: none"> – estimation of the number of alternative fuel vehicles expected by 2020, 2025 and 2030, – level of achievement of the national targets for the deployment of alternative fuels infrastructure in the different transport modes (road, rail, water, and air), – levels of achievement of the national targets, year by year, for the deployment of alternative fuels infrastructure in the different transport modes.
7 Deployment of alternative fuels infrastructure	This section refers to changes in refuelling (additional infrastructure capacity) and demand (capacity used).

2 Legal measures

2.1 Introduction - data

Table 2.1: Legal measures

CATEGORY	No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TYPE	TRANSPORT MODE	APPLICATION LEVEL	Start Year	Stop Year
Legislative & Regulatory	1	Joint Ministerial Decision No 42863/438/2019(Government Gazette, Series II, No 2040)	Laying down the terms, conditions and technical specifications for installing charging devices for electric vehicle batteries (recharging points) at vehicle service facilities, at publicly accessible recharging points throughout the urban, intra-urban and national road network, and at parking facilities in public and private buildings.	AFI	Electricity	Norms & Requirements	Road	National	2019	
	2	Joint Ministerial Decision No 33180/351/2019 (Government Gazette, Series II, No 1454)	Laying down the terms and conditions for establishing and operating liquid fuel, liquid petroleum gas (LPG) and natural gas filling stations (refuelling points) within port zones and tourist ports (marinas) for fuel to be sold exclusively to ships.	AFI	Combination	Norms & Requirements	Water	National	2019	

	3	Presidential Decree 64/2019(Government Gazette, Series I, No 103)	Implementation of a Regulation on safe bunkering of liquefied natural gas fuelled vessels.	AF	LNG (incl. Biomethane)	Norms & Requirements	Water	National	2019	
	4	Ministerial Decision No 7135/81/2019(Government Gazette, Series II, No 714)Ministerial Decision No 44464/452/2019(Government Gazette, Series II, No 2140)	Laying down the terms and conditions for the creation, development, operation and maintenance of a digital register of operating 'fuel and energy supply stations, liquid and gaseous fuel filling stations, indoor car parks with fuel pumps and all kinds of stations supplying fuels for public and private use', and all other necessary details.	AFI	Combination	Norms & Requirements	Combination	National	2019	
	5	Ministerial Decision No 29122/314/2019(Government Gazette, Series II, No 1485)	Laying down the procedure, other conditions and all other technical details for sealing filling stations that supply LPG only, CNG only, and mixed stations that supply any combination of liquid fuels, LPG and CNG.	AFI	Combination	Permits	Road	National	2019	

	6	Joint Ministerial Decision No 93067/1083/2018(Government Gazette, Series II, No 5661)	Laying down the technical specifications, competent bodies and terms and conditions for establishing and operating filling stations with devices (refuelling points) for the supply of CNG to wheeled vehicles, such as (1) filling stations that supply CNG only; or (2) mixed filling stations that supply (a) liquid fuels, LPG and CNG; or (b) LPG and CNG; or (c) liquid fuels and CNG.	AFI	Combination	Norms & Requirements	Road	National	2018	
	7	Law 4067/2012(Government Gazette, Series I, No 79)	New building regulation - Establishment licence for electric vehicle charging stations in public areas.	AFI	Electricity	Permits	Road	National	2018	
	8	Joint Ministerial Decision No 77226/1/2017(Government Gazette, Series II, No 3824)	Laying down and specifying the detailed implementing measures and the technical specifications required for the national policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector and the deployment of the relevant infrastructure.	AFI	Combination	Norms & Requirements	Combination	National	2017	

	9	Law 4439/2016(Government Gazette, Series I, No 222)	Transposing into Greek legislation Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure, simplifying the licensing process and setting out other provisions on fuel and energy supply stations, and other provisions.	AFI	Combination	Norms & Requirements	Combination	National	2016	
	10	Joint Ministerial Decision No 52/2016 (Government Gazette, Series II, No 3953)	Liquid petroleum products - Fatty acid methyl esters as biofuels and bioliquids - Requirements and test methods.	AF	Biofuel	Norms & Requirements	Combination	National	2016	
	11	Ministerial Decision No 59683/3936/2015(Government Gazette, Series II, No 2733)	Laying down technical specifications for special equipment that makes it possible to use LPG to power motor vehicles, and terms and conditions for the inspection and safe circulation thereof.	AFV	LPG	Norms & Requirements	Road	National	2015	
	12	Ministerial Decision No 21935/756/2015(Government Gazette, Series II, No 2754)	Laying down technical specifications for the special equipment needed to use CNG to convert cars into bi-fuel vehicles, and the terms and conditions for the inspection and safe circulation thereof.	AFV	CNG (incl. Biomethane)	Norms & Requirements	Road	National	2015	

	13	Ministerial Decision No 33749/2015(Government Gazette, Series II, No 623)	Replacement of Article 115(4) and (5) 'Labelling and signs displayed by holders of licences for retail trade in liquid fuel, LPG and CNG (service stations)' of Ministerial Decision A2-718/2014 (Government Gazette, Series II, No 2090/2014).	AF	Combination	Permits	Combination	National	2015	
	14	Law 4277/2014(Government Gazette, Series I, No 156)	New master plan for Athens - Attica and other provisions - Definition of operator of electric vehicle charging infrastructure and determination of field of activity.	AFI	Electricity	Other	Road	National	2014	
	15	Ministerial Decision No 10852/715/2014 (Government Gazette, Series II, No 1466)	Laying down technical specifications for special equipment that makes it possible to use CNG to power motor vehicles, and terms and conditions for the inspection and safe circulation thereof.	AFV	CNG (incl. Biomethane)	Norms & Requirements	Road	National	2014	
	16	Ministerial Decision Δ3/A'/15225/2013(Government Gazette, Series II, No 2055)	Technical regulation entitled 'Technical guidelines for storing and transporting biofuels to refining facilities and to petroleum product storage and transport facilities'.	AF	Biofuel	Norms & Requirements	Combination	National	2013	

	17	Law 4070/2012(Government Gazette, Series I, No 82)	Regulating matters concerning electronic communications, transport, public works arrangements, and other provisions - In chapter II on matters relating to the establishment of filling stations and other provisions.	AFI	Combination	Other	Road	National	2012	
	18	Law 4062/2012(Government Gazette, Series I, No 70)	Criteria for the sustainability of biofuels and bioliquids (Transposition of Directive 2009/30/EC).	AF	Biofuel	Other	Combination	National	2012	
	19	Joint Ministerial Decision No 316/2010(Government Gazette, Series I, No 501/2012)	Harmonisation of Greek national law regarding the quality of petrol and diesel fuel with Directive 2009/30/EC of the European Parliament and of the Council.	AF	Combination	Norms & Requirements	Combination	National	2012	
	20	Ministerial Decision No 175700/2016(Government Gazette, Series II, No 1212)	Sustainability system for biofuels and bioliquids.	AF	Biofuel	Other	Combination	National	2016	
	21	Joint Ministerial Decision No 314/2010(Government Gazette, Series II, No 69/2012)	Vehicle fuels - Ethanol of biological origin (bioethanol) as a blending component for petrol - Requirements and test methods.	AF	Other AF	Norms & Requirements	Road	National	2012	
	22	Joint Ministerial Decision No 16229/2012(Government Gazette, Series II, No 1467)	Measures to restrict the circulation of passenger cars, trucks and buses within the Athens inner and outer Ring ('Daktylios') - Circulation of clean vehicles within the Ring under Regulation (EC) No 715/2007.	AFV	Combination	Other	Road	Regional	2012	

	23	Law 4001/2011(Government Gazette, Series I, No 179)	On the functioning of the electricity and natural gas energy markets, for research, production and transport networks for hydrocarbons, and other provisions.	AF	Combination	Norms & Requirements	Combination	National	2011	
	24	Ministerial Decision No 41871/3068/2010(Government Gazette, Series II, No 1519)	Terms and conditions for licensing gaseous fuel (LPG, CNG) garages.	AF	Combination	Permits	Road	National	2010	
	25	Presidential Decree 66/2010(Government Gazette, Series I, No 117)	Laying down the qualifications and procedure for acquiring a professional practice licence for technicians working with devices using gaseous fuels to power cars.	AFV	Combination	Norms & Requirements	Road	National	2010	
	26	Law 3468/2006(Government Gazette, Series I, No 129)	Production of electricity from Renewable Energy Sources and High-Efficiency Combined Heat and Power generation, and other provisions.	AF	Electricity	National targets	Combination	National	2006	
	27	Law 3054/2002(Government Gazette, Series I, No 230)	Organisation of the petroleum products market and other provisions.	AF	Biofuel	Other	Combination	National	2002	
	28	Presidential Decree 595/1984 (Government Gazette, Series II, No 218)	Terms and conditions for establishing and operating filling stations that distribute LPG.	AFI	LPG	Permits	Road	National	1984	

CATEGORY	No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TYPE	TRANSPORT MODE	APPLICATION LEVEL	Start Year	Stop Year
Administrative	1	ELOT EN 62196-1	Plugs, socket-outlets, vehicle connectors and vehicle inlets — Conductive charging of electric vehicles — Part 1: General requirements.	AFI	Electricity	EU & international standards implementation	Road	National	2019	
	2	ELOT EN 62196-2	Plugs, socket-outlets, vehicle connectors and vehicle inlets — Conductive charging of electric vehicles — Part 2: Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories.	AFI	Electricity	EU & international standards implementation	Road	National	2014	
	3	ELOT EN 62196-3	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for a.c./d.c. pin and contact-tube vehicle couplers.	AFI	Electricity	EU & international standards implementation	Road	National	2019	

	4	IEC/ISO/IEEE 80005-1	Shore-side electricity supply for seagoing ships, including the design, installation and testing of the systems.	AF	Electricity	EU & international standards implementation	Water	National	2016	
	5	ISO/TS 20100	Technical specifications for outdoor hydrogen refuelling points and fuelling algorithms and equipment used.	AFI	Hydrogen	EU & international standards implementation	Road	National	2016	
	6	ISO 14687-2	Technical specifications for the hydrogen purity dispensed by refuelling points.	AF	Hydrogen	EU & international standards implementation	Road	National	2016	
	7	ISO 17268	Specifications for gaseous hydrogen land vehicle refuelling connection devices.	AFI	Hydrogen	EU & international standards implementation	Road	National	2016	
	8	ISO 14469	Specification of refuelling equipment for road vehicles using CNG.	AFV	CNG (incl. Biomethane)	EU & international standards implementation	Road	National	2016	
	9	ELOT HD 384	Requirements for electrical installations	AFI	Combination	EU & international standards implementation	Combination	National	2004	
	10	EN 14678-1:2013	LPG equipment and accessories. Construction and performance of LPG equipment for automotive filling stations.	AFI	LPG	EU & international standards implementation	Road	National	2016	

	11	ISO 16923:2016	CNG stations for fuelling vehicles.	AFI	CNG (incl. Biomethane)	EU & international standards implementation	Road	National	2018	
	12	EN-ISO 13686	Quality designation	Combination	CNG (incl. Biomethane)	EU & international standards implementation	Road	National	2014	
	13	ISO CD 15403	Designation of the quality of natural gas for use as a compressed fuel for vehicles.	AF	CNG (incl. Biomethane)	EU & international standards implementation	Road	National	2014	
	14	EN 14382	Safety devices for gas pressure regulating stations supplying CNG - filling stations and installations. Gas safety shut-off devices for inlet pressure up to 100 bar.	AFI	CNG (incl. Biomethane)	EU & international standards implementation	Road	National	2014	
	15	EN 50110-1	Operation of electrical installations.	AFI	Combination	EU & international standards implementation	Road	National	2014	
	16	UNECE Regulation No 110 (which refers to ISO 14469, Parts I and II)	CNG connectors/receptacles.	AFI	CNG (incl. Biomethane)	EU & international standards implementation	Road	National	2016	

	17	ISO 20519	Ship and marine technology - Specifications for bunkering of liquefied natural gas fuelled vessels.	AF	LNG (incl. Biomethane)	EU & international standards implementation	Water	National	2019	
	18	EMSA (2018)	Guidance on LNG bunkering to port authorities and administrations.	AF	LNG (incl. Biomethane)	EU & international standards implementation	Water	National	2019	
	19	ISO 18683	Guidelines for systems and installations for supply of LNG as fuel to ships.	Combination	LNG (incl. Biomethane)	EU & international standards implementation	Water	National	2019	
	20	ISO 16901:2015	Guidance on performing risk assessment in the design of onshore LNG installations including the ship/shore interface.	Combination	LNG (incl. Biomethane)	EU & international standards implementation	Combination	National	2019	
	21	ICS	Tanker safety guide(Liquefied gas).	Combination	LNG (incl. Biomethane)	EU & international standards implementation	Water	National	2019	
	22	IACS	Rec 142 LNG Bunkering Guidelines.	Combination	LNG (incl. Biomethane)	EU & international standards implementation	Water	National	2019	
	23	SGMF	Safety guidelines for bunkering of gas as a marine fuel.	AF	LNG (incl. Biomethane)	AFV Classification on environmental performance	Water	National	2019	

	24	EN 1532	Installation and equipment for liquefied natural gas - Ship to shore interface.	Combination	LNG (incl. Biomethane)	EU & international standards implementation	Water	National	2019	
	25	ELOT EN 590	Automotive fuels - Diesel - Requirements and test methods.	AFV	Biofuel	EU & international standards implementation	Road	National	2016	
	26	ELOT EN 14214+A1	Liquid petroleum products - Fatty acid methyl esters (FAME) for use in diesel engines and heating applications - Requirements and test methods.	AF	Biofuel	EU & international standards implementation	Road	National	2016	
	27	ELOT EN 15376	Automotive fuels - Ethanol as a blending component for petrol - Requirements and test methods.	AFV	Biofuel	EU & international standards implementation	Road	National	2013	
	28	ELOT EN 3170ELOT EN 3171	Biodiesel sampling.	AF	Biofuel	EU & international standards implementation	Road	National	2016	
	29	ISO 8217	Petroleum products - Fuels (class F) - Specifications of marine fuels.	AF	Combination	EU & international standards implementation	Water	National	2015	
	30	ISO 15501	Road vehicles - Compressed natural gas (CNG) fuel systems - Part 2: Test methods	AFV	CNG (incl. Biomethane)	EU & international standards implementation	Road	National	2014	

	31	ISO 19078	Gas cylinders - Inspection of the cylinder installation, and requalification of high pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles.	AFI	CNG (incl. Biomethane)	EU & international standards implementation	Road	National	2014	
--	----	-----------	--	-----	------------------------	---	------	----------	------	--

2.2 Legislative, regulatory & administrative measures

This section presents in detail the existing (legislative, regulatory and administrative measures) and the intended (legislative and regulatory measures) framework for the support of alternative fuels infrastructure.

2.2.1 Existing legislative and regulatory measures

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES				
S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
1	Joint Ministerial Decision No 42863/438/2019 (Government Gazette, Series II, No 2040)	Laying down the terms, conditions and technical specifications for installing charging devices for electric vehicle batteries (recharging points) at vehicle service facilities, at publicly accessible recharging points throughout the urban, intra-urban and national road network, and at parking facilities in public and private buildings.	MINISTRY OF THE INTERIOR MINISTRY OF FINANCE MINISTRY OF THE ENVIRONMENT AND ENERGY MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF SHIPPING AND ISLAND POLICY	This decision lays down the terms and conditions and technical specifications for approving the installation of publicly accessible electric vehicle battery charging devices (recharging points) at: <ol style="list-style-type: none"> 1. existing fuel and energy supply stations or those in the process of being licensed; 2. existing stopover and parking areas within port zones and/or tourist ports (marinas) or those in the process of being licensed; 3. existing indoor and outdoor car parks or those in the process of being licensed; 4. car, motorcycle and motorbike maintenance and repair shops or those in the process of being licensed; 5. existing public or private vehicle roadworthiness testing centres or those in the process of being licensed; 6. publicly accessible private areas throughout the urban, intra-urban and national road network; 7. publicly accessible public areas throughout the urban, intra-urban and national road network; 8. parking facilities in public and private buildings; 9. terminal stations or transit stations for passengers using public transport.

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
2	<p>Joint Ministerial Decision No 33180/351/2019 (Government Gazette, Series II, No 1454)</p>	<p>Laying down the terms and conditions for establishing and operating liquid fuel, liquid petroleum gas (LPG) and natural gas filling stations (refuelling points) within port zones and tourist ports (marinas) for fuel to be sold exclusively to ships.</p>	<p>MINISTRY OF FINANCE MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF SHIPPING AND ISLAND POLICY</p>	<p>Laying down the terms and conditions and all other technical details for the establishment and operation of filling stations (refuelling points) that supply liquid fuels, LPG, natural gas or any combination of these fuels within port zones (ports and fishing shelters) and tourist ports so that fuel may be sold exclusively to ships, under the master plan with regard to ports of international interest and national importance or under the framework for port development projects with regard to ports of major interest, as well as under the act designating the land use of port areas and the building conditions therein, as appropriate. Fuels may not be supplied to vessels, if there is no operating licence for a 'port filling station' under the provisions hereof. This decision does not supersede the provisions on liquid fuel, LPG and LNG bunkering of vessels, as applicable.</p> <p>The Joint Ministerial Decision in question relates to the following alternative fuels: LPG & CNG.</p>
3	<p>Presidential Decree 64/2019 (Government Gazette, Series I, No 103)</p>	<p>Implementation of a Regulation on safe bunkering of liquefied natural gas fuelled vessels.</p>	<p>MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF THE ENVIRONMENT AND ENERGY</p>	<p>This Presidential Decree establishes rules on the safe bunkering of liquefied natural gas fuelled vessels by bunker ships, tank vehicles, portable tanks or refuelling facilities.</p>
4	<p>Ministerial Decision No 7135/81/2019 (Government Gazette, Series II, No 714)</p> <p>Ministerial Decision No 44464/452/2019 (Government Gazette, Series II, No 2140)</p>	<p>Laying down the terms and conditions for the creation, development, operation and maintenance of a digital register of operating 'fuel and energy supply stations, liquid and gaseous fuel filling stations, indoor car parks with fuel pumps and all kinds of stations supplying fuels for public and private use', and all other necessary details.</p>	<p>MINISTRY OF TRANSPORT AND INFRASTRUCTURE</p>	<p>Laying down the terms and conditions for the creation, development, operation and maintenance of a digital register of the operating 'fuel and energy supply stations' of Article 114(7) of Law 4070/2012 (Government Gazette, Series I, No 82), the operating liquid and gaseous fuel filling stations within port zones and tourist ports (marinas) of Joint Ministerial Decision No 72983/6562/14/2015 (Government Gazette, Series II, No 88/2015), the indoor car parks with fuel pumps of Presidential Decree 455/1976 (Government Gazette, Series I, No 169), all kinds of stations supplying fuels for public and private use, and all other necessary details.</p> <p>Ministerial Decision No 44464/452/2019 (Government Gazette, Series II, No 2140) amends Ministerial Decision No 7135/81 of 29 January 2019</p>

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
				(Government Gazette, Series II, No 714/2019) Alternative fuels: LPG, LNG and CNG. Transport sector: Road network and shipping.
5	Ministerial Decision No 29122/314/2019 (Government Gazette, Series II, No 1485)	Laying down the technical specifications, competent bodies and terms and conditions for establishing and operating filling stations with devices (refuelling points) for the supply of CNG to wheeled vehicles, such as (1) filling stations that supply CNG only; or (2) mixed filling stations that supply (a) liquid fuels, LPG and CNG; or (b) LPG and CNG; or (c) liquid fuels and CNG.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE	Laying down the procedure and method for sealing filling stations that supply LPG only or CNG only, and mixed stations that supply liquid fuels, LPG and/or CNG or any combination thereof. The Joint Ministerial Decision in question relates to the following alternative fuels: LPG and CNG.
6	Joint Ministerial Decision No 93067/1083/2018 (Government Gazette, Series II, No 5661)	Terms and conditions for establishing and operating liquid fuel, LPG and natural gas filling stations within port zones and tourist ports (marinas) for fuel to be sold exclusively to ships.	MINISTRY OF THE ENVIRONMENT AND ENERGY MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF FINANCE	This decision lays down: (a) the minimum internal and external safety distances of the major elements of filling stations that supply CNG only or CNG mixed with other fuels; (b) the terms and conditions for the safe construction, operation, maintenance and inspection of the building and electromechanical installations of filling stations that supply CNG only or CNG mixed with other fuels; (c) the technical specifications for the building and electromechanical installations of filling stations that supply CNG only or CNG mixed with other fuels; (d) the total number of installations of filling stations that supply CNG only or CNG mixed with other fuels, from the shut-off valve at the installation inlet to the supply nozzle, including its functional areas.

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
				The Joint Ministerial Decision in question relates to the following alternative fuels: LPG and CNG.
7	Law 4067/2012 (Government Gazette, Series I, No 79)	New building regulation - Establishment licence for electric vehicle charging stations in public areas.	MINISTRY OF THE INTERIOR MINISTRY OF FINANCE MINISTRY OF DEFENCE MINISTRY OF DEVELOPMENT MINISTRY OF THE ENVIRONMENT AND ENERGY MINISTRY OF EDUCATION, RESEARCH AND RELIGIOUS AFFAIRS MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF HEALTH MINISTRY OF RURAL DEVELOPMENT MINISTRY OF JUSTICE MINISTRY OF CULTURE	Law 4513/2018 (Government Gazette, Series I, No 9) on energy communities amended Law 4067/2012. In accordance with Article 20 of Law 4067/2012, charging stations may be installed in public spaces.
8	Joint Ministerial Decision No 77226/1/2017 (Government Gazette, Series II, No 3824)	Laying down and specifying the detailed implementing measures and the technical specifications required for the national policy framework for the development of the market as regards alternative fuels infrastructure in the transport	MINISTRY OF THE INTERIOR MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS	This decision lays down and specifies the detailed implementing measures and technical specifications required for the national policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector and the deployment of the relevant infrastructure, in accordance with Article 3(1) of Law 4439/2016 (Government Gazette, Series I, No 222). This Joint Ministerial Decision relates to all alternative fuels and to the

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
		sector and the deployment of the relevant infrastructure.	MINISTRY OF FOREIGN AFFAIRS MINISTRY OF FINANCE MINISTRY OF THE ENVIRONMENT AND ENERGY MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF SHIPPING AND ISLAND POLICY MINISTRY OF RURAL DEVELOPMENT MINISTRY OF TOURISM	entire transport sector.
9	Law 4439/2016 (Government Gazette, Series I, No 222)	Transposing into Greek law Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure, simplifying the licensing process and setting out other provisions on fuel and energy supply stations, and other provisions.	MINISTRY OF THE INTERIOR MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS MINISTRY OF FOREIGN AFFAIRS MINISTRY OF FINANCE MINISTRY OF THE ENVIRONMENT AND ENERGY MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF SHIPPING	Chapter I sets out minimum requirements for the building-up of alternative fuels infrastructure, including recharging points for electric vehicles and refuelling points for natural gas (LNG and CNG) and hydrogen. It also sets out technical specifications for recharging and refuelling points, as well as the way users will be informed. Finally, it specifies the procedure for simplifying licensing for filling stations selling liquid fuel, LNG only, and for mixed filling stations. In Chapter II, the licensing process for filling stations selling liquid fuel and mixed filling stations selling liquid fuel and LPG has been simplified (abolishing unnecessary supporting documents and procedures, such as on-site inspections to verify the suitability of the property's location in order to grant an establishment licence) and accelerated (by setting time limits for the issue of establishment licences, operating licences and licences for a change of license holder and by enacting a 'tacit' approval procedure). This Law relates to all alternative fuels and to the entire transport sector.

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
			AND ISLAND POLICY MINISTRY OF TOURISM	
10	Joint Ministerial Decision No 52/2016 (Government Gazette, Series II, No 3953)	Liquid petroleum products - Fatty acid methyl ester as biofuels and bioliquids - Requirements and test methods.	MINISTRY OF FINANCE MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF THE ENVIRONMENT AND ENERGY	This decision lays down the specifications for fatty acid methyl esters (FAME), which are intended for use as fuel in diesel engines (biofuels), etc. This Joint Ministerial Decision relates to the entire transport sector.
11	Ministerial Decision No 59683/3936/2015 (Government Gazette, Series II, No 2733)	Laying down technical specifications for special equipment that makes it possible to use LPG to power motor vehicles, and terms and conditions for the inspection and safe circulation thereof.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE	This decision lays down technical specifications and the terms and conditions that make it possible to use LPG to power motor vehicles, and the terms and conditions for the inspection and safe circulation thereof. Moreover, it lays down new regulations for the use of LPG in diesel-powered vehicles (bi-fuel).
12	Ministerial Decision No 21935/756/2015 (Government Gazette, Series II, No 2754)	Laying down technical specifications for the special equipment needed to use CNG to convert cars into bi-fuel vehicles, and the terms and conditions for the inspection and safe circulation thereof.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE	It lays down the technical specifications for the special equipment needed to use CNG to convert cars into bi-fuel vehicles, and the terms and conditions for the inspection and safe circulation thereof. The use of CNG in diesel-powered vehicles (bi-fuel) is also determined.
13	Ministerial Decision No 33749/2015 (Government Gazette, Series II, No 623)	Replacement of Article 115(4) and (5) 'Labelling and signs displayed by holders of licences for retail trade in liquid fuel, LPG and CNG (service stations)' of Ministerial Decision A2-718/2014 (Government Gazette, Series II, No 2090/2014).	MINISTRY OF ECONOMY AND DEVELOPMENT	An obligation is imposed on holders of retail trading permits to display special signage at retail points selling biofuels mixed with refined oil products at a ratio not exceeding 10% by vol. Holders of biofuel selling permits who sell neat biofuels to end consumers, are also obliged to display special signage. Signage issues are also regulated for other by vol. contents of refined oil products in biofuels.

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
				<p>This Ministerial Decision relates to CNG and biofuels.</p> <p>It relates to the road network and shipping.</p>
14	<p>Law 4277/2014 (Government Gazette, Series I, No 156)</p>	<p>New master plan for Athens - Attica and other provisions - Definition of operator of electric vehicle charging infrastructure and determination of field of activity.</p>	<p>MINISTRY OF FOREIGN AFFAIRS</p> <p>MINISTRY OF FINANCE</p> <p>MINISTRY OF THE INTERIOR</p> <p>MINISTRY OF DEVELOPMENT AND COMPETITIVENESS</p> <p>MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS</p> <p>MINISTRY OF CULTURE AND SPORTS</p> <p>MINISTRY OF LABOUR, SOCIAL SECURITY AND WELFARE</p> <p>MINISTRY OF THE ENVIRONMENT AND ENERGY</p> <p>MINISTRY OF ADMINISTRATIVE REFORM AND E-GOVERNMENT</p> <p>MINISTRY OF RURAL DEVELOPMENT AND FOOD</p> <p>MINISTRY OF JUSTICE, TRANSPARENCY AND HUMAN RIGHTS</p>	<p>In accordance with Article 53 of Law 4277/2014, the definition of electric vehicle charging infrastructure operators as the natural or legal persons active in the operation of charging infrastructure for which it procures electricity in order to provide electric vehicle charging services is added to Law 4001/2011.</p>

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
			MINISTRY OF HEALTH MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF PUBLIC ORDER AND CITIZEN PROTECTION MINISTRY OF TOURISM MINISTRY OF SHIPPING AND THE AEGEAN MINISTRY OF MACEDONIA AND THRACE	
15	Ministerial Decision No 10852/715/2014 (Government Gazette, Series II, No 1466)	Laying down technical specifications for special equipment that makes it possible to use CNG to power motor vehicles, and terms and conditions for the inspection and safe circulation thereof.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE	This decision lays down technical specifications and the terms and conditions that make it possible to use CNG to power motor vehicles, as well as the terms and conditions for the inspection and safe circulation of such vehicles. The decision applies to retrofitting systems to be installed in M and N class vehicles as defined in Joint Ministerial Decision No 29949/1841/09 (Government Gazette, Series II, No 2112) which are converted into bi-fuel vehicles.
16	Ministerial Decision Δ3/A' /15225/2013 (Government Gazette, Series II, No 2055)	Technical regulation entitled 'Technical guidelines for storing and transporting biofuels to refining facilities and to petroleum product storage and transport facilities'.	MINISTRY OF THE ENVIRONMENT AND ENERGY	It approves the technical regulation entitled 'Technical guidelines for storing and transporting biofuels to refining facilities and to petroleum product storage and transport facilities'. This ministerial decision relates to the entire transport sector.
17	Law 4070/2012 (Government Gazette, Series I, No 82)	Regulating matters concerning electronic communications, transport, public works arrangements, and other provisions - In chapter II on matters relating to the	MINISTRY OF TRANSPORT AND INFRASTRUCTURE	Article 114 provides for the establishment of filling stations that supply alternative forms of fuel called 'fuel and energy supply stations'. This specific group of filling stations includes those selling mixed fuels or LPG only and those selling natural gas only, whereas the article also provides that, in addition to the above fuels, these filling stations can sell neat biofuels (such as bioethanol and biodiesel), electricity and

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
		establishment of filling stations and other provisions.		hydrogen, as well as other alternative types of fuel to passing wheeled vehicles. Article 114(7) of Law 4070/2012 was replaced under Article 15 of Law 4233/2014 (Government Gazette, Series I, No 22), Chapter II regulating matters related to transport, and subsequently under Article 10 of Law 4439/2016, with regard to defining the location of charging infrastructure. This Law relates to all alternative fuels.
18	Law 4062/2012 (Government Gazette, Series I, No 70)	Criteria for the sustainability of biofuels and bioliquids (Transposition of Directive 2009/30/EC).	MINISTRY OF THE ENVIRONMENT AND ENERGY	Promotion of the use of energy from renewable sources and transposition of Directive 2009/30/EC as regards the specifications for petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions. Its provisions transpose the provisions of Articles 2 and 7a to 7e of Directive 98/70/EC into national law, as amended by and added with Article 1 of Directive 2009/30/EC. This Law relates to the entire transport sector.
19	Joint Ministerial Decision No 316/2010 (Government Gazette, Series I, No 501/2012)	Harmonisation of Greek national law regarding the quality of petrol and diesel fuel with Directive 2009/30/EC of the European Parliament and of the Council.	MINISTRY OF FINANCE MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF THE ENVIRONMENT AND ENERGY	Transposition into national law of Directive 2009/30/EC, other than Articles 7a to 7e of Directive 98/70/EC as amended by Article 1 of Directive 2009/30/EC. The objective is to bring national law in terms of the quality of petrol and diesel fuel into line with the Directive. This decision lays down the technical specifications, which take account of health and environmental factors, for fuels used by motor vehicles and non-road mobile machinery, agricultural and forestry tractors and recreational craft when not at sea, taking into account the technical requirements of their engines. This Joint Ministerial Decision relates to the road network and shipping.
20	Ministerial Decision No 175700/2016 (Government Gazette, Series II,	Sustainability system for biofuels and bioliquids.	MINISTRY OF FINANCE MINISTRY OF THE	This decision lays down the procedures for certifying and verifying compliance with the biofuel and bioliquid sustainability criteria.

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
	No 1212)		ENVIRONMENT AND ENERGY MINISTRY OF RURAL DEVELOPMENT AND FOOD	
21	Joint Ministerial Decision No 314/2010 (Government Gazette, Series II, No 69/2012)	Vehicle fuels - Ethanol of biological origin (bioethanol) as a blending component for petrol - Requirements and test methods.	MINISTRY OF FINANCE MINISTRY OF THE ENVIRONMENT AND ENERGY	This decision lays down the specifications, other requirements and test methods for bioethanol which is placed on the Greek market and intended for use as a biocomponent in motor gasoline at a ratio that complies with the requirements of standard ELOT EN 228 'Automotive fuels – Unleaded petrol – Requirements and test methods'. The alternative fuel concerned is bioethanol.
22	Joint Ministerial Decision No 16229/2012 (Government Gazette, Series II, No 1467)	Measures to restrict the circulation of passenger cars, trucks and buses within the Athens inner and outer Ring ('Daktylios') - Circulation of clean vehicles within the Ring under Regulation (EC) No 715/2007.		The following vehicles may circulate without any restriction within the Ring established by paragraph 1 of Decision ΔΜΕΟ/οικ./3019/οτ/0967/Φ.911/2011 entitled 'Measures to restrict the circulation of vehicles in the centre of Athens' (Government Gazette, Series II, No 1640) of the Ministers for Infrastructure, for Transport and Networks and for Citizen Protection: (a) electric vehicles and vehicles which comply by default with Regulation (EC) No 715/2007 (Euro 5 and Euro 6) or with a subsequent regulation provided that they emit carbon dioxide of less than 140 g/km, regardless of the fuel that they use (gasoline, oil, LPG or CNG); (b) hybrid vehicles (using electrofuels or conventional fuels) and Euro 4 vehicles powered by gaseous fuels (LPG or natural gas) provided that they emit carbon dioxide of less than 140 g/km. The alternative fuels concerned are the following: Electricity, LPG, CNG.
23	Law 4001/2011 (Government Gazette, Series I, No 179)	On the functioning of the electricity and natural gas energy markets, for research, production and transport	MINISTRY OF THE ENVIRONMENT AND ENERGY	Transposition of Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, and Directive 2009/73/EC concerning common rules for the internal

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
		networks for hydrocarbons, and other provisions.		market in natural gas and repealing Directive 2003/55/EC. The law lays down rules for the production, supply, purchase, transport and sale of natural gas and electricity, and the storage and liquefaction of natural gas and the gasification of LNG within the territory of Greece. These activities are of general interest and are supervised by the State. It relates to all alternative fuels and to the entire transport sector.
24	Ministerial Decision No 41871/3068/2010 (Government Gazette, Series II, No 1519)	Terms and conditions for licensing gaseous fuel (LPG, CNG) garages.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE	This lays down the terms and conditions (regarding space, internal layout, equipment, machinery) and licensing procedure for garages dealing with gaseous fuels (LPG, CNG). It relates to LPG and CNG alternative fuels.
25	Presidential Decree 66/2010 (Government Gazette, Series I, No 117)	Laying down the qualifications and procedure for acquiring a professional practice licence for technicians working with devices using gaseous fuels to power cars.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE	This presidential decree lays down the terms, conditions and procedure for acquiring a professional practice licence for technicians working with devices using gaseous fuels to power cars, and for replacing the professional practice licence for technicians working with car devices using LPG of Article 2(2)(m) of Law 1575/85, as in force, with a professional practice licence for technicians working with devices burning gaseous fuels to power cars. It relates to the following alternative fuels: LPG and CNG.
26	Law 3468/2006 (Government Gazette, Series I, No 129)	Production of electricity from Renewable Energy Sources and High-Efficiency Combined Heat and Power generation, and other provisions.	MINISTRY OF THE ENVIRONMENT AND ENERGY	It transposes Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market, into Greek law, and also promotes as a matter of priority, in the internal energy market, based on rules and principles, the production of electricity from RES and High-Efficiency Combined Heat and Power plants (HECHP). National targets for RES based on Directive 2009/28/EC (OJ L 140/2009).
27	Law 3054/2002 (Government Gazette, Series I, No 230)	Organisation of the petroleum products market and other provisions.	MINISTRY OF THE ENVIRONMENT AND ENERGY	The purpose of this law is to regulate matters relating to Greece's petroleum policy. The provision of services and all activities relating to refining, trade in, transport and storage of crude oil and petroleum products are subject to the provisions of this law and serve the general

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – LEGISLATIVE & REGULATORY MEASURES

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
				<p>interest.</p> <p>Article 15A: Biofuels are to be placed on the domestic market either unmixed or in mixtures with refined petroleum products, on condition that they conform to the technical specifications laid down in decisions of the Supreme Chemical Council.</p> <p>Article 5A, as amended by Article 80 of Law 4602/2019 on the biofuel selling permit and currently in force: The holder of a biofuel selling permit may produce or import neat biofuels and bioliquids (liquid fuels made of biomass for energy purposes other than transport) and sell them in the domestic market, to holders of a refining permit, a class A trading permit, and to end consumers.</p>
28	<p>Presidential Decree 595/1984 (Government Gazette, Series II, No 218)</p>	<p>Terms and conditions for establishing and operating filling stations that distribute LPG.</p>	<p>MINISTRY OF TRANSPORT AND INFRASTRUCTURE</p> <p>MINISTRY OF THE ENVIRONMENT AND ENERGY</p>	<p>This lays down the terms and conditions and the technical specifications for establishing and operating filling stations that only sell LPG or mixed filling stations (gasoline, diesel and LPG). In Chapter II of Law 4439/2016 (Government Gazette, Series I, No 222) the licensing process for mixed filling stations selling liquid fuel and LPG has been simplified (abolishing unnecessary supporting documents and procedures such as on-site inspections to verify the suitability of the property's location in order to grant an establishment licence) and accelerated (by setting time limits for the issue of establishment licences, operating licences and for a change of licence holder and by enacting a 'tacit' approval procedure).</p>

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – ADMINISTRATIVE MEASURES

S/N	Standards applicable to the deployment of alternative fuels infrastructure	Subject matter	Remarks
1	ELOT EN 62196-1	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements.	Application under Ministerial Decision No 42863/438 (Government Gazette, Series II, No 2040/4.6.2019).
2	ELOT EN 62196-2	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional	Application under Joint Ministerial Decision

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – ADMINISTRATIVE MEASURES

S/N	Standards applicable to the deployment of alternative fuels infrastructure	Subject matter	Remarks
		compatibility and interchangeability requirements for a.c. pin and contact-tube accessories.	No 71287/6443 of 31 December 2014.
3	ELOT EN 62196-3	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for a.c./d.c. pin and contact-tube vehicle couplers.	Application under Ministerial Decision No 42863/438 (Government Gazette, Series II, No 2040/4.6.2019).
4	IEC/ISO/IEEE 80005-1	Shore-side electricity supply for seagoing ships, including the design, installation and testing of the systems.	Application under Law 4439/2016.
5	ISO/TS 20100	Technical specifications for outdoor hydrogen refuelling points and fuelling algorithms and equipment used.	Application under Law 4439/2016.
6	ISO 14687-2	Technical specifications for the hydrogen purity dispensed by refuelling points.	Application under Law 4439/2016.
7	ISO 17268	Specifications for gaseous hydrogen land vehicle refuelling connection devices.	Application under Law 4439/2016.
8	ISO 14469	Specification of refuelling equipment for road vehicles using CNG.	Application under Law 4439/2016.
9	ELOT HD 384	Requirements for electrical installations	Application under Ministerial Decision Φ.7.5/1816/88/2004 (Government Gazette, Series II, No 470/5.3.2004). For example, this standard includes the electrical installations regulation for liquid fuel filling stations and car parks equipped with liquid fuel pumps in operation on the ground floors of multi-storey buildings.
10	EN 14678-1:2013	LPG equipment and accessories. Construction and performance of LPG equipment for automotive filling stations.	Application under Law 4439/2016.
11	ISO 16923:2016	CNG stations for fuelling vehicles.	Application under Ministerial Decision No οικ.93067/1083

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – ADMINISTRATIVE MEASURES

S/N	Standards applicable to the deployment of alternative fuels infrastructure	Subject matter	Remarks
			(Government Gazette, Series II, No 5661/2018).
12	EN-ISO 13686	Quality designation.	Application under Ministerial Decision No οικ.13935/930/2014 (Government Gazette, Series II, No 674/18.3.2014). The standard in question relates to the quality specifications for compressed natural gas (CNG), so that it is not condensed when compressed and so that its composition does not change as a consequence. This standard applies to CNG filling stations (neat or mixed).
13	ISO CD 15403	Designation of the quality of natural gas for use as a compressed fuel for vehicles.	Application under Ministerial Decision No οικ.13935/930/2014 (Government Gazette, Series II, No 674/18.3.2014).
14	EN 14382	Safety devices for gas pressure regulating stations supplying CNG - filling stations and installations. Gas safety shut-off devices for inlet pressure up to 100 bar.	Application under Ministerial Decision No οικ.13935/930/2014 (Government Gazette, Series II, No 674/18.3.2014).
15	EN 50110-1	Operation of electrical installations.	Application under Ministerial Decision No οικ.13935/930/2014 (Government Gazette, Series II, No 674/18.3.2014). It relates to the operation of filling stations that supply CNG only or CNG mixed with other fuels (CNG, LPG - CNG).
16	UNECE Regulation No 110 (which refers to ISO 14469, Parts I and II)	CNG connectors/receptacles.	Application under Law 4439/2016.
17	ISO 20519	Ship and marine technology - Specifications for bunkering of liquefied natural gas fuelled vessels.	Application under Presidential Decree 64/2019 (Government Gazette, Series I, No 103/20.6.2019).
18	EMSA (2018)	Guidance on LNG bunkering to port authorities and administrations.	Application under Presidential Decree 64/2019 (Government Gazette, Series I, No 103/20.6.2019).

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – ADMINISTRATIVE MEASURES

S/N	Standards applicable to the deployment of alternative fuels infrastructure	Subject matter	Remarks
19	ISO 18683	Guidelines for systems and installations for supply of LNG as fuel to ships.	Application under Presidential Decree 64/2019 (Government Gazette, Series I, No 103/20.6.2019). It relates to systems and installations for supply of LNG.
20	ISO 16901:2015	Guidance on performing risk assessment in the design of onshore LNG installations including the ship/shore interface.	Application under Presidential Decree 64/2019 (Government Gazette, Series I, No 103/20.6.2019).
21	ICS	Tanker safety guide (Liquefied gas).	Application under Presidential Decree 64/2019 (Government Gazette, Series I, No 103/20.6.2019).
22	IACS	Rec 142 LNG Bunkering Guidelines.	Application under Presidential Decree 64/2019 (Government Gazette, Series I, No 103/20.6.2019).
23	SGMF	Safety guidelines for bunkering of gas as a marine fuel.	Application under Presidential Decree 64/2019 (Government Gazette, Series I, No 103/20.6.2019).
24	EN 1532	Installation and equipment for LNG – Ship to shore interface.	Application under Presidential Decree 64/2019 (Government Gazette, Series I, No 103/20.6.2019).
25	ELOT EN 590	Automotive fuels - Diesel - Requirements and test methods.	Application under Joint Ministerial Decision No 52/2016 (Government Gazette, Series II, No 3953/9.12.2016).
26	ELOT EN 14214+A1	Liquid petroleum products - Fatty acid methyl esters (FAME) for use in diesel engines and heating applications - Requirements and test methods.	Application under Joint Ministerial Decision No 52/2016 (Government Gazette, Series II, No 3953/9.12.2016).
27	ELOT EN 15376	Automotive fuels - Ethanol as a blending component for petrol - Requirements and test methods.	Application under Ministerial Decision Δ3/A/οικ.15225/2013 (Government Gazette, Series II, No 2055/23.8.2013).
28	ELOT EN 3170 ELOT EN 3171	Biodiesel sampling.	Application under Joint Ministerial Decision No 52/2016 (Government Gazette, Series II, No 3953/9.12.2016).

EXISTING INSTITUTIONAL FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL – ADMINISTRATIVE MEASURES

S/N	Standards applicable to the deployment of alternative fuels infrastructure	Subject matter	Remarks
29	ISO 8217	Petroleum products - Fuels (class F) - Specifications of marine fuels	<p>Application under Joint Ministerial Decision No 53/2015 (Government Gazette, Series II, No 987/11.4.2016).</p> <p>More specifically, a set of categories of distillates which may contain biofuels and hydrocarbons from synthetic or renewable sources similar in composition has been added to the sixth edition of standard EN ISO 8217:2017 which is applicable.</p>
30	ISO 15501	Road vehicles - Compressed natural gas (CNG) fuel systems - Part 2: Test methods	Application under Ministerial Decision No 10852/715/14/2014 (Government Gazette, Series II, No 1466/5.6.2014).
31	ISO 19078	Gas cylinders - Inspection of the cylinder installation, and requalification of high pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles.	Application under Ministerial Decision No 10852/715/14/2014 (Government Gazette, Series II, No 1466/5.6.2014).

2.2.2. Envisaged legal and regulatory measures

ENVISAGED REGULATORY FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL				
S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
1	Joint Ministerial Decision (concerning LNG)	Amendment of Ministerial Decision No οικ. 13935/930/2014 (Government Gazette, Series II, No 674/18.3.2014). Enabling provision: Article 10 of Law 4439/2016.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF THE ENVIRONMENT AND ENERGY	Laying down the competent bodies and the terms and conditions for the establishment and operation of <u>natural gas (CNG, LNG) and mixed liquid fuel, LPG and natural gas or LPG and CNG or liquid fuel and natural gas filling stations</u> . This simplifies and establishes a fast-track licensing procedure for natural gas filling stations, in accordance with the provisions of Law 4439/2016, by a mutatis mutandis application of the rules regarding liquid fuel filling stations and LPG (neat or mixed) filling stations.
2	Joint Ministerial Decision CURRENTLY BEING DRAFTED	Terms and conditions for <u>refuelling points for the supply of hydrogen, biofuels, synthetic and paraffinic</u> fuels. Enabling provision: Article 10 of Law 4439/2016.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF THE ENVIRONMENT AND ENERGY	Laying down the terms and conditions and the technical specifications for the installation of refuelling points for the supply of <u>hydrogen, biofuels, synthetic and paraffinic</u> fuels at existing fuel and energy supply stations or those in the process of being licensed.
3	Joint Ministerial Decision CURRENTLY BEING DRAFTED	Laying down the procedure and conditions (experience, training, length of training, etc.) and all other relevant matters regarding managers of fuel and energy supply stations.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS	Laying down the procedure and other conditions (experience, level of knowledge, professional training, length of training, curriculum, appropriately certified training structure) and all other relevant details for the appointment of managers of filling stations supplying LPG only or LPG mixed with other fuels.
4	Joint Ministerial Decision CURRENTLY BEING DRAFTED	Enabling provision: Article 24 of Law 4439/2016.	MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS	Laying down the procedure and other conditions (experience, level of knowledge, professional training, length of training, curriculum, appropriately certified training structure) and all other relevant details for the appointment of managers of filling stations supplying CNG only or CNG mixed with other fuels.

ENVISAGED REGULATORY FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
5	Presidential Decree	Laying down the qualifications for technicians and mechanics working with vehicles that use alternative fuels. Enabling provision: <i>Article 12 of Law 4439/2016.</i>	MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS	Laying down the qualifications and procedure for granting a certificate of commencement of the profession of repair and maintenance technician working with cars powered by hydrogen, biofuels and synthetic and paraffinic fuels.
6	Joint Ministerial Decision		MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS	Laying down the length of training, the training structure and method, the content of the curriculum, and the procedure and terms and conditions for extending the professional practice licence of technicians working with gaseous fuels under Presidential Decree 66/2010 on the repair and maintenance of engine power supply and operation parts in LNG-powered vehicles.
7	Joint Ministerial Decision		MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF EDUCATION AND RELIGIOUS AFFAIRS	Laying down the length of training, the training structure and method, the content of the curriculum, and the procedure and terms and conditions for extending the professional licence of mechanical technicians, electrical technicians, automotive engineers (university education) and automotive engineers (technical education) in relation to the repair and maintenance of electric vehicles.
8	Joint Ministerial Decision		Laying down the terms and conditions, the internal layout, the mechanical equipment and the prohibitions relating to proximity and safety distance, for extending the scope of a garage's services. Enabling provision: <i>Article 12 of Law 4439/2016.</i>	MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF THE ENVIRONMENT AND ENERGY
9	Joint Ministerial Decision		MINISTRY OF TRANSPORT AND INFRASTRUCTURE	Requirements for the extension of the scope of services offered by garages dealing with gaseous fuel under Article 1(2) of

ENVISAGED REGULATORY FRAMEWORK REGARDING INFRASTRUCTURE FOR ALTERNATIVE FUEL

S/N	Legislative or regulatory provision	Subject matter of provisions	Competent ministries	General description - Observations
			MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF THE ENVIRONMENT AND ENERGY	Ministerial Decision No oik. 41871/3068 of 31 August 2010 relating to the repair and maintenance of electric vehicles.
10	Joint Ministerial Decision		MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF THE ENVIRONMENT AND ENERGY	Requirements for granting a certificate of lawful operation to garages offering repair and maintenance services for vehicles powered by hydrogen, biofuels and synthetic and paraffinic fuels.
11	MINISTERIAL DECISION IN THE PROCESS OF BEING ISSUED	Laying down terms and conditions for the establishment and operation of electric vehicle charging infrastructure operators. Enabling provision: Article 134 of Law 4001/2011 (Government Gazette, Series I, No 179).	MINISTRY OF FINANCE MINISTRY OF FINANCE MINISTRY OF ECONOMY AND DEVELOPMENT MINISTRY OF TRANSPORT AND INFRASTRUCTURE MINISTRY OF THE ENVIRONMENT AND ENERGY	Article 134(2) requires a joint ministerial decision to be issued with regard to trade in electric energy for electric vehicles. Specifically, it states that: 2. Operators of electric vehicle charging infrastructure shall be exempted from the obligation to obtain a permit to supply or trade in electricity. A joint decision of the Ministers for Finance, Development and Competitiveness, Infrastructure, Transport and Networks, and the Environment, Energy and Climate Change, after obtaining the opinion of RAE, shall specify the beneficiaries, the terms and conditions pertaining to the establishment and operation of electric vehicle charging infrastructure operators, the obligations of operators to other consumers, the obligations to disclose information, especially in relation to demand for power and energy on an annual basis, and the relevant cost, how existing operators have adapted to the provisions thereof and all other issues relating to the running and obligations of electric vehicle charging infrastructure operators.

3 Policy measures to support the implementation of the national policy framework

3.1 Introduction - data

Table 3.1: Policy measures

CATEGORY	No.	DENOMINATION	DESCRIPTION	AF FIELD	TYPE	INDICATOR	ALTERNATIVE FUEL	TRANSPORT MODE	APPLICATION LEVEL	Start Year	Stop Year
M1 - Measures to ensure national targets and objectives	M1.1	Joint Ministerial Decision ΥΠΕΝ/ΔΑΠΕΕΚ/95823/3190	Establishment and composition of an Interministerial Committee for implementation of the project 'Promoting electromobility in Greece'.	Combination	Other		Electricity	Road	National	2019	

	M1.2	Joint Ministerial Decision No 77226/1/2017 (Government Gazette, Series II, No 3824)	National policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector and the deployment of the relevant infrastructure.	AFV	Education / Information		Combination	Combination	National	2017	
	M1.3	Law 4211/2013 (Government Gazette, Series I, No 256)	Exemption of electric cars from the luxury tax	AFV	Financial incentives	Charges / fees	Electricity	Road	National	2013	

	M1.4	Law 3986/2011 (Government Gazette, Series I, No 152)	Urgent Measures for the Implementation of the Mid-Term Fiscal Strategy Framework 2012- 2015.	AFV	Financial incentives	Charges / fees	Electricity	Road	National	2011	
	M1.5	Joint Ministerial Decision ΔΜΕΟ 1889/Φ.911/2003 (Government Gazette, Series II, No 1140)	Measures to limit vehicle traffic in the centre of Athens	AFV	Non- financial incentives		Electricity	Road	National	2003	

	M1.6	Law 2960/2001 (Government Gazette, Series I, No 265)	Hellenic Customs Code	AFV	Financial incentives	Charges / fees	Electricity	Road	National	2001	
	M1.7	Law 2459/1997 (Government Gazette, Series I, No 17)	Abolition of tax exemptions and other provisions	AFV	Financial incentives	Charges / fees	Electricity	Road	National	1997	
	M1.8	Law 2052/1992 (Government Gazette, Series I, No 94)	Measures to combat smog, and town planning arrangements	AFV	Financial incentives	Charges / fees	Electricity	Road	National	1992	
	M1.9	NSRF 2014-2020	90 new electric buses, LNG buses and replacement of the buses of the fleet with alternative fuel vehicles.	AFV			Combination	Road	Local	2014	

3.2 Measures to ensure that the national targets and objectives are reached

Measures to ensure that the national targets and objectives are reached			
S/N	Legislative or regulatory provision	Subject matter of provisions	Remarks
	Joint Ministerial Decision ΥΠΕΝ/ΔΑΠΕΕΚ/95823/3190	Establishment and composition of an Interministerial Committee for implementation of the project 'Promoting electromobility in Greece'.	The Committee's task shall be to submit proposals relating to: <ol style="list-style-type: none"> 1. preparation of a national operational plan for the deployment of electromobility in Greece by 30 June 2020; 2. management and coordination of all the actions and measures which relate to promoting electromobility in Greece; 3. revision of the electromobility targets which are included in the national energy and climate plan and in the national policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector; 4. planning of the implementation of a comprehensive programme of incentives to promote the penetration of electric vehicles; 5. recording of the national and European financing instruments in order to include electromobility measures in financing schemes; 6. tracing of the developments of the European framework; 7. spatial planning of the charging infrastructure across Greece; 8. the regulatory framework governing electrical charging stations; 9. highlighting for implementation of any other issues related to electromobility.
	National policy framework for the development of the market as regards alternative fuels infrastructure in the transport sector and the deployment of the relevant infrastructure.	Laying down the detailed implementing measures and the technical specifications required for the development of the market as regards alternative fuels infrastructure in the transport sector.	It relates to all alternative fuels and to the entire transport sector. It was adopted under Joint Ministerial Decision No 77226/1/2017 (Government Gazette, Series II, No 3824).
	Law 4211/2013 (Government Gazette, Series I, No 256)	Exemption of electric cars from the luxury tax.	Amendment of Law 3833/2010.

Measures to ensure that the national targets and objectives are reached

S/N	Legislative or regulatory provision	Subject matter of provisions	Remarks
	<p>Law 3986/2011 (Government Gazette, Series I, No 152)</p>	<p>Urgent Measures for the Implementation of the Mid-Term Fiscal Strategy Framework 2012-2015.</p>	<p>Article 35 as amended by Article 46(2) of Law 4410/2016.</p> <p>Circulation tax:</p> <ul style="list-style-type: none"> -Hybrid private- and public-use passenger cars with engine capacity of up to 1,929 cc, registered in Greece for the first time up to 31 October 2010, are exempt from the circulation tax. -The circulation tax for hybrid private- and public-use passenger cars with an engine capacity over 1,929 cc, registered in Greece for the first time until 31 October 2010, is equal to half of the tax for the corresponding conventional vehicles. -The circulation tax for the above-mentioned vehicles, irrespective of their cylinder capacity, which are first registered in Greece from 1 November 2010 onwards, is determined on the basis of carbon dioxide emissions. -Electric and hydrogen-fuelled passenger motor vehicles for private or public use, registered in Greece for the first time until 31 October 2010, shall be exempt from the circulation tax. The circulation tax for the above-mentioned vehicles, which are first registered in Greece from 1 November 2010 onwards, is determined on the basis of carbon dioxide emissions. -Hybrid private- and public-use two- and three-wheel motorcycles with an engine capacity of up to 1,929 cc, irrespective of the date of first registration in Greece, are exempt from the circulation tax. -The circulation tax for hybrid private- and public-use two- and three-wheel motorcycles with an engine capacity over 1,929 cc, irrespective of the date of first registration in Greece, is half the tax of the corresponding conventional vehicles. -Electric and hydrogen-fuelled two- or three-wheeled passenger motorcycles for private or public use, irrespective of the date of first registration in Greece, shall be exempt from the circulation tax.
	<p>Joint Ministerial Decision ΔΜΕΟ 1889/Φ.911/2003 (Government Gazette, Series II, No 1140)</p>	<p>Measures to limit vehicle traffic in the centre of Athens</p>	<p>Paragraph 2zh: All hybrid cars are exempt from the restrictions on circulation (Ring).</p>

Measures to ensure that the national targets and objectives are reached

S/N	Legislative or regulatory provision	Subject matter of provisions	Remarks
	Law 2960/2001 (Government Gazette, Series I, No 265)	Hellenic Customs Code	Article 121 Registration tax for private-use passenger cars: Article 5 as amended by Article 59(5) of Law 4389/2016: Hybrid cars are exempt from 50% of the registration tax contemplated by this Article. Electric vehicles are not subject to the registration tax laid down by this Article.
	Law 2459/1997 (Government Gazette, Series I, No 17)	Abolition of tax exemptions and other provisions	Chapter I Abolition of tax exemptions and reductions Article 5 Abolition of exemptions from the circulation tax: Exemptions from the circulation tax which, however, do not include the exemption of electric or of hybrid vehicles are abolished. Article 6 Abolition of exemptions from excise duties and from other types of taxes and fees: Exemptions from the special supplementary single-payment registration tax are abolished.
	Law 2052/1992 (Government Gazette, Series I, No 94)	Measures to combat smog, and town planning arrangements	Chapter I Provisions concerning vehicles Article 2 Incentives: Paragraph 9a: Electric or hybrid cars with an engine whose pollutant emissions comply with the existing provisions on anti-pollution technology cars are not subject to an excise duty, a supplementary single-payment tax and a registration tax. Paragraph 9b: A joint decision of the Minister to the Prime Minister and the Ministers for the Environment, for Physical Planning and Public Works, and for Transport and Communications may impose use of the cars of the previous paragraph on entities of the broad public sector or on organisations and undertakings controlled by the State.

4 Infrastructure deployment and support

4.1 Introduction - data

Table 4.1: Development of and support for manufacturing

CATEGORY	No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TRANSPORT MODE	APPLICATION LEVEL
AFI deployment	1	Annual public budget allocated to the deployment of alternative fuels infrastructure	Direct incentives for deployment of alternative fuels infrastructure or for investments in smart grids	AFI	Combination	Combination	Regional
Support of manufacturing plants for AF technologies	1	Annual public budget allocated for the support of alternative fuel fabrication plants	Incentives for the introduction of new technologies (manufacture or purchase)	AF	Combination	Combination	National

5 Research, technological development and demonstration (RTD&D)

5.1 Introduction - data

Table 5.1: Research, technological development and demonstration

No.	DENOMINATION	DESCRIPTION	AF FIELD	ALTERNATIVE FUEL	TRANSPORT MODE	TOTAL ESTIMATED BUDGET [k€]	Start Year	Stop Year
1	POSEIDON MED II	LNG bunkering	AF	LNG (incl. Biomethane)	Water	33,400	2015	2020
2	ELEMED	Shore-side electricity supply in the region of the Eastern Mediterranean through the extensive use of cold ironing and through the introduction of electricity as an alternative solution for propulsion in short-sea connections.	AF	Electricity	Water	860	2015	2018

5.2 ELEMED

The ELEMED project, which relates to shore-side electricity supply to ships, has been developed under the European instrument 'Connecting Europe Facility – CEF', a funding mechanism for trans-European networks in the field of transport. ELEMED is implemented with the involvement of companies from Greece, Cyprus and Slovenia and is part of an international project to implement environmentally-friendly maritime transport in the Adriatic and the Ionian Sea. It aims at the preparation of technical studies and plans concerning infrastructure for the cold ironing (procedure for the supply of electric power to ships that are breasted-up in ports), electricity supply and electrification of ships, analysis of the regulatory framework, a model-based financial analysis and the construction of facilities on a pilot basis to supply electricity to ships at the port of Kyllini.

5.3 POSEIDON MED

The POSEIDON MED project, which has also been developed under CEF Transport and is coordinated by the Public Gas Corporation of Greece (DEPA) relates to adopting LNG as a safe, environmentally-friendly and sustainable alternative fuel in shipping. The project aims at the preparation of all final studies for the creation of a full chain of supply of LNG as fuel for shipping in the Southeast Mediterranean. The project is expected to make Greece an international hub for the bunkering and distribution of LNG in Southeast Europe.

6 Targets and objectives

6.1 Introduction - data

Table 6.1: Targets and objectives for vehicles and other transport modes

Alternative Fuels Vehicles (AFV) estimates							
TRANSPORT MODE	ALTERNATIVE FUELS VEHICLES (AFV)	CURRENT AND PAST NUMBER OF AFV			NUMBER OF AFV EXPECTED TO BE REGISTERED		
		2016	2017	2018	2020	2025	2030
	ELECTRICITY						
Road	Electric Vehicles, EV (total road)	427	506	732	3,500	8,000	15,000
	Powered Two Wheelers (PTW)	261	276	387			
	Electric Vehicles, EV (excl. PTW)	166	230	345			
	Electric Passenger Cars (BEV+PHEV)	159	220	322			
	• BEV	151	207	308			
	• PHEV	8	13	14			
	Electric Light Commercial Vehicles	7	9	21			
	• BEV	7	9	21			
	• PHEV	0	0	0			
	Electric Heavy Commercial Vehicles	0	0	0			
	• BEV	0	0	0			
	• PHEV	0	0	0			
	Electric Buses and Coaches	0	1	2	0	40	90
	• BEV	0	1	2		40	90
	• PHEV	0	0	0			
Water	Inland Waterway Vessels	0	0	0			
	Seagoing Ships	0	0	0			

Air	Aircraft	0	0	0			
Rail	Locomotives	30	30	30			
	CNG (including Biomethane)						
Road	CNG Vehicles (total road)	937	1,096	1,406	2,570	5,050	11,550
	Powered Two Wheelers	0	0	0			
	CNG Vehicles (excl. PTW)	937	1,096	1,406	2,570	5,050	11,550
	CNG Passenger Cars	496	701	920	2,000	4,000	10,000
	CNG Light Commercial Vehicles	25	68	130			
	CNG Heavy Commercial Vehicles	106	101	109	120	250	350
	CNG Buses and Coaches	310	226	247	450	800	1,200
Water	Inland Waterway Vessels	0	0	0			
	Seagoing Ships	0	0	0			
Air	Aircraft	0	0	0			
Rail	Locomotives	0	0	0			
	LNG (including Biomethane)						
Road	LNG Vehicles (total road)	0	0	0	0	250	900
	Powered Two Wheelers	0	0	0	0	0	0
	LNG Passenger Cars	0	0	0	0	0	0
	LNG Light Commercial Vehicles	0	0	0	0	0	0
	LNG Heavy Commercial Vehicles	0	0	0	0	250	900
	LNG Buses and Coaches	0	0	0	0	0	0
Water	LNG Inland Waterway Vessels	0	0	0			
	LNG Seagoing Ships						
Air	Aircraft	0	0	0			
Rail	Locomotives	0	0	0			

		HYDROGEN					
Road	Fuel Cell Vehicles, FCEV (total road)	0	0	0	0	0	0
	Powered Two Wheelers	0	0	0	0		
	Hydrogen Passenger Cars	0	0	0	0		
	Hydrogen Light Commercial Vehicles	0	0	0	0		
	Hydrogen Heavy Commercial Vehicles	0	0	0	0		
	Hydrogen Buses and Coaches	0	0	0	0		
Water	Inland Waterway Vessels	0	0	0			
	Seagoing Ships	0	0	0			
Air	Aircraft	0	0	0			
Rail	Locomotives	0	0	0			
		LPG					
Road	LPG Vehicles (total road)	409	383	355	450	600	750
	Powered Two Wheelers	15	13	12	430		
	LPG Passenger Cars	276	265	248			
	LPG Light Commercial Vehicles	102	90	80			
	LPG Heavy Commercial Vehicles	12	11	11	15		
	LPG Buses and Coaches	4	4	4	5		
Water	Inland Waterway Vessels	0	0	0			
	Seagoing Ships	0	0	0			
Air	Aircraft	0	0	0			
Rail	Locomotives	0	0	0			
		OTHER AF					
Road	Other AF Vehicles (total road)	0	0	0	0	0	0
	Powered Two Wheelers				0		

	Passenger Cars				0		
	Light Commercial Vehicles				0		
	Heavy Commercial Vehicles				0		
	Buses and Coaches				0		
Water	Inland Waterway Vessels						
	Seagoing Ships						
Air	Aircraft						
Rail	Locomotives						

Notes:

According to data from the Athens Urban Transport Organisation (OASA), the fleet of trolleybuses includes 360 anti-pollution technology vehicles. This information is not included in the table above, since it does not fall under the predefined categories.

The table above does not include information on converted bi-fuel motor vehicles, which are estimated to be more than 300,000.

Table 6.2: Targets and objectives for the deployment of alternative fuels infrastructure in the different transport modes

Alternative Fuels Infrastructure (AFI) targets							
TRANSPORT MODE	ALTERNATIVE FUELS INFRASTRUCTURE (AFI)	CURRENT AND PAST NUMBER OF RECHARGING/REFUELLING POINTS			TARGET NUMBER OF RECHARGING/REFUELLING POINTS		
		2016	2017	2018	2020	2025	2030
	ELECTRICITY						
Road	Total recharging points (public* + private)	32	37	46	2,000	12,000	25,000
	Recharging points (publicly accessible)	32	37	46	0	4,000	0
	Normal power recharging points, P ≤ 22 kW (public)	31	36	40			
	High power recharging points, P > 22 kW (public)	1	1	6	0	0	0
	• AC fast charging, 22 kW < P ≤ 43 kW (public)	0	0	2			
	• DC fast charging, P < 100 kW (public)	1	1	4			
	• DC ultrafast charging, P ≥ 100 kW (public)	0	0	0			
	Recharging points (private)	0	0	0	0	8,000	0
	Normal power recharging points, P ≤ 22 kW (private)						
	High power recharging points, P > 22 kW (private)						
	• AC fast charging, 22 kW < P ≤ 43 kW (private)						
	• DC fast charging, P < 100 kW (private)						
	• DC ultrafast charging, P ≥ 100 kW (private)						
	Water	Shore-side electricity supply for seagoing ships in maritime ports	0			7	27
Shore-side electricity supply for inland waterway vessels in inland ports		0					
Air	Electricity supply for stationary airplanes	55	55	55		97	97
	NATURAL GAS (including Biomethane)						
Road	CNG refuelling points (total)	11	11	13	22	35	55
	CNG refuelling points (public)	11	11	13	22	35	55
	CNG refuelling points (private fleet operators)				0	0	0
	LNG refuelling points (total)	0	0	0	1	2	4
	LNG refuelling points (public)	0	0	0	1	2	4
	LNG refuelling points (private fleet operators)						

Water	Maritime Ports - LNG refuelling points	0			2	5	5
	Inland Ports - LNG refuelling points	0					
HYDROGEN							
Road	H2 refuelling points (total)	0	0	0	0	0	0
	H2 refuelling points – 350 bar (total)	0	0	0	0	0	0
	H2 refuelling points – 350 bar (public)	0	0	0			
	H2 refuelling points – 350 bar (private fleet operators)						
	H2 refuelling points – 700 bar (total)	0	0	0	0	0	0
	H2 refuelling points – 700 bar (public)	0	0	0			
	H2 refuelling points – 700 bar (private fleet operators)						
LPG							
Road	LPG refuelling points (total)	634	811	1,050	1,100	1,500	0
	LPG refuelling points (public)	634	811	1,050	1,100	1,500	
	LPG refuelling points (private fleet operators)						
OTHER AF							
All	AF refuelling points (total)	0	0	0	0	0	0
	AF refuelling points (public)	0					
	AF refuelling points (private fleet operators)						

7 Deployment of alternative fuels infrastructure

7.1 Introduction - data

Table 7.1: Deployment of alternative fuels infrastructure

Alternative Fuels Infrastructure (AFI) developments																			
		PAST									FUTURE ESTIMATED								
		2016			2017			2018			2020			2025			2030		
MODE OF TRANSPORT	ALTERNATIVE FUEL	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio	Supply	Demand	Ratio
Road	Electricity	32	427	13.34	37	506	13.68	46	732	15.91	2,000	3,500	1.75	12,000	8,000	0.67	25,000	15,000	0.60
	CNG (incl. Biomethane)	11	937	85.18	11	1,096	99.64	13	1,406	108.15	22	2,570	116.82	35	5,050	144.29	55	11,550	210.00
	LPG	634	409	0.65	811	383	0.47	1,050	355	0.34	1,100	450	0.41	1,500	600	0.40			
	LNG (incl. Biomethane)	0	0		0	0		0	0		1	0		2	250	125.00	4	900	225.00
Water	Electricity	0																	
	CNG (incl. Biomethane)																		
	LNG (incl. Biomethane)																		
Air	Electricity	55	0	0	55	0	0	55	0	0				97		0	97		0
	Select:																		
	Select:																		
Rail	Select:																		
	Select:																		

Select:

References

- [ACE18a] ACEA Tax Guide 2018, European Automobile Manufacturers Association (ACEA) https://www.acea.be/uploads/news_documents/ACEA_Tax_Guide_2018.pdf
- [ACE18b] ACEA Position Paper - The European Commission's Action Plan on Alternative Fuels Infrastructure, European Automobile Manufacturers Association (ACEA) https://www.acea.be/uploads/publications/ACEA_position_paper-Action_plan_Alternative_fuels_infrastructure.pdf
- [ACE18c] Overview of tax incentives for electric vehicles in the EU, European Automobile Manufacturers Association (ACEA), 2018 https://www.acea.be/uploads/publications/EV_incentives_overview_2018_v2.pdf
- [BDO16] VAT deduction on company cars: three calculation methods <https://www.bdo.be/en-gb/news/2016/vat-deduction-on-company-cars-three-calculation-m>
- [BLT18] Bonus Depreciation and How It Affects Business Taxes, The Balance Small Business (website) <https://www.thebalancesmb.com/what-is-bonus-depreciation-398144>
- [EC17a] Communication: Towards the broadest use of alternative fuels – an Action Plan on Alternative Fuels Infrastructure, European Commission, COM(2017) 652. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2017:0652:FIN>
- [EC17b] Staff Working Document – Detailed Assessment of the National Policy Frameworks, European Commission, SWD(2017) 365. <https://publications.europa.eu/en/publication-detail/-/publication/d80ea8e8-c559-11e7-9b01-01aa75ed71a1>
- [EC18a] Statistical Pocketbook 2018 - EU Transport in figures, European Commission, Publications Office of the European Union, 2018, PDF ISBN 978-92-79-73952-1, ISSN 2363-2739, doi:10.2832/05477, Cat. No. MI-AA-17-001-EN-N https://ec.europa.eu/transport/facts-fundings/statistics/pocketbook-2018_en
- [EC18b] Better regulation toolbox - Tool #18 The choice of policy instruments, European Commission https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-18_en_0.pdf
- [EEA18] Appropriate taxes and incentives do affect purchases of new cars, European Environment Agency, Briefing 02/2018, ISBN 978-92-9213-942-1; ISSN 2467-3196; doi:10.2800/468924; Cat. No. TH-AM-18-002-EN-N <https://www.eea.europa.eu/themes/transport/vehicules-taxation/appropriate-taxes-and-incentives-do>
- [EIU09] Methodologies and working papers; ISBN 978-92-79-17082-9; ISSN 1977-0375; doi:10.2785/58454; Cat. No. KS-RA-10-028-EN-N <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-RA-10-028>
- [ETC18] Vehicle Emissions and Impacts of Taxes and Incentives in the Evolution of Past Emissions, European Topic Centre on Air Pollution and Climate Change Mitigation - ETC/ACM 2018/1, April 2018, Report to European Environment Agency, Authors: Richard German, Alison Pridmore, Christofer Ahlgren, Tim Williamson (Aether, UK), Hans Nijland (PBL, NL) https://acm.eionet.europa.eu/reports/docs/EIONET_Rep_ETCACM_2018_1_Vehicle_Taxes.pdf
- [GUL18] Tax benefits, Go Ultra Low campaign UK (website) <https://www.goultralow.com/company-cars-and-fleet-vehicles/tax-benefits/>
- [ICV17] Incentives for Cleaner Vehicles in Urban Europe (I-CVUE) project, Public report, May 2017 <http://icvue.eu/download?file=6>
- [OLE18] Tax benefits for ultra low emission vehicles, Office for Low Emission Vehicles, UK, Version 6.1, May 2018, (website) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/709655/ultra-low-emission-vehicles-tax-benefits.pdf
- [PAR18] Your complete guide to BIK Tax, Parkers (trading name of Bauer Consumer Media Ltd), (website) <https://www.parkers.co.uk/company-cars/what-is-bik/>
- [TRA18] Research for TRAN Committee – Charging infrastructure for electric road vehicles, Spöttle, M., Jörling, K., Schimmel, M., Staats, M., Grizzel L., Jerram, L., Drier, W., Gartner, J., 2018, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/617470/IPOL_STU\(2018\)617470_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/617470/IPOL_STU(2018)617470_EN.pdf)