REPUBLIC OF CYPRUS

MINISTRY OF TRANSPORT, COMMUNICATIONS AND WORKS

MINISTRY OF ENERGY, COMMERCE, INDUSTRY AND TOURISM

NATIONAL POLICY FRAMEWORK FOR THE DEVELOPMENT OF THE MARKET FOR ALTERNATIVE FUELS IN THE TRANSPORT SECTOR AND DEPLOYMENT OF THE RELEVANT INFRASTRUCTURE PURSUANT TO ARTICLE 3 OF DIRECTIVE 2014/94/EU

INTRODUCTION

Directive 2014/94/EU establishes a common framework of measures for the deployment of alternative fuels infrastructure in the Union in the form of recharging and refuelling points in order to minimise dependence on liquid fossil fuels and to mitigate the environmental impact of transport.

Under Article 3 of Directive 2014/94/EU, Member States are required to submit to the European Commission, by 18 November 2016, a national policy framework setting out national objectives and targets, guidelines, supporting actions and policy measures for the development of alternative fuels and deployment of the necessary infrastructure. It should also include an assessment of the current state and future development of the market for alternative fuels in the transport sector and list, among other things, relevant policy decisions and current and future legislation, according to guidelines provided by the European Commission to help Member States draw up their national policy framework.

Table of contents

LIST OF TABLES

Table | Page No

1 ASSESSMENT OF THE CURRENT STATE AS REGARDS ALTERNATIVE FUELS IN THE TRANSPORT SECTOR

A. Development of alternative fuels in the transport sector

Regarding the future development and further penetration of alternative fuels in the transport sector, a study is being carried out by the German organisation Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, entitled 'Technical assistance in order to assess and formulate recommendations for the promotion and penetration of alternative fuels in the transport sector'. The purpose of the study is to present a comprehensive proposal setting out future scenarios for wider use of the various alternative fuels in Cyprus's transport sector and policies and measures to promote such fuels, taking into account the country's specificities. The aim is for Cyprus to meet mandatory energy and climate targets in the area of transport. The preliminary results were presented on 6 April 2017.

In addition, the Swedish KTH Royal Institute of Technology has conducted a study by developing energy modelling software for the purposes of Cyprus's national energy planning. The study aims to set out a roadmap for meeting the renewable energy targets by 2020 and the climate and energy targets by 2030 in the most cost-effective way.

The results of the GIZ study may be fed into the above energy model to enable a review of the energy and climate targets by 2030.

B. Current state

(i) Biofuels

So far the alternative fuels used for transport purposes are mainly biofuels, in particular biodiesel. Suppliers of conventional road transport fuels are required to blend diesel with biodiesel, with biodiesel making up at least 2.4% in terms of energy content. This percentage is set by decree by the Minister for Energy in line with the intermediate targets set by Cyprus to achieve its mandatory targets in the area of transport by 2020 in accordance with Directives 2009/28/EC and 2009/30/EC.

(ii) Electricity

The use of electricity for transport purposes is currently limited. There are 129 electric vehicles (34 cars and 95 motorcycles) registered, and a total of 32 recharging points (16 double points) have been installed to date, as shown in Tables 1.2 and 1.3, respectively.

(iii) Liquefied Petroleum Gas (LPG)

A legislative framework allowing LPG to be used for autopropulsion is in place, vehicles are being converted for such use and more than 20 applications have been submitted for planning permission to install LPG pumps. It is expected that by 2017 it will be possible to use LPG as road transport fuel.

(iv) Natural gas

Natural gas (LNG, CNG) is currently not being used in the transport sector as there is no market for natural gas (NG) in Cyprus due to its geographical isolation, the small size of the market and the lack of interconnections with other gas networks.

The Natural Gas Market Regulation Laws of 2004 to 2012 are aligned with Directive 2009/73/EC concerning common rules for the internal market in natural gas ('the Directive'). The Directive on which the Law is based gives Cyprus the possibility to derogate from some of its articles as it can be considered an isolated or emergent market. These characteristics therefore allow Cyprus to derogate from specific provisions of the Law under both the Law and the Directive.

Following unsuccessful efforts to introduce NG through the 'Interim Solution', the Council of Ministers decided, at a meeting on 22 June 2016, to allow the introduction of natural gas in liquefied form (LNG) as soon as possible. LNG supply will be permanent and will be the exclusive supply option until the internal NG market can be supplied from local reserves. Once it becomes possible to supply the Cypriot NG market from local reserves, it will remain as an alternative option to ensure the security of energy supply.

Under the decision referred to above, Cygas (Cyprus's public natural gas company) has been commissioned and has started to prepare a study analysing the options for sea transport and storage/processing/regasification of LNG in an on-shore or off-shore unit, as well as options for land transport and distribution. The study also includes a schedule for the detailed design of the infrastructure that will initially be required to use liquefied NG for electricity generation as soon as it is introduced and during the initial phase. Based on the results of the study, a new proposal for decisions will be submitted to the Council of Ministers.

1.1 PERCENTAGE USE OF VARIOUS FUELS IN TRANSPORT

Currently the use of fuels for transport purposes can be broken down as follows:

Petrol 57.0%, diesel 41.5%, biodiesel 1.5%.

1.2 NUMBER OF EXISTING ALTERNATIVE FUEL VEHICLES (AFVs)

Table 1.1: Number of AFVs

ALTERNATIVE FUEL VEHICLES	NUMBER OF VEHICLES
	2016
Electric cars	34
Electric light duty vehicles	1
Electric heavy duty vehicles	0
Electric buses	0
Electric motorbikes	95
CNG cars	0
CNG light duty vehicles	0
CNG heavy duty vehicles	0
CNG buses	0
LNG light duty	0
LNG heavy duty	0
LNG buses	0
Hydrogen cars	0
Hydrogen light duty	0
Hydrogen heavy duty	0
Hydrogen buses	0
Other (LPG/petrol cars)	64

1.3 ELECTRICITY

Table 1.2: Number of existing recharging points

ELECTRICITY	Recharging points
	2016
Normal power recharging points (public)	32
High power recharging points (public)	0
Normal power recharging points (private)	0
High power recharging points (private)	0
Shore-side electricity supply in maritime and inland ports (terminals)	0
Electricity supply for stationary airplanes	0

1.4 NATURAL GAS

Table 1.3: Number of existing gas refuelling stations

NATURAL GAS	Natural gas refuelling stations
	2016
CNG refuelling stations (public)	0
CNG refuelling stations (private)	0
LNG refuelling stations for HD vehicles (public)	0
LNG refuelling stations for HD vehicles (private)	0
Sea ports - LNG refuelling points	0
Inland ports - LNG refuelling points	0

1.5 HYDROGEN

Table 1.4: Number of existing hydrogen refuelling stations

HYDROGEN	Hydrogen refuelling stations	
	2016 (350 bar)	2016 (700 bar)
Refuelling stations (public)	0	0
Refuelling stations (private)	0	0

2 NATIONAL OBJECTIVES AND TARGETS

2.1 TARGET PERCENTAGE FOR THE USE OF VARIOUS FUELS IN TRANSPORT

National targets for the penetration of alternative fuels in the transport sector and the percentage share of the various fuels are examined in the studies referred to in paragraph 1A.

2.2 ALTERNATIVE FUEL VEHICLES TARGET

Table 2.1: Target number of AFVs

ALTERNATIVE FUEL VEHICLES	Number of vehicles		
	2020	2025	2030
Electric cars	100 – 2,000*	No assessment has been made at this stage.	

* This information and the decision to include other vehicles powered by other alternative fuels may be reviewed in the light of the results and deliverables of the studies being carried out.

The number of electric vehicles was estimated on the basis of:

(a) data from the 2010-2020 National Renewable Energy Action Plan, which is currently under review (note that the Action Plan does not distinguish between the different categories of electric vehicles);

(b) the official forecast made by the European Commission using the Primes model, which points to some 1 700 electric vehicles by 2020, and the reduced penetration of electric vehicles in Cyprus over the past three years;

(c) the high initial purchase cost of electric vehicles compared to all other types of vehicle.

2.3 ELECTRICITY

Table 2.2: Target number of recharging points

ELECTRICITY	Recharging points		
	2020	2025	2030
Normal power recharging points (public)	80	≥80	≥80
High power recharging points (public)	20	≥20	≥20

2.4 NATURAL GAS

The number of supply points will be determined in the light of the results of the studies referred to in paragraphs 1A, 7 and 8 and based on the measures referred to in paragraph 1B(iv).

2.5 HYDROGEN

A decision has yet to be taken on the use of hydrogen for transport purposes.

3 NECESSARY MEASURES TO ENSURE THE ACHIEVEMENT OF NATIONAL TARGETS AND OBJECTIVES

3.1 LEGISLATION

1. A regulatory framework will be put in place for the deployment of natural gas supply points for transport purposes, by:
   - amending Law 2004/2012 regulating the Natural Gas Market;
   - designating a competent authority responsible for drawing up technical specifications for natural gas infrastructure (storage areas and natural gas supply pump);
   - drawing up rules regulating health and safety matters (technical conditions) concerning safe natural gas management;
   - drawing up rules on the registration of natural gas vehicles;
   - drawing up rules on natural gas vehicle mechanics;

- issuing a decree on Natural Gas Specifications, pursuant to the Specifications of Petroleum Products and Fuels Law of the Ministry of Energy, Commerce, Industry and Tourism.

The time frames, the definition of responsibilities for adopting the measures described above, and any new measures required will be determined at a later stage once an investment decision on the supply of natural gas has been taken. This is because (a) based on the developments linked to the introduction of natural gas, any early arrangements may prove obsolete and problematic, and (b) as there is currently no natural gas, the role of the various stakeholders has yet to be determined.

2. Order 1/2016 on standards for the provision and design of parking areas will be amended in 2017 by the Ministry of the Interior to include the following provisions for all new developments with more than 100 parking spaces (with the exception of residential buildings):

   - mandatory installation of at least one publicly accessible normal power recharging point;
   - mandatory installation of a power supply system covering 5% of the total number of parking spaces provided to enable future installation of recharging points for electric vehicles (or vehicles powered by other forms of renewable energy).

3. By the end of 2018, the Motor Vehicles Inspector, the Ministry of Justice and Public Order and the Ministry of the Interior will, within the scope of their responsibilities, make the regulatory arrangements required to prohibit parking by conventional motor vehicles in electric vehicle recharging areas and to install suitable signage in such areas (signs, road surface marking, etc.).

3.2 POLICY MEASURES AND INVESTMENTS

1. At a later stage and based on the results of the studies referred to in paragraph 1A, the Ministry of Finance may, taking into account the pressure on public finances and:

   - the provisions of the Fiscal Responsibility and Budgetary Framework Law (Law No 20(I)/2014);
   - the provisions of the Medium-Term Budgetary Framework; and
   - the expenditure ceilings included in the budget of each Ministry;

   consider granting incentives for various policy measures and for any investments.

2. In the context of the next regular review of the local plans of large cities, expected to be completed in 2019, it will be considered whether new provisions and policy measures can be included aimed at promoting the use of alternative fuels and the deployment of the necessary infrastructure.

   For example, the following provisions could be introduced and assessed as part of the above procedure, to encourage the use of electric or other clean vehicles in the areas covered by such local plans:

- encouraging local authorities to provide free parking for electric vehicles in city centres and other high-demand areas;
- providing urban development or other incentives for large developments that will provide a substantial number of easily accessible free public parking spaces (and recharging points) for clean vehicles;
- including public recharging points for electric vehicles in the design and implementation of urban development projects or projects carried out by local authorities, etc.

3. To promote the use of electric vehicles in Cyprus, a number of municipalities provide free parking to owners of hybrid and electric vehicles (e.g. Nicosia, Strovolos, Agios Athanasios, and Larnaca in the public car park in Ermou Street).

3.3 COOPERATION WITH NEIGHBOURING MEMBER STATES

Table 3.1: Cross-border measures

	Electricity	CNG	LNG	Hydrogen	LPG	Biofuels	Synthetic and paraffinic fuels
Greece, Italy, Cyprus			The European POSEIDON-MED II programme for liquefied natural gas (LNG bunkering project).				

4 MEASURES TO PROMOTE AND DEVELOP PRIVATE ALTERNATIVE FUEL INFRASTRUCTURE

4.1 LEGISLATION

A. The Ministry of the Interior will consider introducing provisions in the Roads and Buildings Law requiring all parking spaces in new buildings, or buildings undergoing major renovation, with at least two residential units, to be supplied with electrical power of up to 3.7 kW to allow recharging of electric vehicles in the future. This will be done in consultation with the competent building authorities and all interested and relevant parties, and decisions on the action to be taken will be made by the end of 2018.

5 MEASURES TO PROMOTE THE DEPLOYMENT OF ALTERNATIVE FUELS INFRASTRUCTURE IN PUBLIC TRANSPORT

5.1 MEASURES IN THE AREA OF PUBLIC TRANSPORT

Various policy measures, including measures pertaining to public transport, may be examined on the basis of the results of the studies referred to in paragraph 1A.

6 FACILITIES IN URBAN/SUBURBAN AGGLOMERATIONS OR DENSELY POPULATED AREAS AND ALONG INTERURBAN NETWORKS

6.1 URBAN/SUBURBAN AGGLOMERATIONS OR DENSELY POPULATED AREAS

Table 6.1: Planned number of recharging and refuelling points in urban/suburban agglomerations or densely populated areas – 2020

2020	Number of inhabitants	High power recharging points	Normal power recharging points	CNG refuelling stations	LNG refuelling stations	Hydrogen refuelling stations
Municipality of Nicosia	55,000		4			
Municipality of Strovolos	68,000		2			
Municipality of Aglantzia	21,000		2			
Municipality of Engomi	18,000		1			
Municipality of Latsia	17,000		1			

Municipality of Limassol	101,000		2			
Municipality of Agios Athanasios, Limassol	14,000	–	1			
Community of Platres	240		1			
Municipality of Larnaca	51,000		6			
Municipality of Paphos	33,000		2			
Municipality of Polis Chrysochous	2,000		1			
Community of Stroumbi	540	1				
Municipality of Paralimnio	15,000		2			
Community of Kakopetria	1,300	1				
Other						

6.2 CORE TRANS-EUROPEAN TRANSPORT NETWORK (TEN-T)

6.2.1 Recharging points

Table 6.2: Planned number of recharging points along the core Trans-European Transport Network (TEN-T)

		2020			2025			2030		
NAME OF ROAD		Number	Max. distance	Completion rate	Number	Max. distance	Completion rate	Number	Max. distance	Completion rate
Nicosia - Limassol motorway (A1)	High power	3	45							

6.3 EXTENDED TRANS-EUROPEAN TRANSPORT NETWORK (TEN-T)

6.3.1 Recharging points

Table 6.3: Planned number of recharging points in the extended Trans-European Transport Network (TEN-T)

		2020			2025			2030		
NAME OF ROAD		Number	Max. distance	Completion rate	Number	Max. distance	Completion rate	Number	Max. distance	Completion rate
Larnaca – Kofinou motorway (A5)	High power	1	25							
Larnaca – Paralimni motorway (A3), (E327)	High power	1	55							
Limassol – Paphos motorway (A6)	High power	4	35							
Paphos - Polis road (B7)	High power	1	20							
Nicosia – Troodos road (B9)	High power	1	55							

7 LNG REFUELLING POINTS IN MARITIME AND INLAND PORTS IN THE CORE TRANS-EUROPEAN TRANSPORT NETWORK (TEN-T)

The Cyprus Ports Authority participates in the European 'Poseidon Med II' project, which was submitted under CEF-MOS to prepare and conduct a study regarding the siting and future development of LNG bunkering infrastructure in Cypriot ports.

8 ASSESSMENT OF NEEDS FOR LNG REFUELLING POINTS IN MARITIME AND INLAND PORTS OUTSIDE THE CORE TRANS-EUROPEAN TRANSPORT NETWORK (TEN-T)

The relevant decisions to install LNG refuelling points in maritime and inland ports outside the core Trans-European Transport Network (TEN-T) will be made once the study referred to in paragraph 7 above has been completed.

9 SHORE-SIDE ELECTRICITY SUPPLY IN MARITIME AND INLAND PORTS

This matter is currently being assessed by the Cyprus Ports Authority, which participates in the Elemed project involving a study on shore-side electricity supply to vessels calling at Cypriot ports which are part of the core Trans-European Transport Network (TEN-T).

10 POWER SUPPLY AT AIRPORTS FOR STATIONARY AIRCRAFT

The Department of Civil Aviation will examine the possibility of installing power supply for stationary aircraft at Larnaca and Paphos airports towards the end of 2017.

To form its final opinion it will take account of cost-benefit studies and the views of Hermes Airports Ltd., the airport operator, and of the Concessions Coordination Committee.

11 PLANS, MEASURES AND PROGRAMMES FOR OTHER ALTERNATIVE FUELS AND INFRASTRUCTURE

As mentioned in paragraph 1A, a study is currently being conducted by GIZ entitled ‘Technical Assistance in order to assess and formulate recommendations for the promotion and penetration of alternative fuels in the transport sector’.

The results of this study may be fed into the energy model referred to in paragraph 1A to establish the most cost-effective scenario for promoting the use of alternative fuels in the transport sector, initially by 2020 and subsequently by 2030, also taking account of the impact on other sectors such as electricity generation and environmental issues.

The need for new plans, measures and programmes for other alternative fuels and infrastructure will be assessed at a later stage based on the results of the studies.