











Assessment of climate change policies as part of the European Semester

Country Report Cyprus

26 January 2015

A report submitted by ICF Consulting Limited in association with

Ecologic Institute, Berlin and eclareon GmbH to DG Climate Action

ICF Consulting Limited

Watling House 33 Cannon Street London EC4M 5SB T +44 (0)20 3096 4800 F +44 (0)20 3368 6960

www.icfi.com

Document Control

Document Title	Assessment of climate change policies as part of the European Semester: Country Report Germany
Prepared by	Georgios Maroulis, eclareon GmbH
Checked by	Martine Sobey, ICF International
Date	26 January 2015
First point of contact	Lena Ruthner, ICF International Watling House 33 Cannon Street London EC4M 5SB Lena.Ruthner@icfi.com

This final draft report (the "Report") has been prepared by ICF Consulting Ltd ("ICF") and its subcontractors for DG Climate Action (the "Client") and does not necessarily represent the Commission's view. The Report is based on the data which was publicly available at the time of its delivery by ICF and ICF shall not be held liable for any change, update or any other alterations of this data after delivery.

The report is building on the country reports and other documents prepared by Ecologic Institute and eclareon for the Directorate General for Climate Action (DG CLIMA) under Service Contract: 071201/2012/635684/SER/CLIMA.A.3.

This report is the copyright of the Client. The contents of this Report may not be reproduced in whole or in part, nor passed to any other organisation or person without the specific prior written permission of the Client.

ICF and its subcontractors have used reasonable skill and care in checking the accuracy and completeness of information supplied by the Client or third parties in the course of this project under which the Report was produced. ICF is however unable to warrant either the accuracy or completeness of such information supplied by the Client or third parties, nor that it is fit for any purpose. ICF does not accept responsibility for any legal, commercial or other consequences that may arise directly or indirectly as a result of the use by ICF of inaccurate or incomplete information supplied by the Client or third parties in the course of this project or its inclusion in this report.

Contents

Docun	ment Control	ii
1	Short Summary	1
2	Climate and energy policy priorities	
3	GHG trends and projections	
4	Policy development	
4.1	Key policies as outlined in the National Reform Programme	3
4.2	National policy priorities	4
4.2.1	Environmental Taxation	4
4.2.2	Energy Efficiency	
4.2.3	Renewable Energy	5
4.2.4	Transport	6
5	Policy progress against Country Specific Recommendations (CSRs) issued 20)136
Refere	ences	7

1 Short Summary

Cyprus has set an ambitious -5% target by 2020 compared to 2005 in terms of GHG emissions reduction. The achievement of this goal is seen as a major challenge and so an ad hoc committee has been set up to draft a detailed low-carbon economy development roadmap that is still being developed. In addition, as Cyprus is already being affected by the impacts of climate change, a National Adaptation Plan was published in April 2014.

The Cyprus non-ETS target under the Effort Sharing Decision (ESD) is 5% (compared to 2005). Emissions in these sectors were reduced by 20.8% between 2005 and 2013 which exceeds the interim target. According to the latest national projections submitted to the Commission and taking into account existing measures, the 2020 target is expected to be met by a margin of 46.3% points.

The key policy developments in the last year include the issue of a support scheme for PV installations ("Solar Energy for all") along with another support scheme related to the energy upgrading of commercial buildings "Energy Upgrading of Enterprises". Apart from that, the hydrocarbon exploration on the Cyprus EEZ (Exclusive Economic Zone) continues and further developments concerning natural gas infrastructure on the island are discussed.

2 Climate and energy policy priorities

Concerning GHG emissions, these increased by 1.5% in 2012 compared to 2005 levels. In addition, Cyprus has set a -5% target by 2020 as far as GHG reduction is concerned and based on the current projections reaching that goal is considered a major challenge (EEA, 2014a). For that reason, an ad hoc committee has already been set up for the synthesis of a detailed low-carbon economy development roadmap that is still being developed (Republic of Cyprus, 2014).

Nevertheless, it should be noted that Cyprus is one of the countries already affected by the consequences of climate change (Republic of Cyprus Auditing Agency, 2012). This is why Cyprus is equally concerned on climate adaptation. As a result, a National Adaptation Plan was published in April 2014. Its preparation was part of the LIFE+ Project CYPADAPT (1 Sep 2011- 31 Mar 2014), which involved the Department of Environment, Ministry of Agriculture, Natural Resources and Environment of Cyprus, the National Technical University of Athens and the National Observatory of Athens.

In Cyprus electricity generation has been dominated by the use of fossil fuels (approximately 93% of total electricity generation in 2013) (TSO Cyprus, 2014). More specifically, electricity production is based on 3 fossil fuelled power plants, located on the island and Cyprus is completely dependent on imported petroleum products (European Commission, 2014). Nevertheless, renewable energy sources are gradually increasing, with their share in gross final energy consumption in 2012 reaching 7.3% (EEA, 2014a). As far as electricity production is concerned, RES share increased from 5.2% in 2012 to 7.5% in 2013 that is attributed to the connection of new PV installations to the grid (TSO Cyprus, 2014).

The promotion of RES through the introduction of new support schemes along with the continuation of domestic hydrocarbon exploration with the development of new natural gas infrastructure shows the commitment of Cyprus to reduce its energy dependence on fossil fuels imports. However, it should be noted that the primary objective of Cyprus, as a small island without any interconnections so far, is energy security.

3 GHG trends and projections

Cyprus reduced its total GHG emissions by 12% between 2005 and 2013. The share of GHG emissions not covered by the European Emission Trading Scheme (EU ETS) is around 54%, which is below the EU28 average (see Table 1).¹

Table 1 Key data on GHG emissions

		National data			EU28	
		2005	2011	2012	2013	2013
Total GHG emissions	Mt CO₂eq	9.9	9.7	9.3	8.7	4 539
Non-ETS emissions	Share in total emissions	49%	52%	53%	54%	58%

Source: EEA 2014a; EEA 2014c

By 2020, Cyprus needs to reduce its emissions not covered by the EU ETS by 5% compared to 2005, according to the ESD. The latest data for 2013 show that Cyprus not only met but exceeded its annual allocation interim target under the ESD for the year 2013 by 15.4 percentage points (see figures in Table 2). National projections indicate that the country should stay on this course and not only meet but exceed its 2020 target by even wider margins of about 46.3 percentage points with existing measures (WEM) and 48.1 percentage points with additional measures (WAM)(EEA 2014a).

Table 2 Non-ETS emission targets, trend and projections

		Compared to base year
2013	ESD interim target	- 5.4%
	ESD emissions	- 20.8%
2020	ESD target	- 5.0%
	ESD projections WEM	- 51.3%
	ESD projections WAM	- 53.1%

Source: EEA 2014a. Green indicates target met or exceeded.

GHG emissions are mainly created by the energy industries, followed by direct fuel consumption (e.g. households for heat generation) and the transport and the waste sector (see figure below for historic and estimated emissions by sector). Projections indicate that by 2020 emissions from all these sectors will be significantly reduced, compared to 2005, a trend that can already be seen from 2009/10 onwards.

¹ The European Environment Agency has developed a complex methodology to measure progress on the Non-ETS/ESD targets of all EU Member States. This report uses the figures derived on this basis. A detailed explanation and the underlying absolute amounts are contained in Annexes 1-3 of the EEA report No 6/2014 "Trends and projections in Europe 2014. Tracking progress towards Europe's climate and energy targets for 2020" available at http://www.eea.europa.eu/publications/trends-and-projections-in-europe-2014/

5 4 4 Mt CO₂ equivalent 3 3 **Energy supply** 2 **Energy use** Transport 2 Industrial proc. Agriculture Waste Int'l aviation LULUCF 1995 2000 2005 2010 2015

Figure 1 GHG trends and projections by sector

Source: EEA 2014a. Dashed lines indicate the WEM projection, dotted lines the WAM projection.

4 Policy development

This section covers significant developments made in key policy areas between January and December 2014. It does so through two different perspectives: 1) progress on the policies communicated under the National Reform Programme 2) developments in the identified national priority sectors and policy areas.

4.1 Key policies as outlined in the National Reform Programme

Member States prepare National Reform Programmes (NRPs) each April outlining the country's progress and the key policies and measures to achieve targets under the EU 2020 Strategy.

Table 3 Key policies and measures as outlined by the NRP 2014

Introduction of the 3rd National Energy Efficiency Action Plan (3rd NEEAP)		
Status in the NRP	3rd National Energy Efficiency Action Plan (3rd NEEAP) was submitted to the European Commission in April 2014	
Status as per Dec 2014	In force	
Description of policy	The 3 rd National Energy Efficiency Action Plan includes energy efficiency related policies and measures through which the 2020 primary Energy Efficient Target will be achieved The Action Plan includes a detailed assessment of the effectiveness of the existing policies and has been carried out along with the potential of those policies to induce further energy savings.	

Hydrocarbon exploration		
Status in the NRP	Several licenses were issued for a number of "Blocks". The first licence was issued for "Block 12" in 2008 and after the second licensing round in 2012, hydrocarbon exploration was authorised in "Blocks 2,3,9,10,11" in 2013. For "Block 12" the "Appraisal Well" operations are expected to be completed in 2015. In addition, the decision for the construction of an onshore LNG plant has been taken. Finally, the Cyprus Natural Gas Company (DEFA) plans to develop an internal pipeline network for the transmission of natural gas to the island's main power stations.	
Status as per Dec 2014	Ongoing	
Description of policy	See Chapter 4.2.2	

Support for RES		
Status in the NRP	The Cyprus Energy Regulating Authority (CERA) announced in 2013 two innovative support schemes for PV. The first one foresaw the installation of 5,000 small PV installations up to 3kW. The scheme included the provision that 2,000 will be provided to social vulnerable consumers i.e. social assistance recipients, families with low income that were entitled to request an additional support of 900 EUR/kW. The installed PV will operate under a net metering scheme. The second support scheme foresaw the installation of PVs for self-generation from companies (max. cumulative capacity 10MW).	
Status as per Dec 2014	Updated and ongoing	
Description of policy	See Chapter 4.2.3	

4.2 National policy priorities

The below sub-sections provide updates on key existing and new policies in priority sectors and policy areas of relevance to the energy and climate targets under the Europe 2020 strategy². Each sector or policy area contains information on the most important policy instruments in operation or development.

4.2.1 Environmental Taxation

In Cyprus, the implicit tax rate on energy lies below the EU average with EUR 141 per ton of oil equivalent in 2012 (Eurostat, tsdcc360). The share of environmental tax revenues in overall tax revenue was 7.6% in 2012 and therefore above the EU average of 6.1% (Eurostat, ten00064). The same holds true for a comparison of environmental tax revenues with GDP, which amounts to 2.7% in 2012 compared to the EU average of 2.4% in 2012 (Eurostat, ten00065).

4.2.2 Energy Efficiency

The energy intensity of Cyprus's economy is slightly above the EU average and declined by 11% between 2005 and 2012 (Eurostat, tsdec360). At the same time, the country's final energy consumption decreased by 4% over the same time period. This is especially due to an 8% drop of energy consumption between 2011 and 2012 mainly caused by decreases in the industry and transport sectors (Eurostat, tsdpc320), due to the declining economic activity. As Cyprus has a positive energy efficiency target, it is currently on track to meet it (EEA 2014a).

² The Consortium jointly with DG Clima identified these based on identified challenges in Country Profiles (EEA, 2014), share of sectors in total GHG emissions, and Country Specific Recommendations (2014). DG Clima has identified additional relevant issues to be reviewed for some or all Member States, including country specific energy challenges.

As far as hydrocarbon exploration is concerned, the Republic of Cyprus signed a Memorandum of Understanding (MoU) with the Italian/ Korean consortium of JV Eni and Kogas on 30 Jul 2014 concerning the exploitation of the potential gas reserves in the Cyprus Exclusive Economic Zone (EEZ), having priority to the future LNG Terminal at the port of Vassilikos (MECIT, 2014b). Six potential deposits have been identified. The drilling of the first potential deposits has already been approved, while the others will be shortly approved.

Concerning the prospecting construction of natural gas infrastructure in Cyprus, i.e. the construction of the LNG facility in Vassilikos, the Minister of Energy, Commerce, Industry and Tourism, Mr. Georgios Lakkotrypis stressed the importance of project realisation but at the same time the challenges related to the LNG Terminal were identified. More specifically, the project has currently a negative net present value and cannot be profitable. Consequently its viability as an investment depends on the discovery of new natural gas deposits in the Cyprus Exclusive Economic Zone. Nevertheless, there is a preliminary agreement between the related stakeholders as far as the spatial Master Plan of the Vassilikos area is concerned and it remains to be seen if the investment can be realised (MECIT, 2014c). The introduction of natural gas in Cyprus consists one of the main priorities as its introduction is expected to create cumulative emission reductions of 887 kt CO₂ in 2020.

In addition, the Ministry of Energy, Commerce, Industry and Tourism has announced in December 2014 the Support scheme "Energy Upgrading of Enterprises". This economic policy is part of the sectoral operational programme "Competiveness and Sustainable Development" for the Programmatic Period 2014-2020 (MECIT, 2014d). SMEs that exercise economic activity in Cyprus are eligible for support. The support scheme supports the energy upgrading of the buildings where the respective SMEs are located. More specifically, the supported interventions can upgrade the building to NZEB (Nearly Zero Energy Emissions Building) or alternatively to reduce its final energy consumption by a minimum of 40%. Public expenditure for each submission varies between 50% and 75%, depending on the type of investment, while the maximum support cannot exceed 200,000 EUR (MECIT, 2014d). The scheme supports a number of measures such as Energy Efficiency Certificates, the purchase and installations of equipment which will facilitate the energy upgrading of the building. Support for the installation of RES such as solar thermal, biomass as well as heat pumps (MECIT, 2014d) are also foreseen.

Total public expenditure for the support scheme amounts to 15.3 million EUR, while for this first call (two others are expected to follow) 6 million EUR will be distributed (MECIT, 2014d).

The issue of the call was also preceded by a study on the definition of NZEB in Cyprus that was included in the 3rd NEEAP of Cyprus (MECIT, 2014a).

4.2.3 Renewable Energy

The share of renewables in gross final energy consumption was 6.8% in 2012, which is above the indicative 2012 target of 4.9% set out by the Renewable Energy Directive (RED). The average annual growth rate was 12.3% between 2005 and 2012. Despite this progress an annual growth rate of 13.1% is still needed between 2013 and 2020 to reach the 2020 target of 13% due to the projected increase in energy consumption by 2020 (EEA 2014a). The share of renewable electricity generation, mainly PV and wind in final electricity consumption increased from around zero to 4.9% between 2005 and 2012, and the share of renewable heating more than doubled from 10.0% to 21.2% (Eurostat, SHARES 2014).

Concerning the support for RES, the Ministry of Energy, Commerce, Industry and Tourism launched on 14 Jun 2014 the "Solar Energy for All" Scheme. The Scheme substitutes the existing support schemes for RES and Energy Efficiency of for the period 2009-2013 and focuses only on PV installations.

"Solar Energy for All" supporting supports 4 categories: Firstly, support for the purchase and installation of roof-mounted PV installations that will operate under a net metering scheme up to 3kW. Main beneficiaries are individuals with low income and social assistance recipients. Secondly, installation of roof-mounted PV on households that will operate under a net metering scheme (no subsidy is foreseen). Thirdly, installation of roof-mounted PV on local administration public buildings

and finally installation of PV for the autonomous production of industrial/ commercial units (MECIT, 2014e).

Furthermore, there seems to be acceleration as far as the realisation of big renewable energy investments is concerned. In Apr 2014, the creation of two new solar thermal parks has been approved with the total budget amounting to 221 million EUR. The realisation of both projects is expected to create approximately 150 to 170 permanent jobs and along with the development of the smart grid infrastructure 30 to 40 jobs will be further created (SigmaLive, 2014).

The main barrier for the further development of RES in Cyprus is mainly the reliability of the RES support schemes. There is a general framework concerning the RES-E support. Based on that, support schemes are issued annually by the Ministry of Energy, Industry, Commerce and Tourism and more specifically the Administrative Committee of the Special Fund for RES and Energy Efficiency. As those support schemes are issued annually and are published not at the beginning but in the middle of the year, the whole process of designing new support schemes, based on the yearly budget creates uncertainties and unnecessary delays in the realization of prospective investments (Keep on Track, 2014). Apart from that there are issues related to the lack of finance as well as structural problems related to the administrative burden and the unnecessary bureaucracy for the licencing of RES in Cyprus (Keep on Track, 2014).

As far as renewable heating and cooling is concerned, Cyprus reached 17.7% (81.25ktoe) in 2010 and this is mainly attributed to the solar thermal sector as it accounts for 75% of RES-H share (61ktoe) (Keep on Track, 2014). There are prospects concerning the use of renewable heating and cooling and the Support scheme "Energy Upgrading of Enterprise" can be seen as one characteristic example.

4.2.4 Transport

GHG emissions as well as energy consumption from transport increased steadily between 1990 and 2012 and only showed a slight downward trend in 2011. In 2012, the proportion of transport emissions among Cyprus' total emissions amounted to 21% (Eurostat, tsdcc210 and tsdpc320). Average emissions for newly registered cars are very high in Cyprus with a level of 139.2 g CO_2 /km. The level is the sixth highest in the EU and has decreased by 20% between 2005 and 2013, at a rate lower than the EU average of 22% (Eurostat, tsdtr450). Road fuel excise duties are below EU average, especially concerning petrol. The duties on petrol are the eighth lowest among EU MSs (EEA 2014b).

Cyprus levies a registration tax and an annual circulation tax that are both based on CO₂ emissions (ACEA 2014). No road use charge applies (CE Delft 2012).

There were no crucial policy developments on that sector in 2014.

Policy progress against Country Specific Recommendations (CSRs) issued 2013

The EU Commission provides Country Specific Recommendations (CSRs) for each MS for consideration and endorsement by the European Council. The recommendations are designed to address the major challenges in relation to the targets of the EU 2020 Strategy. For Cyprus no CSRs have been issued in the climate and energy area.

References

- ACEA (European Automobile Manufacturer's Association),2014. Taxation Guide. Online available at: http://www.acea.be/uploads/publications/CO 2 Tax overview 2014.pdf
- CE Delft, 2012. An inventory of measures for internalizing external costs in transport. Final Report. November 2012. Online available at: www.cedelft.eu/publicatie/an_inventory_of_measures_for_internalising_external_costs_in_transport/1334
- EEA, 2014a. Climate and energy profiles 2014. Online available at: http://www.eea.europa.eu/themes/climate/ghg-country-profiles
- EEA, 2014b. Road fuel excise duties. Online available at: http://www.eea.europa.eu/data-and-maps/daviz/road-fuel-excise-duties#tab-chart_1
- EEA, 2014c. Approximated EU GHG inventory: Proxy GHG emission estimates for 2013. EEA Technical report No 16/2014. 30 September 2014.
- European Commission, 2014. Member State's Energy Dependence: An Indicator-Based Assessment. Occasional Paper 196, June 2014. Online available at:

 http://ec.europa.eu/economy_finance/publications/occasional_paper/2014/pdf/ocp196_en.pdf

 [Accessed 12 January 2015]

Eurostat, SHARES 2014, Short Assessment of Renewable Energy Sources

Eurostat, ten00065: Total environmental tax revenues as a share of GDP

Eurostat, tsdcc210: Greenhouse gas emissions by sector

Eurostat, tsdcc360: Implicit tax rate on energy

Eurostat, tsdec360: Energy intensity of the economy

Eurostat, tsdpc320: Final energy consumption by sector

Eurostat, tsdtr450: Average carbon dioxide emissions per km from new passenger cars

Keep on Track, 2014. Analysis of Deviations and Barriers 2013/2014. Online available at: http://www.keepontrack.eu/contents/publicationsanalysisdeviationsbarriers/kot_deviations-and-barriers-report-2014.pdf [Accessed 12 January 2015]

- MECIT Ministry of Energy, Commerce, Industry and Tourism, 2014a. 3rd National Energy Efficiency Programme. Nicosia, April 2014. Online available at:

 http://ec.europa.eu/energy/efficiency/eed/doc/neep/2014_neeap_en_cyprus.pdf [Accessed 12 January 2015]
- MECIT Ministry of Energy, Commerce, Industry and Tourism, 2014b. The Republic of Cyprus and JV Eni/KOGAS sign MoU for cooperation in potential gas resources valorization Press release Wednesday, 30 July 2014. Online available at: http://www.mcit.gov.cy/mcit/mcit.nsf/All/9ED85CFB808E9994C2257D26002317E9?OpenDocument [Accessed 12 January 2015]
- MECIT Ministry of Energy, Commerce, Industry and Tourism, 2014c. Statement of Energy Minister for hydrocarbon issues, on 07 Jul 2014- Υπουργείο Ενέργειας, Εμπορίου, Βιομηχανίας και Τουρισμού, 2014c. Δηλώσεις Υπουργού Ενέργειας για θέματα υδρογονανθράκων, 7.7.2014. Online available at: http://www.mcit.gov.cy/mcit/mcit.nsf/All/17E46E8D152CC4BFC2257D0E0037768D?OpenDocume nt [Accessed 12 January 2015]
- MECIT Ministry of Energy, Commerce, Industry and Tourism, 2014d. Operational Programme "Competiveness and Sustainable Development" for the Programmatic Period 2014-2020- Support scheme- Υπουργείο Ενέργειας, Εμπορίου, Βιομηχανίας και Τουρισμού, 2014d. "Energy Upgrading of Enterprise"- Επιχειρησιακό Πρόγραμμα «Ανταγωνιστικότητα και Αειφόρος Ανάπτυξη» για την

Προγραματική Περίοδο 2014-2020 «Εξοικονομώ Αναβαθμίζω τις Επιχειρήσεις».Online available at: http://www.cie.org.cy/menuGr/pdf/sxedia-xorigiwn/Sxedio_Epixeirisewn_2014-2020.pdf [Accessed 12 January 2015]

MECIT - Ministry of Energy, Commerce, Industry and Tourism, 2014e. "Solar Energy for All Scheme"-Υπουργείο Ενέργειας, Εμπορίου, Βιομηχανίας και Τουρισμού, 2014e. «Ηλιακή Ενέργεια για Όλους». Online available at:

http://www.mcit.gov.cy/mcit/mcit.nsf/All/294D516BA95427C4C2257CF6003C4F62/\$file/%CE%A3 %CF%87%CE%AD%CE%B4%CE%B9%CE%BF%20%CE%97%CE%BB%CE%B9%CE%B1%C E%BA%CE%AE%20%CE%95%CE%BD%CE%AD%CF%81%CE%B3%CE%B5%CE%B9%CE% B1%20%CE%B3%CE%B9%CE%B1%20%CE%8C%CE%BB%CE%BF%CF%85%CF%82%2020 14 13062014.pdf [Accessed 12 January 2015]

Republic of Cyprus Auditing Agency, 2012. Climate Change Adaptation. Confronting the challenges of tomorrow - Ελεγκτική Υπηρεσία της Δημοκρατίας, 2012. Προσαρμογή στις κλιματικές αλλαγές. Αντιμετωπίζοντας σήμερα τις προκλήσεις του μέλλοντος.- Online available at: <a href="http://www.audit.gov.cy/audit/audit.nsf/All/EDB9574F70426BA0C2257A1E0038E044/\$file/%CE%A0%CF%81%CE%BF%CF%83%CE%B1%CF%81%CE%BC%CE%BF%CE%B3%CE%AE%20%CF%83%CF%84%CE%B9%CF%82%20%CE%BA%CE%BB%CE%B9%CE%BC%CE%B1%CF%84%CE%B9%CE%BA%CE%BD%CE%BB%CE%BB%CE%BB%CE%B1%CE%B3%CE%B1%CE%B3%CE%B1%CE%BB%CE%B1%CE%B3%CE%B1%CE%BB%CE%B1%CE%B1%CE%B3%CE%B1%CE

- TSO Cyprus, 2014.Penetration of RES into the Cyprus Electrical System. Online available at: http://www.dsm.org.cy/media/attachments/RES/ENGLISH_VERSION_2012-2013.pdf [Accessed 12 January 2015]
- SigmaLive, 2014. Energy projects with a budget of 221 million EUR in Cyprus- Ενεργειακά project 221 εκ. ευρώ στην Κύπρο. Online available at: http://www.sigmalive.com/inbusiness/news/financials/116506 # sthash.erV0mMva.dpuf [Accessed 21 January 2015]