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Assessment of climate change policies in the context of the European Semester

Country Report: Cyprus



ideas into energy.

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The report provides an overview of current emission trends and progress towards targets as well as policy developments that took place over the period May 2012 to January 2013.

The content of the report represents the state of knowledge in February 2013, specific updates were made adding the latest official greenhouse gas emission data by the European Environment Agency (EEA).

Please feel free to provide any comments or suggestions to the authors through the contacts listed above.

Short summary

- Background: The government has acknowledged the necessity of climate change
 policies; however, the current discussion is dominated by the future exploitation of
 natural gas and the balance of power in a politically fragile region.
- **GHG target:** Non-ETS emissions in 2011 were below of the 2013 target and according to the latest national projections Cyprus is expected to overachieve its 2020 target.
- Policy development: There are new developments in the field of climate policies, mainly related to new or updated support mechanisms for the promotion of renewable energy technologies and energy efficiency, but also for GHG emission reductions in transport.

I Background on climate and energy policies

Cyprus is one of the countries already affected by the consequences of climate change. The annual mean temperature during the period 1980-2010 was 18.2 °C and was 1.4 °C higher than that of the previous period 1960-1990 (17.2 °C), and in 2010 it reached 20.6 °C. Changes were also observed in the mean annual rainfall (8% reduction during the same period) (Ελεγκτική Υπηρεσία της Δημοκρατίας 2012). In addition, it is also estimated that in the next 30 years a gradual temperature increase between 1-3 °C is expected, and it could reach 3.5-7 °C at the end of the century (IPCC 2007; The Cyprus Institute 2011). Based on this, Cyprus is trying to focus its attention on climate change policies. There are certain studies that focus on climate change mitigation and adaptation, and certain climate change related policies have been adopted and established, but how efficiently these policies have been implemented remains to be seen. The situation is surely aggravated by the current financial crisis the country is facing.

In Cyprus, the implementing authority for energy policy is the Ministry of Commerce, Industry and Tourism. Its priorities are the liberalisation of the electricity market and the oil sector, the establishment and operation of a strategic oil stock terminal, the promotion of renewable energy sources (RES) and energy efficiency, and the promotion of oil products as well as of environment-friendly sources of energy (MCIT 2012). The policy discussion is currently overshadowed by the natural gas reserves that were found in Cyprus and their future exploitation.

In the midst of the financial crisis, the subject of green growth has been undermined. As was mentioned earlier, the current discussion is dominated by the future exploitation of natural gas and the balance of power in a very politically fragile region. Although the government has acknowledged the necessity of climate change policies as well as environmentally friendly energy policies, policy implementation in these areas is relatively slow (Republic of Cyprus 2012).

2 GHG targets, status quo and the latest developments

Background information:

In 2011, Cyprus emitted 9.2 Mt CO_2 eq (UNFCCC inventory 2011), 50% more than in 1990. More than 40% of total emissions stem from energy supply. Emissions from that sector more than doubled between 1990 and 2010. Emissions from transport, which currently account for around 25% of total emissions, grew by more than 90% during that period. Emissions from agriculture, industrial processes and emissions from energy use remained stable.

Progress on GHG targets

There are two sets of targets to evaluate: 1) the Kyoto Protocol targets for the period 2008-12 (which has just ended) and 2) the 2020 targets for emissions not covered by the EU ETS.

As Cyprus has no target under the Kyoto Protocol for the period 2008-12. An evaluation of the latest complete set of greenhouse gas data (for the year 2011) shows that Cyprus's emissions have increased by 50% since 1990 (UNFCCC inventory 2011).

By 2020, Cyprus needs to decrease its emissions not covered by the EU ETS by 5% compared to 2005 according to the Effort Sharing Decision (ESD) (¹). The latest data (for the year 2011) suggests that Cyprus is on track at present. Emissions were significantly below the Annual Emissions Allocation (COM 2013) for the year 2013. National projections show that Cyprus is expected overachieve its target significantly in scenarios with both existing and even more so with additional measures (²) (EEA 2013b).

Figure 1 shows non-ETS emissions until 2011, targets under the ESD for the period 2013-2020 and projections with existing measures for 2020.

Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.

² Calculations are based on domestic emissions only, without accounting for possible use of flexibility options. The 2020 targets and 2005 non-ETS emissions are all consistent with 2013-2020 ETS scope, i.e. they take into account the extension of the ETS scope in 2013 and the unilateral inclusion of installation in 2008-2012.

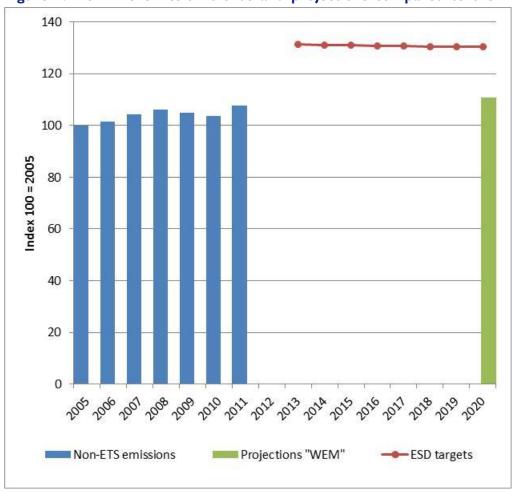


Figure I: Non-ETS emission trends and projections compared to the ESD targets

Source: EEA. Projections are based on 15/04/2013 draft GHG inventory submissions under the UNFCCC and MS projections submitted

Table I: GHG emission developments, ESD-targets and projections (in Mt CO2eq)

| | | | | | ESD target* | | 2020 Projections** | |
|----------------------|------|------|------|------|-------------|------|--------------------|------|
| | 1990 | 2005 | 2010 | 2011 | 2013 | 2020 | WEM | WAM |
| Total | 6.1 | 9.3 | 9.4 | 9.2 | | | | |
| Non-ETS emissions | | 4.2 | 4.4 | 4.6 | 5.6 | 5.5 | 4.7 | 3.2 |
| (% from 2005) | | | | 8% | 31% | -5% | -19% | -45% |
| Energy supply | 1.8 | 3.5 | 3.9 | 3.7 | | | | |
| (% share of total) | 29% | 37% | 41% | 41% | | | | |
| Energy use (w/o | | | | | | | | |
| transport) | 1.3 | 1.5 | 1.2 | 1.1 | | | | |
| (% share of total) | 21% | 16% | 13% | 13% | | | | |
| Transport | 1.2 | 2.0 | 2.3 | 2.2 | | | | |
| (% share of total) | 19% | 22% | 24% | 25% | | | | |
| Industrial processes | 0.7 | 0.9 | 0.6 | 0.7 | | | | |
| (% share of total) | 12% | 10% | 7% | 8% | | | | |
| Agriculture | 0.7 | 0.7 | 0.7 | 0.7 | | | | |
| (% share of total) | 11% | 8% | 8% | 8% | | | | |

Source: UNFCCC inventories 2011; EEA (2012c, 2013b), COM (2013), Calculations provided by the EEA and own calculations.

^{*} The ESD target for 2013 and for 2020 refer to different scopes of the ETS: The 2013 target is compared with 2011 data and is therefore consistent with the scope of the ETS from 2008-2012; the 2020 target is compared to 2020 projections and is therefore consistent with the

scope of the ETS from 2013-2020. Non-ETS emissions in the year 2005 for the scope of the ETS from 2013-2020 amounted to 5.8 Mt CO_2 eq. ** 2011 projections with existing measures (WEM) or with additional measures (WAM).

Legend for colour coding: green = target is being (over)achieved); orange = not on track to meet the target

Total greenhouse gas emissions (GHG) and shares of GHG do not include emissions and removals from LULUCF (carbon sinks) and emissions from international aviation and international maritime transport.

National projections of GHG emissions up to 2020, summarised by the EEA, need to be prepared by the Member States in accordance with the EU Monitoring Mechanism (³) every two years, and the latest submission was in 2013. However, Cyprus has not handed in new projections so far since 2011.

Projections need to be prepared reflecting a scenario that estimates emissions reductions in line with policies and measures that have already been implemented (with existing measures, WEM), and an additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM) may also be submitted.

In the following two tables, these measures - as outlined by the Member States as basis for their projections as of April 2011 - have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most (4). An update on the status of the policies and measures is included in order to assess the validity of the scenarios. Below the tables you will find a summary assessment.

Table 2: Existing and additional measures as stated in the 2011 GHG projections

| | leasures (only important national w/o EU legislation) | Status of policy in January 2013 | |
|----------------------|--|--|--|
| | Law No. 33(I)/2003 on the promotion and encouragement of the use of renewable energy sources and Energy Conservation | An amendment of the Law was open for public consultation until September 2012. No further information is available on the current progress. | |
| Energy | Implementation of grant scheme for installations producing biofuels | Support scheme for the promotion of RES and Energy Conservation 2012: Support of the production of biofuels for transport carried out by private and public entities that exercise economic activity. The Scheme can finance up to 35% of the project budget (max. €200,000) | |
| | Promotion of biomass and alternative fuels in industry | Similar to the "Implementation of grant scheme for installations producing biofuels" but for biofuels used in industry | |
| Energy Efficiency | Law No. 31/2009 on energy end-use efficiency and energy services (incl. promotion of efficient light bulbs, grant scheme for energy conservation | Apart from the the Law, no further development has been observed | |
| | Law No. 142(I)/2006 regulating energy efficiency of buildings and amending Law No. 30(I)/2009 | L201(I) 2012 amended the existing framework (L142(I) 2006 and L30(I) 2009) relating to the energy performance of buildings | |

Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

⁴ The implementation of the EU-ETS has not been included. Other EU Directives have only been considered if they have been outlined in the projections as one of the main instruments to reduce GHG emissions.

| _ | | |
|-----------------------------|---|--|
| | Tax exemption for biofuels | Revoked since 2011 |
| Transport | Decrees 63/2008 and 16/2009 on the content of biofuels in transport conventional fuels | Apart from the amendment of L 66(I)/2005 in 2009 (Deployment of Biofuels or other alternative fuels for transport), which defined the content of biofuels, no further information is available |
| | Grant scheme for the promotion of alternative technologies (hybrid and electric vehicles) and low emission vehicles | Support Scheme for the promotion of the utilization of RES and Energy Conservation 2009: Financial support for the purchase of hybrid and electric vehicles by private and public entities. As the specific measure is no longer in force, modern vehicles with low emissions benefit only from the linking of the excise vehicle tax with the vehicle's CO ₂ emissions |
| | Grant scheme for the promotion of replacement of vehicles (withdrawal of old vehicles) | The fifth scheme since 2008 was prepared in September by the Ministry of Transport but the Ministry of Finance did not consent |
| Other non-ETS sectors | Methane recovery from existing and new waste management sites | Support Scheme for Electricity Generation from Wind Energy, Solar Energy and Biomass 2013 supported the production of biogas from landfills through a premium tariff (up to €0.1145/kWh) |

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011.

| | Measures (only important national ; w/o EU legislation) | Status of policy in January 2013 | | |
|-----------------------------|--|---|--|--|
| | Development and implementation of mobility master plans and land use transportation studies | Since 2010, when a integrated mobility master plan for Nicosia was developed, no further development can be observed | | |
| | Development of infrastructure for public transport (bus lanes, bus priority lanes, new bus stops and stations) | Beyond the Public Transport Programme of 2010, no further development has been observed | | |
| Transport | Development and implementation of "park-and-ride" systems | No development has been observed | | |
| | Study for the development of a tram system | Ministry of Transport and Public Works are issuing a call for the preparation of a feasibility study of a tram system in Nicosia. The study is expected to cost approximately €300,000 and will be co-financed by EU Structural Funds | | |
| Other non-ETS sectors | Promotion of anaerobic digestion for the treatment of sewage sludge | Apart from the end-use production of that process, namely biogas, which is supported by the relevant Support Scheme, no further development has been observed | | |
| | Promotion of anaerobic digestion for livestock breeding waste treatment | Apart from the end-use production of that process, namely biogas, which is supported by the relevant Support Scheme, no further development has been observed | | |

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011.

Most of the policies in the "with existing measures" (WEM) scenario as specified in the national GHG emission projections of April 2011 are implemented. Some of them, such as the Law on the promotion and encouragement of the use of renewable energy sources and Energy Conservation and Law regulating energy efficiency of buildings are going to be amended and as such are in a revision process. The Support Scheme for the promotion of the utilization of RES and Energy Conservation is being continued. However, biofuels are not exempt from tax anymore, and the grant scheme for vehicle replacement (withdrawal of old vehicles) has not been implemented. Some progress can be seen regarding additional measures; however, none of the measures has been implemented so far.

Due to the fact that the main instruments are in place or are undergoing amendments promoting GHG reductions, Cyprus is expected to achieve its reduction target as stated in the national projections.

3 Evaluation of National Reform Programme 2012 (NRP)

In April of each year, Member States are required to prepare their National Reform Programmes (NRPs), which outline the country's progress regarding the targets of the EU 2020 Strategy. The NRPs describe the country's national targets under the Strategy and contain a description of how the country intends to meet these targets. For climate change and energy, three headline targets exist: 1) the reduction of GHG emissions, 2) the increase of renewable energy generation, and 3) an increase in energy efficiency (⁵).

In the following table, the main policies and measures as outlined in the NRP of April 2012 (⁶) have been summarised, and their current status (implemented, amended, abolished, or expired) is given, with specifics on latest developments.

Table 3: Main policies and measures as outlined in the NRP, April 2012

| Implementation of the 3rd internal market energy package (transpose the provisions of the two Directives (2009/73/EC and 2009/72/EC) to the national law) | | | |
|---|---|--|--|
| Status as stated in the NRP | In the final stage of consultation | | |
| Status as per Jan 2013 | Not yet implemented | | |
| Description of policy or measure | Transposition of the Directives 2009/73/EC and 2009/72/EC in national legislation | | |

⁶ All NRPs are available at: http://ec.europa.eu/europe2020/documents/related-document-type/index_en.htm

⁵ There are specific targets for all MS by 2020 for non-ETS GHG emission reductions (see section 2) as well as for the renewable energy share in the energy mix by 2020 (see section 4, renewable energies). Specific energy efficiency targets will be defined (or revised) by the MS until the end of April 2013 in line with the methodology laid out in Article 3 (3) of the Energy Efficiency Directive (Directive 2012/27/EU).

| Introduction of natural gas and the combined cycle technology in power generation | | | | |
|---|---|--|--|--|
| Status as stated in the NRP | at the final stage of consultation | | | |
| Status as per Jan 2013 | Delayed but still planned | | | |
| Description of policy or measure | Introduction of natural gas in power generation so as to be prepared to use the newly found reserves of natural gas in the area in the future | | | |

| Transposition of the recast of EPBD (Directive 2010/31/EC) in the national legislation | | | |
|--|--|--|--|
| Status as stated in the NRP | 9th July 2012 | | |
| Status as per Jan 2013 | Adopted | | |
| Description of policy of measure | r All buildings should be ZEBs (zero balance buildings) by 2019 (in the public sector) and by 2020 (for the rest). | | |

| Implementation of stringent minimum requirements for buildings | | | |
|--|--|--|--|
| Status as stated in the NRP | Expected by 2013 | | |
| Status as per Jan 2013 | Planned | | |
| Description of policy or measure | More regulations regarding specific energy performance standards are being considered. | | |

| Implementation of the 2nd National Energy Efficiency Action Plan (NEEAP) | | | |
|--|--|--|--|
| Status as stated in the NRP | To be implemented | | |
| Status as per Jan 2013 | Implemented | | |
| Description of policy or measure | Measures such as the Green Public Procurement Programme, the Public Transport Programme and the Support Schemes for RES and Energy Efficiency are included in the measures on NEEAP. | | |

| Additional measures for the promotion of CHP in the context of the 2nd NEEAP | | | | |
|--|--|--|--|--|
| Status as stated in the NRP | Planned | | | |
| Status as per Jan 2013 | Planned | | | |
| Description of policy or measure | Additional grants for the construction of CHP are foreseen but apart from the existing support schemes there is no discussion on this subject. | | | |

| Implementation of an energy audit scheme | | | |
|--|---|--|--|
| Status as stated in the NRP | Expected to start operating in Cyprus in 2012 | | |
| Status as per Jan 2013 | Implemented | | |
| Description of policy or measure | Inventory and requirements for energy auditors are set. | | |

| Regulating the operation on Energy Service Companies (ESCOs), as well | as | a draft |
|--|------|--------------|
| ministerial order providing guidelines on energy performance contracting bet | veen | ESCOs |
| and public authorities | | |

| Status as stated in the NRP | Expected to be adopted by the end of 2012 |
|----------------------------------|--|
| Status as per Jan 2013 | Implemented |
| Description of policy or measure | Framework on ESCOs is in place a since 2009. A draft bill on the operation of ESCOs in 2012 was open for public consultation in September 2012 but no reliable information was available on the state of progress at this point of time. |

| Energy Efficiency in Public Buildings | | |
|---------------------------------------|---|--|
| Status as stated in the NRP | Expected to be implemented in 2012 with first projects | |
| Status as per Jan 2013 | There is no reliable information available at this point in time.on realised projects apart from some information campaigns for civil servants | |
| Description of policy or measure | All public sector buildings should be ZEBs (zero balance buildings) until 2019. In relation to that, parts of the presidential palace have applied energy efficiency measures, thus promoting the exemplary role of the public sector | |

| National Renewable Energy Action Plan (NREAP) | | |
|---|---|--|
| Status as stated in the NRP | Implemented | |
| Status as per Jan 2013 | Implemented | |
| Description of policy or measure | National Renewable Energy Action Plans were issued by the Member states and include policies and measures with which their legally binding targets for 2020 (share of RES in total energy consumption) can be achieved. Art.4 of the Directive 2009/28/EC stipulates that member states are obliged to set a specific target in relation to the share of RES in total energy consumption. | |

| Support Schemes for the promotion of the utilisation of RES and Energy Conservation | | |
|---|--|--|
| Status as stated in the NRP | Implemented | |
| Status as per Jan 2013 | At present, the yearly call has ended. It is expected to open on April 2013. | |
| Description of policy or measure | Since 2009, a yearly call for applications is issued in April and it lasts until the end of October. Support is differentiated on the legal status of the applicant and the measure (RES or energy efficiency) measure one is applying for. Until 2011 RES with an aggregate capacity of 168.7 MW were installed and for the period 2012-2016 82 MW of additional RES plants is expected | |

| Introduction of a new legislation for the utilisation of RES | | |
|--|---|--|
| Status as stated in the NRP | Transpose the provisions of the new Directive within 2012 | |
| Status as per Jan 2013 | Remains open | |
| Description of policy or measure | Public consultation took place in September 2012. The bill was discussed in January 2013 and was postponed at a later date. | |

| Accelerating the Implementation of RES investments (licenses and permits through "One Stop Shop" and a Ministerial Committee) | | |
|---|--|--|
| Status as stated in the NRP | Establishment of a "one-stop-shop" in the Ministry of Industry, Commerce and Tourism- Energy Agency since 2002 | |
| Status as per Jan 2013 | Implemented | |
| Description of policy or measure | A "one stop shop" was establishment so as to accelerate the licensing procedure for RES | |

| New Public Transport Programme | | |
|----------------------------------|--|--|
| Status as stated in the NRP | Use of public transport to at least 10% by 2012 | |
| Status as per Jan 2013 | Implemented | |
| Description of policy or measure | Strengthening public transport in Cyprus (new fleet, awareness rising for using public transport, design of new trajectories). | |

| Trans-European Network Study | | |
|----------------------------------|--|--|
| Status as stated in the NRP | Expected to be completed by the end of 2012 | |
| Status as per Jan 2013 | No further reliable information available since implementation. | |
| Description of policy or measure | Trans European Networks is an initiative of the European Union so as to enhance the functioning of the internal market as well as to support social and territorial cohesion. Cyprus has submitted proposals as far as its port infrastructures are concerned | |

4 Policy development

This section covers significant developments made in key policy areas between May 2012 and January 2013. It does not attempt to describe every instrument in the given thematic area. The time-frame was chosen based upon the release of the National Reform Programmes (in the section above) in April 2012, which contain the status quo for policy on most topics.

Environmental Taxation

The implicit tax rate on energy, with a value of approximately 150 € per tonne of oil equivalent in 2009, was slightly below the EU-27 average (Eurostat 2013). The energy intensity of the economy was also on par with the EU average (Eurostat 2013). Accordingly, Cyprus's revenues from energy taxes as a percentage of GDP can be placed in the middle of the pack among EU MS: Cyprus ranked 14th in the EU for revenue from energy taxes (1.9% of GDP) and 6th in the EU when all environmental taxes are considered (2.9% of GDP) (Eurostat 2012).

A new framework for vehicle excise duties has been implemented (see transport section).

Energy Efficiency

The energy intensity of the economy declined (~4%) from 2005 to 2010. The country's final energy consumption in 2010 had increased approximately 9% compared to the average from 2001-2005. This is undoubtedly a result of an increase in the residential

and the transport sector. Only due to a sharp decline in industrial final energy consumption the total increase was still limited (Eurostat 2013).

An Action Plan for <u>Green Public Procurement</u> in Cyprus has been issued in September 2012. Based on the experience of the previous Programme implemented during the period 2007-2009, the Action Plan describes the framework and the targets of the Programme for the period 2012-2014. The aim of the Programme is that public purchases should take into consideration environmental factors when buying products, services or works (MCIT, 2011). 12 categories of products are identified and the environmental standards for those products are defined $(Y\pi oupyείο Γεωργίας, Φυσικών Πόρων και Περιβάλλοντος, 2012)$. It is expected that the Programme will result in energy savings of 600 toe until 2016 (MCIT 2011). The Programme is also listed as a measure in the 2^{nd} National Energy Efficiency Action Plan (NEEAP) (MCIT 2011).

In addition, an Energy Audit System has been established: L201(I) 2012 amended the existing framework (L142(I) 2006 and L30(I) 2009) in relation to energy performance of buildings. It is merely the transposition of the EPBD (Directive 2010/31/EC) and it sets the regulatory framework for energy auditing in Cyprus. Apart from the building performance standards, the selection process of energy auditors and their entry in a special inventory is foreseen ($Ku\pi\rho$ iακή Δημοκρατία, 2012a). The Programme is also listed as a measure in the 2nd NEEAP (MCIT, 2011).

Financial incentives are provided via <u>support schemes for the utilisation of RES and for energy conservation</u>. Every year a call for application is issued in April and it lasts until the end of October. Support is differentiated on the legal status of the applicant and the energy efficiency measure one is applying for. The support schemes are expected to cause a cumulative reduction of 850 Gg CO₂eq by 2020 (Republic of Cyprus 2012). The Ministry of Commerce, Industry and Tourism, more specifically the Special Fund for RES and Energy Efficiency, is the implementing authority with a budget of € 25 Mio. for the year 2012 (Κυπριακή Δημοκρατία 2012b). The budget of the Special Fund is defined yearly by law and finances the supported projects.

Naturalised persons and public entities that do not exercise economic activity are supported through a subsidy when installing thermal insulation on buildings with a Building Permit until 21 December 2020. According to this support scheme, 30% of the total budget can be financed. However, the maximum volume of support per building is €2,500 (Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ 2012a).

Private and public entities that are economically active (industry and tertiary sector) are also eligible for financial support to implement energy efficiency measures. Mainly, there is a de minimis subsidy amounting to 30% of the total budget (max. sum per application is $\leq 50,000$). A regional subsidy can also be granted and amounts to 15%, 20%, or 30% of the total budget (max. sum per application is $\leq 50,000$) (Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ 2012b).

Renewable Energy

Renewable energy use as a portion of final consumption has been increasing slowly but surely in Cyprus. However, at 7.8% of total consumption in 2010, the country is quite far from reaching its target of 13% by 2020. The share of electricity generated from renewable sources in final electricity consumption is still negligible and increased from almost zero to 0.7% between 2005 and 2010 (Eurostat 2013).

In Cyprus, renewable energy sources are promoted through the <u>Support scheme for the utilisation of RES and Energy Conservation 2012</u> for natural persons and public entities that do not exercise economic activity/ private and public entities that exercise economic activity and <u>Support Scheme for Electricity Generation from Wind Energy, Solar Energy and Biomass</u>. Every year, a call for applications is issued in April and it lasts until the end of October or November. Support is differentiated on the legal status of the applicant and the RES. The support schemes are expected to cause a cumulative reduction of 800 Gg CO₂eq by 2020 (Republic of Cyprus 2012). The Ministry of Commerce, Industry and Tourism, more specifically the Special for RES and Energy Efficiency, is the implementing authority. As it was mentioned above, the budget of the Special Fund amounts to € 25 Mio for the year 2012, which will be distributed accordingly to successful applications and existing projects (Κυπριακή Δημοκρατία 2012b). According to the Cyprus Energy Agency, it is estimated that the deployment of RES in Cyprus can create up to 2,780 new jobs by 2020 (Ενεργειακό Γραφείο Κυρπίων Πολιτών 2011).

The type and the level of financial support for natural persons and public entities that do not exercise economic activity and that do exercise economic activity are presented in Table 4 and Table 5, respectively.

Table 4: RES support scheme for natural persons and public entities with no economic activity

| RES | Subsidy | Premium Tariff |
|--|---|---|
| Small wind power (until 30kW) | 55% of the total budget (max. €50,000) for off-grid plants | € 22ct/kWh for Wind Power plants connected to the grid |
| Installation of central water heating system | 45% of the total budget (max. €20,000) | |
| Solar thermal H&C system | 55% of the total budget (max. €50,000) | |
| Replacement of domestic solar thermal systems | €350 per building | |
| Installation of a biomass plant | 55% of the total budget (max. €19,000) | |
| PV systems (7kW for domestic use/ 20kW for public use) | 55% of the total budget (max. €33,000) for autonomous PV | €28ct/kWh for PV connected to the grid |
| Heat pumps | 55% of the total budget (max. €20,000) for domestic use and 40% of the total budget (max. €50,000) for public use | |
| CHP until 1MW | 30% of the total budget (max. €160,000) | Market Price |

Source: Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ, 2012a

Table 5: RES support scheme for natural persons and public entities exercising economic activity

| RES | Regional Subsidy | De-minimis subsidy |
|--|--|---|
| Wind power until 30kW | 15%, 25%, or 35% of the total budget (max. €15,000) | 35% of the total budget (max. €15,000) (⁷) |
| Installation of central water heating system | 15%, 25%, or 30% of the total budget (max. €20,000) | 30% of the total budget (max. €20,000) |
| Solar thermal H&C system | 15%, 25%, or 35% of the total budget (max. €75,000) | 35% of the total budget (max. €75,000) |
| Autonomous PV systems until 20kW | | 40% of the total budget (max. €24,000) |
| Small Hydro | 15%, 25%, or 35% of the total budget (max. €50,000) | 35% of the total budget (max. €50,000) |
| Geothermal | 15%, 25%, or 35% of the total budget (max. €100,000) | 35% of the total budget (max. €100,000) |
| Biomass for H&C | 5%, 25%, or 35% of the total budget (max. €200,000) | 35% of the total budget (max. €200,000) |

Source: Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ, 2012b

Aside from the subsidy scheme, fixed feed-in tariffs are provided through the <u>Support Scheme for Electricity Generation from Wind Energy</u>, <u>Solar Energy and Biomass</u> (Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ 2012c). PV between 20 kW and 150 kW receives a premium tariff of € 25 ct/kWh; biomass and biogas from landfills receive € 0.1179/kWh, and €0.0974/kWh, respectively (8) (Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ, 2012c).

Large-scale PV systems between 150 kW and 10 MW have been promoted for the first time in 2012 by the Ministry of Commerce, Industry and Tourism through the Special Fund for RES and Energy Efficiency using a tender to allocate support for 50 MW (Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ 2012c). The deadline for applications expired in September 2012, and the selection process took place in January 2013 (Ο Φιλελεύθερος 2013). The starting bid of the premium tariff was € 21ct/kWh (Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ 2012c), and 19 companies were primarily selected (Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ 2013).

Finally, the Support Scheme for Electricity Generation from Wind Energy provides a FiT for wind power plants above 30kW. The support scheme is in place since early December 2012. Successful applications (in aggregate 10 MW) will receive a premium tariff of € 0.166/kWh. The call closed in 31 December 2012 (Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ 2012e).

⁷ This applies for off-grid installations; wind power plants connected to the grid receive a premium tariff of €19ct/kWh.

⁸ Biomass and biogas also receive a bonus of €0.0171/kWh if they employ certain technologies.

Energy Networks

Cyprus is a small isolated island with no interconnections to other countries. The politically fragile regional circumstances prevent any consideration of connecting the island to the EU or other countries at the moment. The exploration of natural gas sources could lead to new developments on the island. In this case, a connection to a gas pipeline network would be essential to assure cost-efficient export opportunities.

Transport

As shown in Table 1, the GHG emissions originating in Cyprus' transport sector and their proportion among Cyprus's total emissions increased between 2005 and 2011 with a slight drop of emissions from 2010 to 2011. Revenues generated by transport taxes (excluding fuels) in Cyprus as a percentage of GDP is 1.1%; this is the 4th-highest value among EU MS in this regard in 2010 (Eurostat 2012). On the other hand, newly registered vehicles in Cyprus emitted on average 149.9 g CO₂/km driven in 2011. This is 8% above the EU average and makes Cyprus the forth-less efficient Member State in this regard in the EU (EEA 2012e).

A new framework of <u>vehicle excise duty</u> has been implemented in Cyprus at the end of 2012. The new system calculates the vehicle excise duty on the basis of the CO_2 emissions of the vehicles. It is estimated that the introduction of the new system will result in the increase of state revenues (an increase of approximately \in 2 Mio.) (O Φιλελεύθερος 2012a). It should be highlighted that the specific bill with which the new vehicle excise duty was implemented was ready since March 2012 but was brought to the Parliament almost seven months later (O Φιλελεύθερος 2012b).

In 2010, the <u>Public Transport Programme</u> was introduced and aimed to strengthen the use of public transport in the urban areas of Cyprus. It is coordinated by the Ministry of Transport and Public Works and is expected to lead to energy savings of 27,816 toe by 2016. It is also integrated into the 2nd NEEAP (MCIT 2011).

Adaptation

An assessment on the existing adaptation policies has been published by the Auditor General of the Republic of Cyprus (Ελεγκτική Υπηρεσία της Δημοκρατίας 2012). The report focused on the state of play of climate change adaptation policies in specific areas and highlighted the priority areas (water resources, forests, and agriculture) for future policies. A coherent adaptation strategy has been designed as part of the Life Project CYPADAPT (9) and is expected to be issued in 2014.

The assessment of the current adaptation policies identified agriculture as one of the priority sectors for adaptation policy. Although a coherent adaptation strategy is currently designed and will be adopted in 2014, some specific measures have already been implemented. For example, through the financial support of the Agricultural Development Programme in Cyprus (2007-2013), the construction of more efficient irrigation systems has been supported. According to the assessment, these measures have led to a reduction of water consumption in agriculture (approximately 60 million m³), and currently

⁹ More on the project see http://uest.ntua.gr/cypadapt/

95% of the irrigated areas in Cyprus are using efficient irrigation systems (Ελεγκτική Υπηρεσία της Δημοκρατίας 2012).

5 Policy progress on past CSRs

As part of the European Semester, Country Specific Recommendations (CSRs) for each MS are provided by the EU Commission in June of each year for consideration and endorsement by the European Council). The recommendations are designed to address the major challenges facing each country in relation to the targets outlined in the EU 2020 Strategy. In the following table, those CSRs that are relevant for climate change and energy that were adopted in 2012 are listed, and their progress towards their implementation is assessed.

No CSRs related to climate change and energy were issued for Cyprus in 2012.

6 References

- COM (2013): Commission decision of 26 March 2013on determining Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council. Online available at: http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:090:0106:0110:EN:PDF
- EC European Commission (2012): Europe 2020 Targets, Climate change and energy. Available online: http://ec.europa.eu/europe2020/pdf/themes/13_energy_and_ghg.pdf
- EEA (2012a): "Approximated EU GHG inventory: Early estimates for 2011" Technical report No 13/2012, available online at http://www.eea.europa.eu/pressroom/publications/approximated-eu-ghg-inventory-2011/
- EEA (2012b): Gap between average non ETS 2008–2011 emissions and Kyoto targets without the use of carbon sinks and flexible mechanisms. Online available: http://www.eea.europa.eu/data-and-maps/figures/gap-between-average-nonets-200820132011
- EEA (2012c): Greenhouse gas emission trends and projections in Europe 2012 Tracking progress towards Kyoto and 2020 targets. EEA Report No 6/2012. Online available: http://www.eea.europa.eu/publications/ghg-trends-and-projections-2012
- EEA (2012d): Projected gaps between 2020 GHG emissions and national targets in sectors not covered by the EU ETS. Online available: http://www.eea.europa.eu/data-and-maps/figures/projected-gaps-between-2020-ghg-1
- EEA (2012e): Monitoring CO₂ emissions from new passenger cars in the EU: summary of data for 2011. Online available: www.eea.europa.eu/publications/monitoring-co2-emissions-from-new/at download/file
- EEA (2013a): EEA greenhouse gas data viewer: Change in emissions by country (%), Kyoto base year 2011. Online available at: http://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer
- EEA (2013b): Summary of new Member State projections under the Reporting of Member States in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2013.
- Eurostat (2012): Source of data is Eurostat "Taxation trends in the European Union 2012", Collection: Statistical books, 2012, Brussels.
- Eurostat (2013): Source of data is Eurostat using the following tables: Implicit tax rate on energy (tsdcc360). Energy intensity of the economy (tsdec360). Final energy consumption (ten00095). Share of renewable energy in gross final energy consumption (t2020_31). Electricity generated from renewable sources (tsdcc330). Average carbon dioxide emissions per km from new passenger cars (tsdtr450). Final energy consumption. by sector (tsdpc320). Greenhouse gas emissions by sector (tsdcc210)
- Green Jobs (2012): Green Jobs: Employment Potential and Challenges. Available at: http://ec.europa.eu/europe2020/pdf/themes/green jobs.pdf
- IPCC Intergovernmental Panel on Climate Change (2007): The Physical Science Basis Regional Climate Projections- Projections of future climate for Europe and the Mediterranean. Available online: http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-chapter11.pdf
- MCIT Ministry of Commerce, Industry and Tourism (2011): 2nd National Energy Efficiency Programme. Available online: http://www.buildup.eu/system/files/content/CY%20-%20Energy%20Efficiency%20Action%20Plan%20EN.pdf

- MCIT- Ministry of Commerce, Industry and Tourism (2012): Energy Service- Energy Policy and target. Available online:
 - http://www.mcit.gov.cy/mcit/mcit.nsf/dmlenergyservice_en/dmlenergyservice_en?OpenDocume nt
- Reporting of Member States in accordance with Decision No 280/2004/EC of the European Parliament and of the Council concerning a mechanism for monitoring Community GHG emissions and for implementing the Kyoto Protocol. Last submission: April 2011.
- Republic of Cyprus (2012): Cyprus National Reform Programme. Europe 2020 Strategy for Smart, Sustainable and Inclusive Growth. Available online: http://ec.europa.eu/europe2020/pdf/nrp/nrp_cyprus_en.pdf
- The Cyprus Institute (2011): Climate change and impacts in the Eastern Mediterranean and the Middle East. Available online: www.cyi.ac.cy/.../238_9c7a9ac6023f0892d40bb3e8f03d50d7.html
- UNFCCC inventory (1990-2011): National greenhouse gas inventories (IPCC Common Reporting Format sector classification). Online available for the EU: http://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer (Last modified: May 29, 2013 09:30 AM)
- UNFCCC (2012) Reports on in-depth reviews of the fifth national communications of Annex I Parties. Online available:

 http://unfccc.int/national_reports/annex_i_natcom/idr_reports/items/4056.php
- Ελεγκτική Υπηρεσία της Δημοκρατίας (2012): Προσαρμογή στις κλιματικές αλλαγές.
 Αντιμετωπίζοντας σήμερα τις προκλήσεις του μέλλοντος. (Republic of Cyprus Auditing Agency (2012): Climate Change Adaptation. Confronting the challenges of tomorrow.) Available online: http://theopemptou.com/portal/index.php/downloads25/doc_download/551-elegktiki-ypiresia-tis-dimokratias-prosarmogi-stis-klimatikes-allages-antimetopizontas-simera-tis-prokliseis-toumellontos
- Ενεργειακό Γραφείο Κυπρίων Πολιτών (2011): Πράσινες Θέσεις Εργασίας- ΑΠΕ- Cyprus Energy Institute (2011): Green jobs- RES. Available online: http://www.cea.org.cy/publications/green-jobs-RES.pdf
- Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ (2012a): Σχέδιο Παροχής Χορηγιών για Ενθάρρυνση της Χρήσης των Ανανεώσιμων Πηγών Ενέργειας για φυσικά πρόσωπα και οργανισμούς, στο βαθμό που δεν ασκούν οικονομική δραστηριότητα. (Administrative Committee of the Special Fund for RES and Energy Efficiency (2012a): Support Scheme for Energy Conservation and the Promotion of Renewable Energy Sources (RES) for natural persons and public entities that do not exercise economic activity for 2012.) Available online: http://www.cie.org.cy/menuGr/pdf/sxedia-xorigiwn/Sxedio_Xorigiwn_Fusika_Proswpa_2012.pdf
- Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ (2012b): Σχέδιο Παροχής Χορηγιών για Ενθάρρυνση της Χρήσης των Ανανεώσιμων Πηγών Ενέργειας για Φυσικά και νομικά πρόσωπα καθώς και φορείς του δημοσίου τομέα που ασκούν οικονομική δραστηριότητα. . (Administrative Committee of the Special Fund for RES and Energy Efficiency (2012b): Support Scheme for Energy Conservation and the Promotion of Renewable Energy Sources (RES) for natural, legal persons and public entities that exercise economic activity for 2012.) Available online: http://www.cie.org.cy/menuGr/pdf/sxedia-xorigiwn/Sxedio Xorigiwn Nomika Proswpa 2012.pdf
- Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ (2012c): . Προκήρυξη Μειοδοτικού Διαγωνισμού Φωτοβολταϊκών Συστημάτων. (Administrative Committee of the Special Fund for RES and Energy Efficiency (2012c): Support Scheme for Electricity Generation from Wind Energy, Solar Energy and Biomass. Tender for PV systems) Available online: http://www.cie.org.cy/menuGr/pdf/sxedia-xorigiwn/PARARTHMA A MEIODOTIKOS DIAGWNISMOS.pdf

- Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ (2012d): Σχέδιο Χορηγιών για την Ενθάρρυνση της Ηλεκτροπαραγωγής από Μεγάλα Εμπορικά Αιολικά. (Administrative Committee of the Special Fund for RES and Energy Efficiency (2012d): Support Scheme for Electricity Generation from Wind Energy, Solar Energy and Biomass. Call for big Wind Power Plants) Available online: http://www.cie.org.cy/menuGr/pdf/sxedia-xorigiwn/Sxedio_Megala_Aiolika_2012.pdf
- Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ (2012e): Σχέδιο Χορηγιών για την Ενθάρρυνση της Ηλεκτροπαραγωγής από Μεγάλα Εμπορικά Αιολικά, Ηλιοθερμικά και Φωτοβολταϊκά Συστήματα καθώς και την Αξιοποίησης της Βιομάζας. (Administrative Committee of the Special Fund for RES and Energy Efficiency (2012e): Support Scheme for Electricity Generation from Wind Energy. Available online: http://www.cie.org.cy/menuGr/pdf/sxedia-xorigiwn/Sxedio_Xorigiwn_gia_ilektroparagwgh_APE_2012.pdf
- Επιτροπή Διαχείρισης Ειδικού Ταμείου ΑΠΕ και ΕΞΕ (2013): . Προκήρυξη Μειοδοτικού Διαγωνισμού Φωτοβολταϊκών Συστημάτων, Πινακας Αιτήσεων που έτυχαν αρχικής επιλογής. (Administrative Committee of the Special Fund for RES and Energy Efficiency (2013): Support Scheme for Electricity Generation from Wind Energy, Solar Energy and Biomass. Tender for PV systems, Initial selection) Available online: http://www.cie.org.cy/menuGr/anakoinwseis/Meiodotikos_aithseis_katarxin_epiloghs.pdf
- Κυπριακή Δημοκρατία (2012a): Ο περί ρύθμισης της Ενεργειακής Απόδοσης (Τροποποιητικός)
 Νόμος του 2012 (N201(I) 2012). (Republic of Cyprus, (2012a): Law concerning Energy
 Performance on Buildings (L201(I)2012 -amendment) Available online:
 http://www.mcit.gov.cy/mcit/mcit.nsf/All/DF8E187B6AF21A89C22575AD002C6160/\$file/N210
 %28i%29_2012%20peri%20Rithmisis%20Energiakis%20Apodosis%20Ktirion%20Tropoiitikos
 %20Nomos.pdf
- Κυπριακή Δημοκρατία (2012b): N35(II) 2012. Νόμος που προβλέπει περί του Προϋπολογισμού του Ειδικού Ταμείου Ενθάρρυνσης Χρήσης των Ανανεώσιμων Πηγών Ενέργειας και Εξοικονόμησης Ενέργειας για το Οικονομικό έτος που λήγει στις 31 Δεκεμβρίου 2012. Republic of Cyprus (2012b): L35(II) 2012. Law that defines the budget of the Special Fund for RES and Energy Efficiency for the fiscal year 2012)
 http://www.mof.gov.cy/mof/gpo/gpo.nsf/All/D637923155EC8624C22579DE002FF574/\$file/421 3%20%2012%204%202012%20%20PARARTIMA%20%2010%20%20MEROS%20%20II.pdf
- Ο Φιλελεύθερος (2012a): Με βάση τις εκπομπές ρύπων θα υπολογίζονται τα τέλη κυκλοφορίας των οχημάτων. (Ο Fileleytheros, (2012a): Vehicle Excise Duty will be based on emissions) Available online: http://www.philenews.com/el-gr/Eidiseis-Oikonomia/29/121883/me-vasi-tis-ekpompes-rypon-tha-ypologizontai-ta-teli-kykloforias-ton-ochimaton
- Ο Φιλελεύθερος (2012b): (O Fileleytheros, (2012b): "Taking the wheel" from the government for excise vehicle duty) Πήραν το τιμόνι από την κυβέρνηση για τα νέα τέλη κυκλοφορίας. Available online: http://www.philenews.com/el-gr/Eidiseis-Kypros/22/117035/piran-to-timoniapo-tin-kyvernisi
- Ο Φιλελεύθερος (2013): (O Fileleytheros, (2013): The budget for the Special Fund for RES and Energy Efficiency for 2013 will be defined in 2 months) Σε 2 μήνες θα ψηφιστεί ο προϋπολογισμός του Ταμείου για τις Ανανεώσιμες. Available online: http://www.philenews.com/el-gr/Oikonomia-Kypros-XAK/3353/129800/se-dyo-mines-thapsifistei-o-proypologismos-tou-tameiou-gia-tis-ananeosimes-piges
- Υπουργείο Γεωργίας, Φυσικών Πόρων και Περιβάλλοντος (2012): Σχέδιο Δράσης για τις Πράσινες Δημόσιες Συμβάσεις 2012- 2014. (Ministry of Agriculture, Natural Resources and Environment (2012): Action Plan on Green Public Procurement Programme 2012-2014)