20-20
KEEPONTRACK!

2014

POLICY RECOMMENDATIONS

REPORT

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TABLE OF CONTENTS

WHAT IS EUFORES?

EUFORES, the European Forum for Renewable Energy Sources, is the European cross-party parliamentary network with Members of the European Parliament and the EU national Parliaments. EUFORES is an independent, non-profit organization founded in 1995 by Members of Parliament and other key actors. EUFORES promotes the systemic integration of renewable energy and energy efficiency as key solutions for a sustainable development and supports the transformation of good practice into coherent policies. It facilitates the exchange of views on EU and national legislation and organizes a variety of events such as Inter-Parliamentary Meetings, national parliamentary workshops, MEP roundtables with EU Commissioners and EU Council Presidencies, dinner debates in the European Parliament and Advisory Committee meetings. It also manages a diversity of projects supporting the implementation of EU legislation in the EU Member States.

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THE KEEP ON TRACK! PROJECT

The 2009/28/EC Directive on the promotion of the use of energy from renewable sources[1] (referred to in this publication as the "RES Directive") sets the objective of reaching at least 20% of the EU's final energy consumption with renewable energy sources by 2020. It sets for each Member State mandatory national targets for the overall share of renewable energy sources (RES) in gross final energy consumption. The annex to the Directive also defines an indicative trajectory for RES developments leading to the 2020 objectives. Progress towards reaching the 2020 targets are carefully monitored to ensure that actual developments are not lagging behind the trajectory outlined in the RES Directive. With this aim and building on the experience of the Intelligent Energy Europe (IEE) project REPAP2020, Keep on Track! offers market, legal and political advice and recommendations for EU Member States to stay on track with the objectives set for 2020.

This is done via a platform for discussion among different market actors such as renewable energy industry associations, national and EU Parliamentarians and the scientific community. Moreover, the project ensures a close-to-market monitoring of the fulfilment of the RES trajectory for each of the 27 EU Member States and for Croatia in 2015.

If a Member State is found to be lagging behind and is failing to overcome identified barriers for RES deployment, Keep on Track! will provide early warnings and suggest solutions on how to compensate any possible delay encountered.

KEEP ON TRACK! PARTNERS:

The European Forum for Renewable Energy Sources (EUFORES) is the project coordinator. Partners in the project are:

BEE - Bundesverband Erneuerbare Energie

EEG - Vienna University of Technology, Energy Economics Group

Fraunhofer Institute for Systems and Innovation Research

Eclareon

BBH - Becker Büttner Held

APEE - Association of Producers of Ecological Energy

AssoRinnovabili

APPA - Asociación de Productores de Energías Renovables

APREN - Associação Portuguesa de Energias Renováveis

EEÖ - Bundesverband Erneuerbare Energie Österreich

EDORA - Fédération de l'Energie d'origine renouvelable et alternative

GAREP - Greek Association of RES Producers

PIGEO - Polish Economic Chamber of Renewable Energy

REA - Renewable Energy Association

SERO - Swedish Renewable Energies Organisation

Visit the project website to learn more: **WWW.KEEPONTRACK.EU**

Co-financed by IEE

Co-funded by the Intelligent Energy Europe Programme of the European Union

EU OVERVIEW

In 2012 the European Union (EU) reached an overall share of renewable energy of 14.09%, compared to a planned share of 12.87% set in the National Renewable Energy Action Plans (NREAPs). However, the renewable energy production capacity put in place in the EU thanks to new investments fell by 29% [1] in 2012 compared to 2011. To provide investors with long-term security and strengthen the 2020 target, the debate of whether or not to set post-2020 renewable energy targets has been in the forefront of political discussions in 2013.

As a matter of fact, 90% of European citizens think it is important for governments to set renewable energy targets [2] for 2030, with numerous stakeholders calling for a binding EU RES target for 2030.

In its communication "*A policy framework for climate and energy in the period from 2020 to 2030*" [3], the European Commission proposed a binding EU target of at least 27% renewable energy for 2030. The European Parliament called for a target of at least 30%. According to the Commission's own impact assessment, a 30% target would provide 568 000 additional jobs and savings of about €260bn on fossil fuel imports compared to a 27% target. In addition, a 30% renewable energy target would mean 26% less gas imports than today, whereas the Commission's proposal for a 27% target would reduce imports by 9% only.

The Keep on Track consortium published scenarios showing the distribution of a 30%, 35%, 40% and 45% renewable energy target by 2030 among member states, using the Commission's methodology of a flat rate approach/GDP weighting and the Green-X model based on RES potentials[4].

In 2013 a proposal for a review of the Energy and Environment State Aid Guidelines has been made by the European Commission. EU discussions on the guidelines, and notably on the use of tenders as support scheme and on the phase out of feed-in tariffs, have influenced

1 EurObserv'ER, "The State of Renewable Energies in Europe", 2013

2 Eurobarometer poll from March 2014

3 European Commission, "A policy framework for climate and energy in the period from 2020 to 2030" COM (2014) 15

4 This report can be accessed on the Keep on Track website.

discussions on national RES support schemes, leading Germany and Poland to indicate their intention to use tenders to support renewable energy sources in the future.

In 2013, some member states have introduced measures discouraging future investments: Spain and Bulgaria have once again introduced retrospective changes to their RES support mechanisms. Spain and Greece introduced a moratorium on new RES developments [5]. These abrupt regulatory changes may be due to an overcapacity on the electricity market. *"During the 2000s, European utilities overinvested in generating capacity from fossil fuels, boosting it by 16% in Europe as a whole and by more in some countries (e.g. up to 91% in Spain, for example). The market for electricity did not grow by nearly that amount, even in good times; then the financial crisis hit demand[6]".* Some governments have abruptly stopped RES support, making the renewable energy sector pay for ill-designed investment decisions on the overall electricity market.

With the economic crisis, the issue of energy prices has been increasingly debated in 2013, pushed notably by the energy-intensive and the shale gas industries. The debate focused on the gap between EU and US energy prices, with RES being taken as a scapegoat for increased energy prices in the EU. But, as emphasised by the European Commission in *"Energy prices and costs in Europe"* [7], the main driver of energy prices are international commodity prices for fossil fuels. In Germany for example, renewable energy technologies have helped to lower wholesale power prices, with power prices reaching up to 8-year lows in 2013 [8]. However, due to market concentration, this reduction has not been reflected in retail prices. In Ireland, Poland and Sweden, support for renewable energy only raised household electricity prices by 1% [9].

Last but not least, the emission trading scheme has been the centre of attention: due to a huge oversupply of allowances, the price of Emission Unit Allowances in the ETS has fallen by around 90% since 2008. The vast majority of excess allowances stem from the flood of international credits and from the impact of the economic crisis on the heavy industry. A structural solution needs to be found on this issue.

5 The Keep-on-Track consortium published a briefing on these retrospective changes. It can be accessed on the Keep-on-Track website.

6 THE ECONOMIST, "European Utilities: How to Lose Half a Trillion Euros. Europe's Electricity Providers Face an Existential Threat", 12 October 2013

7 European Commission, "Energy Prices and Costs in Europe", COM (2014) 21

8 R. Morison, J. Mengewein, ""German Power Costs Seen Dropping For Fourth Year", Bloomberg, 3 January 2013, http://bloom.bg/1dfxi

9 European Commission, "Energy Prices and Costs in Europe", COM (2014) 21

EUROPEAN POLICY RECOMMENDATIONS

In view of the current debates, the Keep on Track consortium recommends to:

1 ADOPT AN AMBITIOUS BINDING RENEWABLE ENERGY TARGET FOR 2030, INCLUDING BINDING NATIONAL TARGETS, ALONGSIDE ENERGY EFFICIENCY AND GREENHOUSE GAS EMISSIONS TARGETS.

The 2030 outlook needs to be reliable and support the achievement of the binding 2020 renewable energy target.

2 ENSURE A PREDICTABLE AND STABLE LEGISLATIVE FRAMEWORK FOR RES AT THE NATIONAL LEVEL AND IN PARTICULAR TO AVOID ANY RETROACTIVE CHANGES TO EXISTING SUPPORT SCHEMES.

Stop-and-go policies and disruptive changes are currently jeopardising the achievement of the 2020 targets.

3 INCREASE THE FOCUS ON THE RES-H&C AND RES-T SECTORS, WHICH ARE STRONGLY DEPENDENT ON THE EXISTENCE OF A SUPPORTIVE AND COMPREHENSIVE FRAMEWORK.

Due to the lack of coherent support, current growth rates are too low to reach the 2020 targets.

4 REVISE THE GUIDELINES ON STATE AID FOR ENVIRONMENTAL PROTECTION AND ENERGY 2014-2020 TO MAKE SURE THEY ARE CONSISTENT WITH THE RES DIRECTIVE AND SUPPORT THE ACHIEVEMENT OF ITS OBJECTIVES.

The newly adopted State aid guidelines are limiting the member states' freedom of choice of support schemes that have proven to be effective.

5 RE-ESTABLISH A CLEAR SUPPORTIVE FRAMEWORK FOR RES-T AT EUROPEAN LEVEL IN ORDER TO REMOVE THE CURRENT POLICY VACUUM.

In addition, there is scope to increase renewables-driven electric mobility.

6 RETAIN THE FOCUS ON THE REMOVAL OF ADMINISTRATIVE BARRIERS.

The duration and complexity of administrative procedures is still one of the main barriers identified by European stakeholders, together with the integration of RES in spatial and environmental planning.

2013 KEY FACTS:

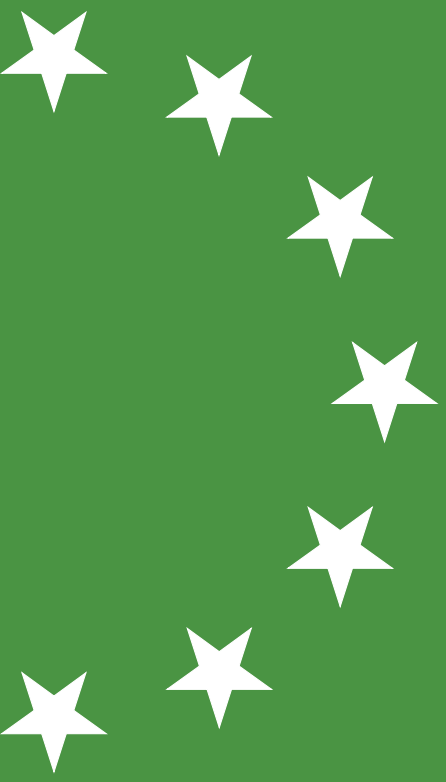
The EU renewable energy sector employed more than 1.2 [10] million people directly and indirectly.

The EU economic activity stemming from renewable energy is valued at more than €130 billion [11].

According to the European Commission, the EU net import bill for fossil fuels amounted to €545 billion.

10 EurObserv'ER, "The State of Renewable Energies in Europe", 2013

11 EurObserv'ER, "The State of Renewable Energies in Europe", 2013



MEMBER STATE REPORTS

AUSTRIA

KEY TRENDS IN THE RES SECTOR

Unlike the economies of many other EU countries in the last years, the Austrian economy remained quite stable. The recession has been avoided. There is a general support for renewable energy, partly driven by a refusal of nuclear power. The renewable energy industry is growing steadily and becoming a relevant economical factor. However, parts of the industry exert strong pressure to reduce the climate and energy policy ambitions, claiming that energy costs are forcing them to reduce investments. It is therefore important to have a strong EU climate and energy policy, including an ambitious RES target.

Austria used to have a good FiT system from 2002 until 2006. After this period, pressure from the energy-intensive industry lead to a stop. However, in the aftermath of Fukushima a new FiT system has been established in 2012, leading to strong investments in renewable electricity and a growing share of renewable power (75.4% of electricity generation in 2012, also due to the amount of precipitation and the share of large hydro power). The renewable energy industry is generally satisfied with the current system. However, PV investments would profit from a less complex and more stable support scheme, with more support now and less in the future.

In recent years, positive developments in the renewable heat sector have taken place, both in the area of district heating and in the building sector. This is due to the RES heat support, to high oil prices, and Austria's will to be independent from fossil fuels. Pellet heating systems have shown particularly strong growth, leading the Austrian biomass industry to become a global player. However, the pulp and paper industry now asks for measures to reduce biomass demand for heat, claiming that biomass use leads to higher wood prices.

Renewable energy in transport is supported in several ways: by biofuel targets, investments in railways and policies to change the modal split. Biofuels currently contribute approximately 6.75% to total fuel demand. 93% of the railway electricity demand is renewable, mainly large hydro power. Investments in the railway sector and a changing modal split in transport will lead to an increased share of renewable energy in the transport sector.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Do not change the current FiT system - it is working. Thanks to the FiT system, we are experiencing a steady increase of the renewable electricity share at costs that are widely seen as acceptable.

Improve the support scheme for PV: remove the current support limitations by using the funding dedicated for post-2018 support. This will speed-up market integration, as long as support is still needed. The support scheme should either be an investment subsidy or a feed-in tariff.

Set a binding 100% target for the share of RES-E for 2020, and RES targets of 60%, 80% and 100% for 2030/40/50.

Introduce a carbon tax of 30€ per ton with annual increases of 5€/t until reaching a value of 60 €/t. Use the revenues to support renewable energy and energy efficiency.

Remove subsidies for nuclear and fossil fuels, including indirect subsidies.

HEATING AND COOLING SECTOR

Introduce a carbon tax of 30€ per ton with annual increases of 5€/t until reaching a value of 60 €/t. Use the revenues to support renewable energy and energy efficiency.

Change the legislation for renting houses and apartments to facilitate investments in thermal insulation and renewable heating systems.

Increase the financial support for thermal insulation to at least 300 Million € annually.

Ban the installation of oil heating systems in new buildings in 2015 and in existing houses in 2016.

Increase the tax for heating oil. Use the revenues to replace old heating systems depending on fossil fuels with modern renewable energy systems.

Introduce a tax deduction scheme for investments in renewable heating systems (the basis for paying income tax should be reduced by 2 000 € annually during 10 years), including extra support for poorer households.

Change the air quality legislation to allow modern pellet heating systems in urban areas.

TRANSPORT SECTOR

Support EU policies for more efficient cars: 80g CO_2 per km in 2020 and 60g CO_2 per km in 2025.

Change the car tax system to support e-mobility by lowering taxes for electric vehicles and increasing taxes for heavy combustion engine cars (NoVA tax [12]).

Link the tax support for e-mobility with the use of renewable electricity (through guarantees of origin).

Introduce an incentive system such as a city toll or a congestion charge to avoid e-mobility being used in urban traffic and competing with public transport.

Shift railway investments away from large tunnel projects to projects aiming at commuter traffic, in order to change the modal split from car to train.

Stabilise the use of biofuels at the current level.

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12 NoVA (NormVerbrauchs-Abgabe) is a vehicle tax, based on the official fuel consumption and the price of the vehicle.

BELGIUM

KEY TRENDS IN THE RES SECTOR

RES are increasingly considered as cost-inducing technologies and several policy-makers even ask for a moratorium in some sub-sectors. In 2013, some RES technologies have been frequently and negatively mentioned in the media. This has contributed to an erosion of the image of the whole sector. The generous support system for domestic PV, leading to an excess of green certificates (GC), has been reviewed in 2013, with retroactive effects decreasing investor confidence in PV investments. The public consultation on the spatial planning of wind energy in Wallonia has allowed anti-wind energy groups to increase their media presence.

In addition, there is a lack of political willingness to finalise a real energy strategy. The current GC system for electricity is still under revision without certainty for the future system. The increase in development and operation costs, combined with uncertainty regarding the future support system, as well as the GC price collapse, block most of the current investments or challenge the realisation of projects for which a permit has already been delivered.

Regarding RES-H&C, there is still a lack of specific support mechanism for RES heat production as well as biogas production and injection. This leads to insufficient profitability and uncertainty of investment.

Regarding RES-T, a quota system scheme must ensure that biofuels make up a defined percentage of the companies' total annual fuel sales. There is a lack of efficient support for the development of electric vehicles.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Agree on a long-term energy strategy based on targets for each RES technology: a comprehensive strategy must be finalised as soon as possible to tackle the current uncertainty. It should take into account the Belgian nuclear phase-out, the potential of each RES technology and its socio-economic impact (including avoided costs thanks to RES). A yearly target for each RES technology should then be approved to ensure a continuous development of the different sub-sectors.

Finalise a stable support system as soon as possible, preventing retroactive effects and guaranteeing an acceptable profitability for each RES technology. A clear support system (number of GC/MWh) is urgently needed for each RES technology, based on a mid-term strategy and annual targets for each technology. This support system must be based on the required profitability, taking into account every development and operation and maintenance (O&M) costs. The support scheme must also allow for the realisation of projects currently in the pipeline and prevent retroactive changes by a coherent implementation with a transition period.

A clear framework for each RES technology must be implemented, in line with the overall long-term strategy and targets. Such a framework must be based on scientific criteria and legally secured via relevant legislative initiatives to prevent legal challenges to the delivered permits.

Make sure grid reinforcements are in line with the timing of RES spatial planning to guarantee priority access and dispatch for RES power plants. Curtailment must be reduced as much as possible and systematically compensated.

Implement a one-stop shop for each procedure of delivering permits. Improve the coordination and coherence between decision-making bodies.

Remove some installation constraints taking into account mitigation and technical solutions (e.g. install wind turbines in forest zones, in the vicinity of airports, radars,...). This will allow for the installation of plants in new locations, as far away as possible from residential buildings.

Launch a RES public promotion campaign.

HEATING AND COOLING SECTOR

Elaborate a clear legal framework to promote RES development in the heating sector. The framework should be based on binding targets in some sectors (e.g. in the building sector) and clear, objective and reasonable criteria with a balanced approach for different uses (especially for biomass).

Introduce a support scheme for RES-H&C with specific measures for biogas and district heating.

Develop a spatial planning strategy focused on district heating development. This strategy must be linked to a specific support system for the development of this network.

TRANSPORT SECTOR

Clarify the sustainability criteria related to biofuels to improve their social acceptance.

Dedicate biofuels to specific applications in order to ensure social acceptance and improve the security of supply of specific sectors.

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BULGARIA

KEY TRENDS IN THE RES SECTOR

In Bulgaria, the development of newly installed RES capacity gained a rapid momentum in 2012, as a result of the higher feed-in tariffs for PV. However, renewable energy installations were said to be expensive technologies and were designated as a major reason for the electricity bill increase by the Bulgarian Government. In the mainstream media there have been negative campaigns on renewables. In June 2012, the State Energy and Water Regulatory Commission introduced a moratorium on all new large-scale RES-E installations. The moratorium is valid up until 2016. It applies to wind turbines and to PV installations up to 30 kW mounted on rooftops, as well as to biomass and hydro power plants of up to 1.5 MW. As stated on numerous occasions, such a ban on the development of RES-E will hinder the achievement of Bulgaria's target set by the EU.

Additional retrospective changes have been introduced recently. In December 2013, the Government passed a 20% tax on the income of renewable energy producers. The tax only applies to wind and PV installations. The measure is discriminatory and clearly violates the Bulgarian Constitution and several obligations under EU legislation.

Currently, there are no effective incentives for RES-H&C producers. The existing support for heating and cooling installations is highly insufficient, consisting of only a couple of grant-schemes for the installation of efficient firewood boilers.

RES-T is solely supported by the obligatory blending of liquid oils with biofuels. However, even this measure has been delayed. As a consequence, Bulgaria lags behind in terms of achieving its RES transport target.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Remove the RES-E moratorium - The Government should encourage investments in RES-E to achieve the targets set by the EU.

Abolish the retrospective 20% tax - The Government should remove the imposed tax for wind and solar producers to guarantee at least the return of investment for existing plants.

Create an energy market (liquid day-ahead, intraday, balancing and ancillary services markets)

- Establish an independent Transmission System Operator (TSO).
- Change the current RES market incentives. The *fixed feed-in-tariff* should be substituted with a more "market and consumer-friendly" *feed-in-premium*.

Set fair and predictable rules for RES participation on electricity markets.

Remove the newly introduced grid access fee targeting wind and solar energy.

Launch a communication campaign for the promotion of RES-E among the general public - The State authorities should launch a communication campaign to ensure wider social acceptance of RES by stating the advantages of renewable energies.

HEATING AND COOLING SECTOR

Introduce tax concessions and financial incentives for investments in energy generation from RES in households - The Government should introduce tax reliefs and financial incentives for households who purchase renewable energy appliances.

Introduce a support scheme for RES-H&C in residential and public buildings - The heat production from RES is not supported by the existing legal framework. State authorities should stimulate the market by imposing appropriate legislative measures such as a mandatory minimum RES obligation in buildings (e.g. a percentage of the total amount of heating and cooling needs of buildings should be produced with renewable energies).

To promote the use of individual renewable energy systems through a government incentive would be a reliable way to achieve the RES target at low public costs.

TRANSPORT SECTOR

Implement a national action plan for electro-mobility including:

- Exemption from automobile taxes/duties, including vignettes
- VAT exemptions for the purchase of an electric vehicle
- Free parking spaces for electric vehicles
- Attribution of spaces for charging points

Exempt biofuels from excise duties to stimulate the market (Currently there are ten bio-diesel and six bio-ethanol power plants in Bulgaria. However, only one plant out of sixteen is in operation).

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CYPRUS

KEY TRENDS IN THE RES SECTOR

In Cyprus, electricity from renewable sources is generally supported through a combination of a subsidy scheme, a premium tariff, as well as a net metering scheme. Apart from that, Cyprus has inaugurated a tender for PV installations. Renewable energy sources for heating purposes are eligible for a subsidy and the same applies for the transport sector, mainly through the funding of relevant infrastructure.

Cyprus is an isolated island with a small electricity infrastructure and no interconnections so far. This is the reason why its electricity generation has been dominated by imported fossil fuels.

According to its NREAP, Cyprus had a negligible RES contribution to gross final energy consumption in 2005. However, in 2011, RES-E accounted for 4% of primary energy consumption and 6% of final energy consumption. As of 2012, RES-E increased their share to 5.2% of primary energy consumption.

The prospects for the further deployment of RES-H&C technologies cannot be considered optimistic. Even in the field of solar thermal installations, the sector shows a decline of 0.8% on the annual evolution of total installed capacity after a decade of continuous growth. Characteristically, almost 92% of the households and 53% of hotels have a solar thermal unit.

The use of renewable energy in the transport sector (RES-T) is slowly developing in Cyprus. A mandatory quota of biofuel use in transport is also imposed on the fuel suppliers, so that a 6% reduction of GHGs can be achieved by 2020.

POLICY RECOMMENDATIONS

ELECTRICITY AND HEATING/COOLING SECTOR

Improve access to finance: As a result of the economic crisis, the situation culminated in June 2012, when Cyprus requested a bailout from the European Financial Stability Facility (EFSF). In March 2013 a €10 billion bailout was agreed between Cyprus, the European Union (EU) and the International Monetary Fund. A radical restructuring of the banking sector is foreseen with bank deposits over €100,000 to be used to support the bailout. Under such negative circumstances, it is clear that the development of RES cannot remain unaffected. Since March 2013 however, the financing of new RES-E investments can be observed.

Maintain long-term reliability for investors: The whole process of designing new support schemes based on the annual budget creates uncertainties and unnecessary delays in the realisation of prospective investments.

Guarantee a fair and independent regulation of the RES-E sector: Currently, the national power company (EAC) plays a dominant role on the island of Cyprus, which hinders the entry of new producers in the electricity market. This is mainly due to the fact that plant operators do not have a clear overview of the process and the charges e.g. for grid stability and grid use, defined by the Cyprus Regulatory Authority on Energy. Such instability creates a degree of uncertainty, not only for RES-E plant operators but also for operators of conventional power plants and does not facilitate the liberalisation of the electricity market.

Decrease the complexity and duration of administrative procedures: E.g. 6 ministries are involved in the licensing procedure of a 100 kW PV plant.

TRANSPORT SECTOR

Sharpen the strategy for the RES-T sector and develop an adequate support scheme: There is only limited support for biofuels in Cyprus, which is directed exclusively towards the installation of biofuel plants. An excise vehicle duty is imposed on biofuels, as well as stringent criteria on the origin of crops used for producing biofuels. However, it is also estimated that in the next 30 years a gradual temperature increase between 1-3°C can be expected and it could reach 3.5-7°C at the end of the century (IPCC, 2007). These facts in correlation with the limited availability of agricultural fields create one of the basic barriers for the further deployment of biofuels in Cyprus. This should be considered within the RES-T strategy.

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THE CZECH REPUBLIC

KEY TRENDS IN THE RES SECTOR

In the Czech Republic, electricity from RES is mainly supported through either a guaranteed feed-in tariff or a premium paid on top of the market price. Operators of RES-E plants are entitled to priority connection to the grid. The use and the expansion of the grid are subject to general legislation on energy.

Heat generation from renewables is mainly supported through subsidies. Furthermore, renewable heating plants are exempted from real estate tax.

The main support scheme for renewable energy sources used in transport (RES-T) is a quota system which is based on the Clean Air Act (Zákon o ochraně ovzduší). This scheme obliges companies importing or producing petrol or diesel to ensure that biofuels make up a defined percentage of their annual fuel sales.

In the past, the focus was mainly on reducing the country's energy consumption in order to meet the 2020 renewable energy targets. Furthermore, the government intended to mitigate the economic burden for electricity consumers by amending the support system for RES-E.

The Czech government was focusing mainly on expanding the country's nuclear capacities rather than developing the production of electricity from RES.

Due to the favourable legal conditions in the past, a lot of new photovoltaic installations applied for grid connection before 2010. Therefore, the transmission grid operator ČEPS decided to block the connection of new PV and wind plants to the grid and declared a temporary connection moratorium.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Mitigate revenue risks under the given support scheme: By the end of 2013, the guaranteed support for electricity generated by photovoltaic, wind, hydro or biomass plants in form of feed-in tariffs or premium tariffs was de facto entirely abolished. According to the latest amendment to the Renewable Energy Act, only newly constructed solar energy plants put into operation before 31 December 2013 are eligible to receive the feed-in or premium tariff. Due to the "solar boom" in 2009 and 2010, the government also introduced a retroactive tax on the revenues from the feed-in/premium tariff schemes. In addition, a recycling fee for solar panels has been introduced in 2012.

Increase the predictability or transparency of the grid connection procedure: The Czech transmission system operator (ČEPS) decided to take preventive measures and set an annual connection limit for volatile energy sources. This limit varies every year. However, the method of determination of this limit remains unknown to the public.

Increase the transparency of administrative procedures: In 2013, both the wind and the solar sector experienced a sharp decrease of grant authorisation by the Energy Regulatory Office. It has also been reported that in some cases the authorities repeatedly requested identical documents, justifying this by the alleged termination of their validity.

Provide objective information to the general public: The government has declared renewable energy sources to be costly, inefficient, and dangerous to the stability of the electricity grid. Overall, the lack of political will for the further development of RES has been masked as a move to save the general public from "unjustified prices" of green energy production.

HEATING AND COOLING SECTOR

Sharpen the RES-H strategy and increase the reliability of the support scheme: In the past five years, frequent changes and amendments have been made to the support system. This notably hampers long-term planning of RES investors. Also, the biggest share of state subsidies has been assigned to large industrial heating plants instead of being used for renewable energy in households. However, this support turned out to be rather inefficient. Due to the fact that both industry and households make up for similar shares of carbon emissions, the Czech government should focus on supporting renewable heating installations in households.

Provide access to finance: Due to the instable RES support schemes, banks are now experiencing financial straits, which in turn pose a substantial barrier for the cashflow of renewable energy companies.

Revise administrative procedures: The Czech Republic has introduced one of the strictest regulations in the EU regarding the certification of renewable energy installers. Every person who wants to install a renewable energy system has to obtain an authorisation issued by the Ministry of Industry and Trade. If one fails to do so, a fine amounting to CZK 100,000 (approx. € 4,000) can be charged.

TRANSPORT SECTOR

Sharpen the RES-T strategy and properly adjust the support scheme: The expansion of electric vehicles in the Czech Republic is mainly hampered by the lack of financial support. Due to political uncertainty, investors are unwilling to take risks. Additionally, there are no support schemes offering financial assistance for those acquiring electric cars.

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DENMARK

KEY TRENDS IN THE RES SECTOR

Denmark is often mentioned as a best-practice example for RES support. The country has the long-term goal of building a carbon-free society and is pushing for a binding RES target at a European level for 2030. The Danish Parliament has decided on an ambitious Energy Agreement in March 2012 [13].

RES-E technologies are mainly supported through a feed-in premium scheme. Net metering, loan guarantees, and investment subsidies for small installations are also available. Wind energy (onshore and offshore), as well as solid biomass feature prominently in the Danish NREAP. Feed-in premium levels are technology specific and mostly set administratively. An exception is offshore wind power, for which support levels are determined in a tendering procedure. The Danish support system has proven to be very effective in the past and can provide policy learning experiences to other member states. The experience Denmark has been gathering in tendered auctions since 2004 shows, for instance, that when designing tendering mechanisms the devil is in the details. Three large offshore wind parks have already been developed using tenders, and two more developments are in progress. Penalties were applied in the Danish tenders for the delay or non-realisation of power plants. This constitutes best practice, as it ensures that bidders calculate the project realistically and are actually able to realise it in case they succeed in the tender. However, the Anholt tendering procedure showed that penalties and time plans, although necessary, should not be too severe. Overly harsh penalties can deter potential bidders from applying, which leads to lower participation and competition in the tendering procedure [14].

Most of Denmark's renewable heat production is from solid biomass, which is also meant to remain the dominant renewable fuel until 2020. The main instruments to support RES-H&C are exemptions on the various taxes applied to the production, processing, possession, receipt, and distribution of fossil fuels in the heating sector. All RES-H&C technologies are eligible for these exemptions. Denmark also applies premium tariff payments to biogas used for heating. The tariff is paid per GJ of biogas used and increases or decreases annually, depending on the price of natural gas. This scheme is scheduled to end in 2019.

The main support instrument in the RES-T sector is a quota obligation for biofuels to companies importing or producing diesel, gas, or petrol fuels. In addition, tax reductions are applicable to the production, processing, possession, receipt, or distribution of transport fuels blended with biofuels. Biogas used in transport is supported with a premium tariff.

13 "Accelerating Green Energy towards 2020 - The Danish Energy Agreement of March 2012", http://www.ens.dk/node/2132

14 L. Kitzing, "Some practical aspects in the implementation of tenders: The Danish example for offshore wind", 2013, http://www.feed-in-cooperation.org/wDefault_7/content/10th-workshop/presentations.php

POLICY RECOMMENDATIONS

OVERALL

Provide continuity based on the existing framework: The ambitious goals and measures specified in the 2012 Energy Agreement should be implemented.

Carefully plan public budgets: "Green taxes", for instance on fossil fuels, provide revenues for the state. These taxes are bound to decrease, as renewables, which are exempt from such taxes, replace conventional fuels. Plans for future public budgets need to take this effect into account.

ELECTRICITY SECTOR

Establish an adequate technical and regulatory framework for the integration of wind power into the energy system: One of the proposed solutions is to use wind electricity in the district heating sector through the introduction of big heat pumps.

Maintain and improve the public's acceptance for RES plants: Finish and publish the study on the relationship between the noise from wind turbines and its effects on health.

HEATING AND COOLING SECTOR

Introduce sustainability criteria for biomass: High consumption of biomass can cause sustainability issues. This applies to the RES-E sector as well, but much more so to the RES-H sector with its strong focus on solid biomass. Introduce sustainability criteria for biomass either on the national level or push for such criteria on the European level.

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ESTONIA

KEY TRENDS IN THE RES SECTOR

Estonia applies a technology-neutral feed-in premium (5.37 €ct/kWh in 2013)[15] as the main instrument to support RES-E. As a result, deployment is very much focused on the low-cost technologies such as onshore wind and solid biomass. This focus is in accordance with the Estonian NREAP. However, deployment happened much faster than originally planned. Support levels were thus adjusted for new wind plants from mid-2012. The support scheme is currently undergoing reform. In addition, investment grants from EU Regional Development Funds are provided for RES CHP plants, district heating networks, and wind power plants. Support is also available for farmers for the production of biomass and related infrastructure.

RES-H installations benefit from the above-mentioned investment support for CHP plants, as well as investment support for solar-thermal installations and heat pumps in private households. These measures are partly covered by EU funds and partly by the nationally-financed Green Investment Scheme, which is mainly aimed at energy efficiency in buildings but includes some RES as well. The programme for energy efficient renovation under the Green Investment Scheme is scheduled to continue throughout the budget period 2014-2020. The Estonian NREAP is not consistent with these support measures, as it foresees zero production of heat from heat pumps, solar thermal, geothermal, and biogas installations until 2020. In its most recent Progress Report, Estonia also reports zero deployment of these technologies. Only solid biomass is planned to contribute significantly in the RES-H sector, and is well on track so far. District heat plays an important role in Estonia.

Estonia subsidises the purchase of electric cars by consumers. A quota scheme for biofuels is under consideration. The country currently reports zero use of biofuels in transport, and a small amount of RES-E used in transport.

15 www.res-legal.eu

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Provide long-term security for investors: Regarding the upcoming revision of the support scheme, foresee an appropriate transition period and communicate this in advance. The new support scheme should be designed taking into account the recent relevant guidelines by the European Commission[16]. Consider applying an automatic and transparent adjustment mechanism for support levels. It is definitely not advisable to apply the new reduced support levels to existing wind power plants, as called for by some stakeholders. Such retrospective changes damage investor confidence and raise support costs in the long run.

Simplify grid connection procedures: Especially for wind farms, procedures are lengthy and complicated. Consider reducing the amount and level of details that the grid operator can ask from wind power developers. Standardise the required tests on a less detailed level similar to other member states.

As some offshore wind deployment is planned in the future, maritime spatial planning and permitting procedures need to be adapted.

HEATING AND COOLING SECTOR

Improve access of small heat producers to heat grids: Conventional retailers are very dominant in this market. Consider creating a clear and reliable regulation for energy cooperatives to foster their development, and simplify procedures for small producers to sell their heat to the grid.

Heat grids are often old and leaky, so the payback periods from new RES-H installations exceed the expected remaining lifetime of the grid. Consider making investments into grid-connected RES-H plants more attractive. Obliging communities to develop local heat management plans may also be helpful here.

Introduce a RES-H building obligation for new and renovated buildings as required by the RES Directive.

TRANSPORT SECTOR

If the use of liquid biofuels is to increase in future years, sustainability considerations have to be included into the relevant plans early on. A coordinated approach taking into account long-term agricultural, environmental, and industrial strategies has to be adopted to avoid similar sustainability problems as in some member states. Provide continuity regarding the support of electric cars.

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16 "Commission Staff Working Document. European Commission guidance for the design of renewables support schemes", SWD(2013) 439 final

FINLAND

KEY TRENDS IN THE RES SECTOR

Finland applies a feed-in premium as its main instrument to promote RES-E from wind, solid biomass, and biogas. The Finnish NREAP foresees the largest part of RES-E production in 2020 to stem from hydropower, followed by solid biomass, wind, and some biogas. In contrast to most member states, according to its NREAP, Finland also plans to produce significant amounts of electricity from liquid biofuels, making it second only to Italy. Capacity caps apply to wind, biogas, and solid biomass. Investment grants are available to companies, municipalities, and other communities for wind, solar, geothermal, biogas, hydro, and solid biomass installations.

In the heat sector, biogas and biomass CHP plants can receive a "heat bonus" in addition to their electricity feed-in premium. Investment grants are available to companies and municipalities for heat pumps, geothermal, biogas, biomass, and solar thermal installations. Farmers benefit from investment grants for heat pumps, geothermal, biogas, biomass, and solar thermal installations. Permitting procedures for small installations vary across municipalities. The Finnish NREAP foresees a focus on solid and liquid biomass.

The use of biofuels in transport is promoted with a quota regulation on the annual sales of companies selling diesel or petrol fuels. Biofuels also benefit from reduced taxation. Finland is planning to achieve its RES-T targets mainly by using biodiesel, followed by bioethanol/-ETBE. Biodiesel consumption in 2012 was much lower than planned.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Improve the attractiveness of small-scale RES-E: Small-scale RES installed by private persons currently cannot benefit from the feed-in premium or the investment grant scheme. Consider providing adequate support to such investments. Encourage municipalities to (voluntarily) align their very diverse permitting procedures for small RES-E installations according to best-practice examples, and improve the alignment of grid operators regarding grid connection.

Finland is lagging behind its 2012 NREAP figures for wind deployment. Improve conditions for wind farm developers by removing non-financial barriers in the planning and permitting stage: This may include a review of the rules allowing third parties to file complaints, and rules about conflicts with the air force radar system. Consider diversifying the market by strengthening the position of smaller wind project developers, as the state enterprise Metsähallitus currently has a very strong position in the market.

Good sites for wind farm development are common in the north of Finland, while the load centres are located in the south. Coordinate the transmission grid development strategy with the wind development strategy to avoid bottlenecks.

HEATING AND COOLING SECTOR

Improve the attractiveness of small-scale RES-H&C. Permitting procedures for small RES-H&C plants are very diverse and could be adapted according to best-practice examples. Also, consider improving the funding for RES-H&C for private persons, which is currently very limited and not reliable.

Adjust heat market regulations to make it easier for heat producers to feed heat into district grids. In case of solar thermal installations, a simple and unified procedure for connection to district grids would be helpful.

Consider making the installation of heat storage technology in or near buildings more attractive by providing support. This would involve adjusting the formula to calculate the energy efficiency of buildings, so that heat storage units close to buildings are taken into account.

TRANSPORT SECTOR

Even though alternative fuels can be cheaper than fossil fuels in some cases given the current support regime, consumers are reluctant to switch. The reasons for this should be explored and addressed, i.e. through information and awareness campaigns.

Coordinate the creation of appropriate infrastructure with the introduction of alternative fuels and drive systems to ensure acceptability by consumers.

STATISTICS COLLECTION

Improve data collection on small-scale wind and solar installations as well as heat pumps.

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FRANCE

KEY TRENDS IN THE RES SECTOR

The main instrument to promote RES-E in France is a technology-specific feed-in tariff. Onshore and offshore wind, PV, geothermal, biogas, hydro power, tidal and wave, and solid biomass installations are eligible for support. An automatic degression formula is in place. In the case of PV, the amount of electricity to be remunerated for every power plant is capped at 1,500 full load hours annually. Any electricity production above this limit will be remunerated at a reduced tariff. In addition, tenders are held at irregular intervals, awarding promotional tariffs to wind, PV, geothermal, hydro power, biogas and solid biomass installations. France already produces significant amounts of hydro power and according to its NREAP plans to focus its further RES-E growth on onshore and offshore wind, as well as solid biomass.

RES-H installations are supported by investment grants, which are allocated to large biomass plants through a tendering procedure, and to heat pumps, biogas, biomass, geothermal and solar thermal installations via a programme to support homeowners with modest incomes. A zero-interest loan for RES installations in the course of building renovations is available for private homeowners or companies. Tax incentives are also being applied. The French NREAP puts a strong emphasis on solid biomass. Around a third of the households in France apply electric heating systems.

In the transport sector, support is mainly provided by a quota regulation on biofuel blending. Fuel suppliers who meet the annual quota are subject to a reduced pollution tax rate. The French NREAP foresees the largest part of biofuel demand to be covered by biodiesel.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Avoid exposing RES producers to legal and regulatory uncertainty such as caused by the recent law suit concerning state aid against French wind power producers. This could have been prevented through a different policy design and/or the timely notification of the scheme to the European Commission. The uncertain situation has severely undermined investor confidence.

Avoid changes in the tax regime which retroactively affect RES projects, such as the significant increase of the IFER tax[17] especially for solar and onshore wind installations.

Improve planning and permitting procedures: Ensure better coordination between the involved authorities and their respective time schedules. The ideal solution would be a one-stop-shop which can be approached by developers to handle all procedures and decrease waiting times. Speed up court procedures regarding complaints against planned wind farms. Simplify the adaptation of land use plans for large PV installations and ensure better coordination between those authorities responsible for planning wind farm development and those for military safety restrictions.

Grid connection and access: Provide reliable long-term RES policies, so that grid operators are able to anticipate RES deployment in their area and can plan accordingly. Reduce the generators' participation for future grid expansions. Consider simplifying grid connection procedures and reducing the proportion of connection costs borne by RES producers. Apply compensation payments in case of curtailment due to local grid congestion.

Ensure a smooth transition to a new regulatory regime (currently under contemplation by the French government), with an adequate transition period from the FiT regime and absolutely no retroactive effects that may impact plants in operation and in advanced development.

HEATING AND COOLING SECTOR

Consider encouraging investments into small RES-H installations. The most important support instrument at present, the investment grant allocated through tenders, is mainly targeted at larger installations. Administrative processes under the scheme are also too complex for owners of small installations.

Introduce a RES-H building obligation for new and renovated buildings as required by the RES Directive.

Improve the energy efficiency of CHP plants: When tendering CHP plants, the tender design often focuses on electricity production. Consider the possibility of including heat production, in connection with heat demand on site, as a criterion in the tendering process.

Address the lack of awareness among building owners and installers, for instance regarding the possibility of installing a solar-thermal system when replacing an old boiler. Monitor and review existing awareness campaigns for the public and for professionals in the sector to improve their effectiveness.

TRANSPORT SECTOR

Ensure the reliability of biofuels policies: France is a big producer of biodiesel. Investors in first generation biofuels experienced unstable support and are now reluctant to invest in second generation biofuel facilities. Barriers also include unclear EU rules and definitions on double-counting of biofuels towards official RES shares. However, these issues are only partly within the control of national decision makers, as they are governed by EU legislation.

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17 Wind and solar energy installations with an installed capacity over 100 kW are subject to a flat-rate tax on network businesses called IFER, which currently amounts to 7,210€ per MW.

GERMANY

KEY TRENDS IN THE RES SECTOR

Since December 2013, Germany has a new coalition Government of the Christian Democratic Union (CDU) and the Social Democratic Party (SPD). The energy competence is now held by the Federal Ministry for Economic Affairs and Energy (BMWi), led by Sigmar Gabriel (SPD). The new Government is in favour of setting three targets for 2030 - renewable energy, CO_2 reduction, energy efficiency - at the European level. Regarding the national situation, the support mechanism for renewables is to be amended again, with a thorough revision planned to enter into force in 2014 before the summer break.

The revision of the support mechanism for renewable energies threatens to bring the development of renewables to a halt by implementing the so-called expansion corridor agreed upon by the coalition government. It sets the goals for the development of renewables in the electricity sector at 40-45% by 2025 and 55-60% by 2035. Among the measures which should ensure the attainment of these goals are: a 'breathing cap' for wind onshore of 2,500 MW installed capacity per year, with tariff reductions becoming effective in case of an expansion above 2,500 MW (the same mechanism was introduced for PV in 2012); an expansion goal of 100 MW for bioenergy, with waste and residues providing the bulk of this development; mandatory direct marketing of renewable electricity for all systems larger than 500 kW starting in 2015; the introduction of tenders starting 2017, etc.

The coalition agreement includes almost no measures for the H&C sector. The only issue worth mentioning concerns the commitment to stabilise the existing market incentive programme (MAP). Coalition talks about the introduction of a tax relief did not materialise due to the unwillingness to bear the costs. In conclusion, there is not much happening in this sector.

Biofuel production picks up after a slump due to the restriction of cheap imports, but the outlook remains grim. With regard to electromobility, there are slight upward tendencies, with some new German cars coming on the market and a minimal increase in registered e-vehicles. This progress is however insufficient for reaching the 2020 goals.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Guarantee a clear and stable framework for the development of renewables in Germany. The general RES-E strategy lacks reliability and the future of the support scheme is uncertain (the feed-in tariff should be replaced with tenders in 2017). This is one of the most significant barriers in the sector. Ongoing discussions have already caused a number of wind projects in the pipeline to reassess their profitability under altering conditions.

Improve the current framework for the development of biogas plants. With increasing environmental and technical obligations for biogas plants, a proposed annual cap of 100 MW starting 2014, and lower remuneration levels since 2012, the operation of the plants cannot be guaranteed anymore, which in turn obstructs project financing.

Elaborate proposals for a genuine market transformation. In its proposed amendments, the Federal Ministry for Economic Affairs and Energy fails to make substantial proposals as to how the energy-only market should be transformed to incorporate large shares of renewables, especially variable energy sources. Instead, it introduces mandatory direct marketing and tendering as the future support mechanisms, proposals which only increase the risks put on renewable energy producers.

Reverse the current negative tendency in spatial planning. According to the proposed key amendments, German federal states will be given even more regulatory freedom to determine minimum distances between wind power plants and residential areas. Some states are already defining these distances in a very restrictive way, so that nearly all potential areas are not available for wind power development.

Encourage a more positive public debate. In the case of biogas, the public discourse focuses on "the monoculture of maize", also influencing the political decisions regarding the support scheme. The same negative perception is encountered by geothermal energy and the sector does not have the capacities to start comprehensive information campaigns. Furthermore, the public debate focuses disproportionately on the cost aspects of the support scheme and neglects the generally high level of support for the energy transition or the unequal burden sharing between private consumers and the energy-intensive industry.

HEATING AND COOLING SECTOR

Make the renewable H&C sector visible and functional. Despite its huge potential for financial and CO_2 savings, the heating and cooling market is widely ignored. The existing policy focuses mostly on new buildings, leaving the existing building stock behind. Unfortunately, the coalition agreement does not include tax reliefs for retrofitting, which would have been an important instrument to revive the market.

Improve the public perception of renewable H&C technologies. Heat pumps and biomass suffer from a negative public perception.

Improve standardisation efforts for heating systems. Many installers do not recommend renewable heating because they often lack the technical expertise necessary for the successful installation and maintenance of different RES H&C technologies.

TRANSPORT SECTOR

Guarantee a clear and stable framework for biofuels at the European level. The Indirect Land Use Change (ILUC) debate has created uncertainty among biofuel producers and might stop the development in the whole sector. The proposal by the European Commission to minimise the climate impacts of biofuel production lacks a reliable scientific basis on which European institutions could reach a consensus. It is an unfair proposal, considering that every kind of land use change could be considered as ILUC.

Revise the introduction of a greenhouse gas reduction quota in 2015. The proposed change will involve complex calculations and translate into an increased workload for biofuel producers. Moreover, the concrete processes, methodologies and provisions are still undefined.

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GREECE

KEY TRENDS IN THE RES SECTOR

In 2013 the RES sector in Greece has been strongly influenced by the ongoing recession and the problems associated with the financial crisis at the national and European level. The distortions in the operation and the obsolete design of the national energy market are also major factors having an impact on the Greek RES sector.

In 2013, support for RES-E projects has dwindled further. A moratorium imposed on the licensing and the connection of new PV projects to the grid (except for small rooftop systems) in April 2013 until the end of 2013 was extended for another year in December 2013. PV tariffs for new PV projects were halved in order to avoid overcompensation. In October 2013, a new levy on the annual revenues of all RES-E producers was imposed by law in order to attenuate the energy costs of the large industry sector. During the second semester of 2013, only small rooftop systems and a small number of wind farms have been connected to the grid. As of the beginning of 2014, new wind farm projects will not be eligible any longer for public support in the form of capital subsidies.

The use of biomass for heating has increased in 2013. This can be explained through the burning of increased quantities of cheap, low quality wood in existing fireplaces and old stoves for space heating by low as well as middle income families affected by the crisis. This tendency has been contributing to a serious degradation of the air quality in major urban centres.

The utilisation of RES in the transport sector has been limited to the introduction of small quantities of biofuels, mainly locally produced biodiesel, in the national automotive fuel mix.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

The weaknesses of the national RES-E strategy formulated in 2010, coupled with serious mistakes in its implementation, have produced a burgeoning electricity tariff deficit and long delays in the remuneration of RES-E producers. In 2013, the government introduced a series of restrictive measures to contain the problem, which has had a further detrimental impact on the viability of existing and the planning of new RES projects. In this context, revenue risk under the existing support scheme and access to project finance remain major barriers for the further development of the sector.

The Government should propose and adopt a viable solution on the electricity tariff deficit. Extensive public considerations indicate that the most feasible option would involve an increase of the levy imposed on energy consumption coupled with a voluntary, permanent decrease of the annual revenues of RES (mainly PV) producers in exchange for an extension of the duration of their Power Purchase Agreements (PPAs) and an extension of their bank loans. The permanent elimination of the deficit would restore the confidence of investors in the RES payment system and allow better access to finance.

Formulate a new / improved RES-E development strategy and support scheme. This action needs to involve all market players and should be consistent with the principles outlined in the European Commission guidance for the design of renewable support schemes. Furthermore, it needs to uphold the current national RES target for 2020 and further expand it for 2030.

The government should seek to support/secure the financing and implementation of new interconnections of the electricity grid both with the non-connected islands and with neighbouring countries. It should also support the implementation of pump-storage systems. This would allow for a more efficient utilisation of the country's significant renewable energy potential.

HEATING AND COOLING SECTOR

The major barrier in RES heating and cooling has always been the lack of an integrated strategy at the regional and the national level, as well as of a relevant legal framework containing proper incentives. The government should proceed with the formulation of a national RES-H strategy identifying priorities and setting realistic targets and incentives for its implementation.

TRANSPORT SECTOR

The major barriers in the RES-T sector in Greece are the scarcity of mature RES-T technologies, the non-technical problems associated with the use of biofuels in transport and the lack of a general RES-T strategy. It is recommended to formulate a RES-T strategy to deal with the limitations in the use of biofuels in the transport sector and to monitor and promote the implementation of new, reliable RES-T technologies.

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HUNGARY

KEY TRENDS IN THE RES SECTOR

In Hungary, electricity generated from renewable energy sources is promoted through feed-in tariffs. The RES-E share in gross electricity consumption increased from 2005 to 2011 and reached 6.4% in 2011, while in 2012 the RES-E share slightly decreased to 6.1%.

Currently, the main renewable energy source used in Hungary is biomass, followed by wind and hydro power. Solar power has a low share summing up to 0.7 ktoe. Even though Hungary has a significant geothermal potential, no geothermal power plant for electricity generation has been installed so far.

The government stresses its intention to diversify energy supply technologies and does not focus on renewable energy exclusively. In official energy planning, a clear preference is given to nuclear power.

Hungary supports the use of RES-H&C technologies through various subsidy programmes. Hungary's energy demand in the heating sector is relatively high compared to other countries. Due to the poor energetic condition of buildings, 40% of Hungary's overall energy demand is consumed in buildings, of which a share of two thirds is used for heating purposes alone.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Infrastructural planning and the adaptation of the transmission system have to prioritise RES-E rather than nuclear power. Hungary's high nuclear power share of 40% of the electricity production and its planned further extension will otherwise hamper future RES-E deployment.

Ensure strategic reliability in the RES-E sector. The planned so-called METÁR system would be more predictable and transparent than the current feed-in tariff system, but postponing its introduction has created considerable insecurity in the Hungarian RES-E market.

Align feed-in tariffs with complementary support. Feed-in tariffs are in general too low for most technologies, requiring additional support for example through investment grants. A better alignment of investment subsidies for RES-E projects and operational support under the current feed-in tariff system is necessary.

Implement a state financed insurance scheme to cover the drilling risks of geothermal projects. A stable, state financed insurance scheme to cover the drilling risks of geothermal projects is urgently needed to encourage geothermal power generation.

Tackle infrastructural deficits in the electricity sector. The transmission grid has only limited capacity for integrating variable RES-E. Thus, the improvement of the grid infrastructure along with the development of a balancing capacity and smart grid measures are essential for increasing the share of these technologies in the future.

Clearly defined rules regarding grid connection for RES-E have to be implemented, as only minimal obligations are defined by law.

Simplify the application procedures for RES-E support. There is no reliable overview of all the necessary documents and application procedures. Authorities can involve various additional so-called professional authorities, for example state chief architects, fire safety agencies, cultural heritage administrations, etc. into the licensing procedure. This significantly increases the number of involved authorities, lengthening the duration of the administrative procedure. Furthermore, administration costs for investors are neither transparent nor reasonable. These non-economic barriers have to be tackled by all involved public institutions.

HEATING AND COOLING SECTOR

Increase the availability of grants for RES-H&C projects. It has happened in the past that subsidy programmes were closed due to exhausted funds only a few days after having been launched.

Due to the many unknown factors regarding geothermal drilling, revenue risks linked to the own financial contribution have to be addressed in the design of support policies. In addition, various subsidy programmes for geothermal projects should be launched.

Provide support for infrastructure development in the heat sector. The share of investments and capital costs for infrastructure development that can be passed on to final consumers through district heating prices is comparatively low. Thus, district heat companies face difficulties to raise the financial means needed for infrastructure development. The availability of grants would alleviate these barriers and permit the deployment of biomass and geothermal based district heating.

TRANSPORT SECTOR

To create a well-functioning market for biofuels, a consistent strategy for increasing domestic demand for biofuels produced in Hungary is needed. Today approximately 90% of Hungary's bioethanol production is exported.

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IRELAND

KEY TRENDS IN THE RES SECTOR

Ireland has a feed-in tariff scheme (called REFIT) which in effect operates as a floor price to commercially negotiated Power Purchase Agreements. In addition, corporate RES-E investments (solar, wind, biomass, hydro power) benefit from a tax relief scheme. Ireland's RES strategy focuses on wind, around 12,000 GWh of (onshore and offshore) wind electricity production are planned for 2020. The electricity act ensures non-discriminatory access for all power plants to the transmission grid. The costs of grid expansion are borne by the final consumers (shallow cost approach), but RES plant operators face additional connection costs (such as technical and maintenance costs) which can make investments unattractive. In addition, long delays have been observed in the connection of wind farms. The "group processing approach" for RES along with the number of applications submitted results in lengthy timelines concerning the processing of those applications.

An investment grant scheme for homeowners is in place for solar thermal installations. A tax regulation mechanism for companies, mainly aimed at energy efficiency measures, also covers solar thermal installations and heat pumps. Other technologies such as solid biomass and biogas are currently not being supported.

RES in transport are supported by the Biofuels Obligation Scheme (BOS), a quota scheme requiring fuel suppliers to include a certain percentage of biofuels in their annual fuel sales.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Minimise insecurities for investors regarding grid access: For wind energy, payments under the feed-in tariff scheme are based on metered output. Consider introducing clear provisions such as compensation payments for forced curtailment due to local grid congestion.

Simplify and streamline planning and permitting procedures, especially for wind parks: For instance, planning permissions have sometimes already expired by the time a RES project developer has obtained a grid connection offer. The procedures should be shortened and ideally a one-stop-shop which handles all relevant procedures should be created.

HEATING AND COOLING SECTOR

Create a reliable RES-H&C strategy and appropriate support schemes: Ireland is currently experiencing less deployment of biogas and solid biomass than planned. Previous support programmes have expired and have not been replaced. Consider providing support to these technologies and focus especially on improving the framework conditions for high-efficiency CHP plants.

Improve awareness and training among professionals in the sector: Installers are often not aware of renewable alternatives and therefore not able to advise building owners in this respect.

TRANSPORT SECTOR

The consumption of biofuels has been below planned levels in 2012. If the NREAP figures are to be achieved, the support scheme has to be reviewed and adjusted.

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ITALY

KEY TRENDS IN THE RES SECTOR

Thanks both to a decrease in the electricity demand and to a good performance of all RES, in 2013 renewable energy accounted for around 30% of national electricity gross production.
The Decree Law n. 69/2013 (DL Fare) lowered the turnover threshold for paying the "Robin Tax" and this measure has an impact on many small and medium RES enterprises[18].

RES-E. According to DM 06/07/2012 (RES-E other than PV) the rankings of the first two calls for auctions and registries have been published. The quotas available for registries were by far overfilled, while only a few plants participated in auctions.
On the 6th of July 2013 the V Conto Energia (PV) was shut down. The sector is now expected to sustain itself, taking advantage from present fiscal benefits and new market opportunities within the self-consumption systems.
The support scheme for bioliquids has been modified once again: the Stability Law n. 147/2013 allows an increase of the incentives for 2 years before reducing them in the following years.
The Decree Law n. 145/2013, "Destinazione Italia", introduced a (voluntary) reduction of the amount combined with an extension of the duration of the RES-E incentive. This measure is not applied to plants which are covered by the newly introduced support scheme (DM 06/07/2012).

RES-H. In January 2013 the **"Conto Termico"** (DM 28/12/2012), the support scheme for small RES-H sources, has finally been published.

RES-T. In March 2013 incentives for the purchase of low-emission cars were introduced for the period 2013-2015. The Ministerial Decree which set up an incentive system for the injection of biomethane into the gas grid and for its use in the transport sector has been published in December 2013.

18 Introduced in 2008, the so called "Robin Tax" (the reference is to Robin Hood, who steals from the rich and gives to the poor!) is a tax on the revenues of electricity production companies with relevant incomes. At first the threshold for its application was an annual gross revenue over 25 million € and RES companies were exempted. Then in 2011 the exemption for RES companies was abolished and the annual gross revenue threshold reduced to 10 million € (provided the company had a taxable income of 1 million €). Finally in 2013, through "DL Fare", the Government further reduced the gross revenue and taxable income thresholds (to 3 million € and 300.000, respectively), thus having an impact on many small and medium RES companies.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Guarantee clear and stable incentives over time

The endless modification of the support scheme, the uncertainty about obtaining an incentive, about the amount of the incentive and about the post-2015 future are dangerous for the market and create problems to access finance. Investors need a clear and long-lasting support framework with predictable changes. New rules should not be applied retrospectively.

Revise quotas of the new tendering system

The quotas of incentivised energy set in the new support scheme have revealed themselves as inadequate and are wrongly distributed among the different RES technologies and plant sizes. Some flexibility should be provided in order to allow for the re-allocation of unused quotas.

Simplify the administrative procedures through centralization of energy competences

The decisional power in the energy field should be kept at the national level as much as possible, while implementing transparent and consistent administrative procedures at the regional level.

Improve the dispatching of RES electricity

The Authority for Electricity and Gas (AEEG) decided to charge producers with the costs for the difference between the planned production and the energy really delivered to the grid by non-predictable RES plants: fair dispatching conditions should be implemented for all RES plants.

HEATING AND COOLING SECTOR

Improve incentives and access to finance for RES-H&C

The high cost of RES-H&C requires adequate incentives for an adequate period. The bank system reveals scarce maturity for financing RES-H&C solutions, especially if linked to ESCOs. Training is needed.

Stimulate training and certification for operators of conventional energy plants

Non-conventional technologies (heat pumps, biomass boilers, solar panels) are often neglected due to a general lack of know-how. Training programs to support the qualification of conventional plant operators are needed. The certification of installers also needs to be further developed. The certification procedures should be aligned with EU standards and the levels of interest to undergo certification should be raised.

Simplify the rules and implementation of the support scheme for district heating networks

Complex regulations and uncertain legislation make it difficult to develop DH networks. It is not yet clear if DH networks should be considered a public service (like electricity and gas distribution) or not. Incentives due for the realization of new networks (D.Lgs. 28/2011) are still missing. Quick and strong action is required to allow for the further development of the sector.

Implement a legislative framework for the injection of biomethane into the natural gas grid

The possibility to inject biogas into the natural gas network is still not operational. The legislative framework with all the necessary technical rules to connect plants to the grid and the standards for the gas quality should be completed.

TRANSPORT SECTOR

Improve training and implement a comprehensive information system

The main barrier is the lack of knowledge and experts. Only very poor and unofficial data are available. A solution would be a better collaboration between the Ministries of Transports and Agriculture, to promote an exchange of information and to elaborate a comprehensive strategy (legislative framework +support scheme) for a sustainable transport system.

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LATVIA

KEY TRENDS IN THE RES SECTOR

The Latvian economy has suffered from the economic crisis in the past years. Depleted municipal budgets and lower income for private households have led to concerns about energy costs. Some RES industry stakeholders complain that the Ministry of Economic Affairs publicly blames RES-E support costs as the main reason for increasing consumer electricity prices, while the effects of increased fossil fuel prices are not communicated.

Latvia's main RES-E support instrument, a technology-specific feed-in tariff allocated through tendering rounds, was put on hold in 2012 due to concerns about corruption. No new tendering rounds are expected until 2016. The support scheme is under revision. The Latvian NREAP focuses on hydro power, but also plans for solid biomass, biogas, and wind. PV plays a negligible role. In 2012, Latvia significantly overachieved in the production of solid biomass (+31%) and biogas (+20%), due to very high support levels for those technologies before the support scheme was put on hold. A tax of 5-10% has been imposed on existing RES installations in January 2014. Without support, new investments can be expected to be much lower.

RES-H&C installations are supported through a preferential tax treatment of fuels. The Latvian NREAP focuses almost exclusively on solid biomass to achieve its RES-H&C targets, complemented by a small amount of biogas. As the country already started off with a very high RES-H&C share, only a small increase in the absolute consumption of renewable heat is foreseen. Latvia's biogas consumption in 2012 has been slightly lower than planned, while solid biomass consumption has been higher. However, biomass consumption in households is still below the planned level.

The use of biofuels in transport is promoted through a reduced excise tax rate on blended fuels. The beneficiaries are those companies processing, holding, receiving, or dispatching fuel products. Latvia is currently lagging behind its plans on the use of biodiesel, bioethanol/-ETBE, and other biofuels.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

The newly revised RES-E support scheme should include a reliable and transparent mechanism to determine support levels for new RES installations. For small- to medium-scale installations, it is advisable to set the level administratively and to plan for regular adjustments, for instance triggered by the capacity installed in the previous year. Policy makers should consider introducing an automatic adjustment mechanism instead of having new support levels approved by the national parliament in a lengthy process. Technology-specific capacity caps (i.e. no further support for onshore wind as soon as x MW of onshore wind are installed in the country) can be applied if there is strong concern about support costs getting too high. However, automatic adjustments of the tariffs are preferable in order to avoid a stop and go effect. For large-scale installations, setting the support level through a tendering mechanism can be appropriate. In this case, the tendering process must be well designed in order to ensure competitive bidding. Penalties must be high enough to discourage winners from not realising their projects, but not so high as to discourage bidders from participating at all. Adopt best-practice design features from member states who have successfully applied tendering mechanisms, for instance Denmark.

Retrospective changes such as the new tax being applied to existing RES-E installations should definitely be avoided in the future. Such unpredictable policy changes increase the risk margins for investors, which in turn leads to higher support costs.

HEATING AND COOLING SECTOR

Tax reductions are a commonly used instrument to support RES-H&C in many member states but may be considered unreliable by investors, because changes in the tax regime will also affect existing installations. In order to create more security for investors, a long-term strategy for RES-H&C should be put in place.

Given the limited biomass potential in Europe, it is advisable to ensure the efficient use of solid biomass in heating, especially as Latvia focuses very much on this fuel until 2020. Consider providing extra incentives to efficient installations, for instance in the form of investment grants, and think about including a CHP bonus in the above-mentioned RES-E support scheme.

Make biomass heating more attractive to households. The current support mechanism applies to fuel costs, which leads to lower expenses over the lifetime of the installation. However, private households often react better to support which reduces the high upfront costs of installing a RES-H&C plant, like investment grants or tax deductions on the investment.

TRANSPORT SECTOR

Biofuel consumption is not only lagging behind plan, but has even decreased between 2011 and 2012, suggesting that the support level is too low to incentivise biofuel use. Consider increasing the support through further tax instruments or through a quota scheme.

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LITHUANIA

KEY TRENDS IN THE RES SECTOR

The main instrument to promote RES-E in Lithuania is a feed-in tariff. The tariff amount is set administratively for plants below 10kW and through a tendering mechanism for plants exceeding 10kW. There are technology-specific capacity caps which are in line with the capacities planned in the NREAP for 2020. However, judging from recent deployment trends, the caps will be reached much earlier than that. The feed-in scheme is accompanied by investment grants, a loan programme, and an exemption from excise tax. Next to the well-established hydro power, the NREAP foresees an important role for onshore wind in Lithuania.

RES-H is promoted through investment grants and exemptions from environmental pollution taxes. For district heat, independent RES-H producers enjoy a purchase guarantee for heat that is cheaper than the heat produced by the heat supplier himself, provided that there is sufficient grid capacity and consumer demand. Roughly one quarter of RES-H consumed in 2012 was district heat. As foreseen in the NREAP, most RES-H energy consumption is covered by solid biomass.

RES-T is promoted via an excise tax relief and an exemption from environmental pollution tax for biofuels. Furthermore, there are financial incentives for farmers who produce raw materials for biofuel production.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Consider increasing the capacity caps for low-cost technologies such as onshore wind. The caps are expected to be hit long before 2020, which will oblige the government to confirm the procedure to regulate further deployment.

Setting support levels for larger installations via competitive tenders has many benefits. However, the design details can be complicated. Risks for bidders should not be too high to prevent participation but there have to be penalties for winners who do not realise projects. For instance, stakeholders in Lithuania have complained about high guarantee payments asked from all participating bidders. Consider reviewing the tendering scheme regularly to check whether risks and penalties are still set at appropriate levels given the market situation. Unproductive risks should be avoided.

Explore possibilities to let local populations benefit financially from wind farms built in their vicinity. This has shown to improve public acceptance in other countries, for instance in Denmark.

HEATING AND COOLING SECTOR

Reduce entry barriers for independent RES-H producers: The Lithuanian heat market is dominated by five major players. For district heat, the purchase guarantee for independent RES-H suppliers only holds if they produce more cheaply than the main supplier. This leads to insecurities for independent producers, as they can be denied grid access as soon as the main supplier switches to a cheaper fuel. Consider creating a more reliable framework for investments into independent RES-H plants, with long-term security regarding grid access.

Improve support for heat pumps: Some deployment of heat pumps is foreseen in the NREAP but there is virtually no support. Consider either adapting the investment grant scheme to include more heat pumps, or enforce the legal provisions ensuring reduced electricity prices for electricity consumed in heat pumps more strictly.

TRANSPORT SECTOR

Biofuels produced in Lithuania are mostly first generation, the vast majority of which is exported. Policies favouring second generation biofuels in the EU will thus have negative effects on domestic biofuel producers and on farmers producing the raw materials. Lithuania should take early action to help its domestic industry adapt to the changing circumstances and anticipate those changes in its agricultural policy.

Create a better strategic perspective and regulative framework for electric vehicles, and improve the charging infrastructure. The strategy might include financial support to electric vehicle buyers through an investment grant or tax exemptions.

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LUXEMBOURG

KEY TRENDS IN THE RES SECTOR

Luxembourg's strategy to achieve its renewable energy targets primarily consists in focussing on the transport sector, namely on the share of biofuels in fuel consumption. The country relies on electricity imports rather than on indigenous production. However, the present discussion in Europe about a possible reduction of the incorporation rate of first generation biofuels from 10% to 5% calls the strategy of Luxembourg into question.

There is also a lack of sectoral plans for the development of renewables. There are no governmental development plans for the wind, solar and biomass sector. Not even the preparation of a wind and solar PV cadastral plan has been commissioned by the government.

The promotion of electricity from renewables is ensured through feed-in-tariffs, investment grants, and in case of photovoltaic installations an exemption from income tax.

The use of gas for heating purposes is quite common in the country, which limits the need for RES-H. Besides, regulations on the energy performance of residential buildings in Luxembourg have been quite strict in the past years. Therefore, newly built housings require only little heat production. The challenge lies in meeting the heating demand of historical districts in the country, where it is necessary to develop suitable heat generation systems, such as cogeneration using RES.

The use of renewable energies in the transport sector is promoted through a biofuel quota. Oil companies selling petrol and diesel for consumption are obliged to fulfil a defined quota of biofuels per year. Currently, the biofuel quota to be fulfilled by oil companies is set at 4.75%.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Create a stable support scheme for RES-E: In the period from 2002 to 2013 for example, feed-in-tariffs for solar PV have been introduced and abolished a number of times.

Integrate RES-E projects into spatial and environmental planning: Luxembourg's wind energy developers face several challenges prior to the installation of wind turbines, such as environmental constraints imposed by the military and civil aviation due to the presence of radars, as well as constraints related to environmental protection.

HEATING AND COOLING SECTOR

Increase provision of information and communication about the availability of renewable energy technologies most adapted to Luxembourg: This is the case of solar thermal energy for example, which is frequently deemed too expensive due to the low insolation rates in the country, while the installation of solar water heaters is regularly suggested. The use of wood burning systems is fairly limited, even though country-specific conditions would allow for a good profitability of such facilities. Instead, one observes the existence of negative communication regarding the maintenance constraints of wood burning installations necessary to assure their appropriate performance.

Reduce complexity and bureaucracy of support applications: Applications have to be perfect in order to be considered admissible, yet applicants are often not technically qualified to fill-in all the files properly. As a result, application files are frequently sent back to applicants after having been checked by the administration for a while.

Maintain quality standards of RES installations: There is a lack of certification of installers regarding several renewable energy technologies. Solar thermal systems for example are often badly installed, which leads to energy losses and higher maintenance costs, thus affecting the acceptance of this technology.

TRANSPORT SECTOR

Revise the strategy for RES development in the transport sector (with involvement of the general public): Public acceptance of biofuels is lacking in the country. Numerous advocates of renewable energies in Luxembourg criticise the government's strategy to focus on the development of biofuels in the transport sector. In this regard, a communication platform composed of several non-governmental organisations has been created to protest against the further production and use of biofuels.

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MALTA

KEY TRENDS IN THE RES SECTOR

Exclusively electricity generated by PV installations is supported through a feed-in tariff. Additionally, investment costs are partly refunded through a subsidy scheme. According to Malta's Progress Report under the Directive 2009/28/EC of 2013, the support provided nearly resulted in a tripling of the installed PV capacities from 6.6 MW in 2011 to 18.7 MW in 2012.

The planned offshore wind farm Sikka l-Bajda, which was expected to be a major contributor to the RES target of 10% renewable energy share in the gross final energy consumption by 2020, will not be considered any further for environmental and economic reasons. According to Malta's Progress Report under the Directive 2009/28/EC of 2013, joint projects overseas or statistical transfers are considered instead if needed.

A submarine cable connection to Sicily is going to be completed by the beginning of 2014. This will increase the stability of the domestic electricity distribution network and Malta will be able to import electricity generated by renewable energy sources.

Malta promotes solar water heating systems for domestic use through a subsidy scheme. As a result, energy generated by solar heating grew from 2.9 ktoe in 2011 to 3.9 ktoe in 2012.

Biodiesel in Malta is retailed either directly by the manufacturers or by a number of petroleum filling stations. Biodiesel has a separate pump in the filling stations, forcing drivers to create the mix themselves by taking fuel from two separate pumps.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Reduce the complexity of administrative procedures: Micro wind energy is being somewhat limited in the built environment by the Maltese Environment and Planning Authority through high requirements, including a complete environmental impact assessment. This poses a large burden on the applicant. For large-scale projects, there are no rules or guidelines, nor a clear sharing of responsibilities. The Maltese Resource Authority, the Environment and Planning Authority and Enemalta, the domestic energy company, refer to three different ministries, which in turn do not have a clear division of responsibilities between themselves. As of now, there are no established rules for developing large scale projects and different authorities do not know how to deal with such requests. This lack of coordination and the unclear responsibilities also represents a clear cost burden for possible applicants. Thus, a better coordination between the different bodies would be beneficial to the country. However, considerations need to be made in terms of coordination costs vs. possible benefits, given the small opportunities that Malta offers for large-scale projects.

Provide financial incentives for several RES-E options: Currently, RES-E support is limited to PV installations. Thus, in addition to the lack of clear administrative procedures, other RES-E options are also not considered in an adequate manner where financial incentives are concerned.

Reduce the duration of administrative procedures: The lead time involved in grid connection, including the collection of all permits, may take up to 5 years.

HEATING AND COOLING SECTOR

Raise the remuneration level for RES-H&C installations: According to an analysis of the monetary sufficiency of the support measures in the renewable heat sector, most analysed heat sources (district heating, heat pumps and biomass) have all been considered to be supported insufficiently. Only in the case of solar thermal applications, adequate remuneration levels have been identified.

Implement regulations for a suitable installation of solar H&C technologies: Around 50% of the Maltese population live in apartment buildings. This means that they might not have access to the roof (except for the top floor). In order to solve this problem, a facade installation represents an option. However, for aesthetic reasons or for lack of knowledge, the Malta Energy and Planning Authority (MEPA) does not easily give permits for this kind of installations, as this is a rather new technology in Malta. Another problem is that most detached-house tenants are elderly couples with a limited interest in the installation of solar thermal systems. Also because there is a tendency to sell the property after their death, demolish the house and build apartment buildings. In addition, there are no solar rights in Malta. If a building has a new flat built at its top, casting shadow on the solar panels of the neighbouring building, no compensation is paid to the solar panel owner.

TRANSPORT SECTOR

Establish technical regulations to mitigate barriers for biofuel blending: Biodiesel has a separate pump in the filling station, forcing drivers to create the mix themselves by taking fuel from two separate pumps. This creates a barrier, as it adds one additional step to the procedure of re-filling.

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THE NETHERLANDS

KEY TRENDS IN THE RES SECTOR

The main support instrument in the Netherlands is the SDE+, a combined support scheme for RES-E, biogas and heating technologies. The SDE+ is in principle a feed-in premium allocated via a tendering procedure. The tender is organised in steps, starting with the cheapest options and moving on to more expensive ones until the budget limit is reached. All RES technologies are generally covered under the scheme but due to the stepwise tendering on a first-come-first-served basis, low-cost RES-H and biogas options are favoured by the scheme, rather than more expensive RES-E options like offshore wind. Preferential loans and tax benefits serve as secondary instruments to incentivise RES investments. The Dutch support scheme has been characterised by frequent adaptations and changes in the past. This led to investor confidence being rather low. The national Energy Agreement on Sustainable Growth of 2012[19] shall provide for a more long-term view, improving reliability. The Dutch NREAP focuses on solid biomass and onshore wind as the most prominent technologies, with some ambitious deployment also planned for biogas.

The use of biofuels in transport is promoted through a quota scheme which obliges companies importing petrol, gas, or diesel fuels to cover a certain share of their total annual sales through biofuels. The production of biofuels for transport is also incentivised via tax benefits.

19 http://www.ser.nl/en/publications/publications/2013/energy-agreement-sustainable-growth.aspxv

POLICY RECOMMENDATIONS

ELECTRICITY AND HEATING SECTOR

Maintain long-term reliability for investors: Frequent changes in the combined RES-E and RES-H support scheme (SDE+) have damaged investor confidence. The Energy Agreement of 2012 was a good step to increase the transparency and reliability of the national RES strategy. The objectives and measures laid down in the Agreement should now be realised. More concrete documents setting visions for individual RES technologies will be developed, which is helpful.

Improve the realisation rates of successful projects under SDE+: Due to the first-come-first-serve principle of the scheme, some projects bid too low in order to be able to participate in one of the earlier steps, fearing that the overall budget will be used up early. Developers later have trouble realising these projects. Consider making support for higher-cost technologies more reliable by allocating a certain portion of the budget to them. In particular, the scheme should differentiate between RES-E and RES-H based on the very different cost level of the two sectors. Introduce a significant penalty in case of the non-realisation of projects.

Improve access to finance: The Green Deal is a first step in helping RES projects access the resources of banks. The scheme should be closely monitored and further research should be done regarding the reasons why some banks are so reluctant to provide credits to RES installations, and how this could be changed.

Developers of RES projects often face significant public opposition. This is especially the case for wind farms, but seems to be increasing regarding biogas and solid biomass installations as well. Develop strategies to address the lack of public acceptance, for instance by ensuring that local communities benefit financially from wind parks in their vicinity. Include the public in the planning process at an early stage to integrate their views.

Some stakeholders have expressed concerns about the focus of the Dutch NREAP on solid biomass and biogas, rather than on wind and PV. The Netherlands produce little biomass themselves due to limited natural resources and are thus dependent on world market prices. While there may be opportunities for trade and job creation, some stakeholders would like to see a more concrete vision for biomass use in the future.

Introduce a RES-H building obligation for new and renovated buildings, as required by the RES Directive.

TRANSPORT SECTOR

While the infrastructure for electric vehicles is relatively good, this is not the case for biogas-fuelled vehicles. For operators of filling stations, installing the necessary pumps is often not a lucrative investment, as the payback times can be longer than the duration of their lease contracts. For instance, typical lease durations for a highway filling station are around 4 years. If the further development of CNG-powered vehicles is desired, the provision of infrastructure needs to be made more attractive, for instance by way of investment grants.

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POLAND

KEY TRENDS IN THE RES SECTOR

The lack of full implementation of the 2009/28/EC Directive through the Polish RES Act is a major issue which has impacted the development of the RES sector.

The current law provides a sufficient legal basis for exploiting existing projects, as well as developing new investments. But the lack of a long-term strategy for RES in Poland brings some risks: The certificate system is valid until the end of 2021 and may be subject to change. Therefore, investors are looking for other business models which could guarantee a reimbursement of their investment costs. The development of small scale projects for the own energy consumption may be a new way of promoting RES projects in Poland.

Electricity sector: Poland lacks a long-term strategy. The certificate system is only valid until 2021. A new tendering system may be introduced before that date. A legislation is being prepared for small scale projects (< 40kW) but no additional financial support in form of feed-in tariffs is planned for them. There is only a plan for subsidising investment costs for those projects winning in tenders.

Heat sector: There is no certificate system for renewable heat. A system of red and yellow certificates, amongst others supporting renewable heat, has expired in 2012. It may be reintroduced in spring 2014 until 2018. This will depend on the results of the DG Competition inquiry on the system.

Transport sector: There is no official policy in Poland focusing on RES promotion in transport. There are no initiatives supporting RES in the public sector, only some private initiatives of different size and character.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

To introduce a new RES act to fully implement the 2009/28/EC RES Directive is the most pressing issue. The government's line on the development of renewables in Poland is neither coherent nor predictable. There is uncertainty, not only regarding different technologies, but also regarding the general direction the government will take. The proposed act on renewable energy sources seems to constitute more obstacles than incentives for RES. This is true for instance concerning the provision of a 3 km minimum distance of wind turbines from households (concerning all projects under preparation as well as existing ones).

The Government is also considering introducing a tendering system, a solution expected by the European Commission (DG Competition). However, this solution does not guarantee the achievement of the RES target. According to the government's draft, projects currently in operation will have the choice between a green certificate system and a tendering system. New projects (after the implementation of the RES act) will only be supported through this system. The tendering system would be technology-neutral, which means that the cheapest renewable energy technologies would be supported, while other less mature ones, which could achieve great cost reductions in the future, would not be considered.

Support for RES generation by households is not sufficient. The energy acts focuses on issues that are important to energy companies, investors and communities, disregarding households and prosumers. For instance, there will be no reasonable payback time for owners of generators smaller than 40kW. Penalties, in case of fraud or administrative mistakes, are also much higher for private users than for energy companies.

HEATING AND COOLING SECTOR

In the absence of a support system promoting renewable heating, cooling and CHP, the development of projects is hindered. There are only a few financial incentives for heat or modernisation purposes (e.g. cheap bank loans from the National Fund for Environmental Protection). However, they are not integrated into an official government strategy. The lack of yellow and red certificates means that big scale projects in heating and cooling are not supported.

RES heating and cooling systems should be introduced in buildings, especially in public buildings such as schools, hospitals and offices. In the public sector, a mandatory obligation to use RES heating and cooling technologies should be implemented as soon as possible.

TRANSPORT SECTOR

There is no strategic national plan to develop RES transportation in Poland. In the public transport sector, rules to promote "green tenders" are necessary. In the Polish tender law, different criteria may be used to select the final winner. Most of the time, the price is the main selection criteria, whist it should not be the only criteria for selecting new buses, planes or other vehicles. When a municipality takes into account other criteria such as the environmental impact of a project, it is taken to court by opponents. The law should provide more freedom to municipalities to choose their own criteria.

Tax allowances for biofuels should be implemented to provide additional incentives for customers.

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PORTUGAL

KEY TRENDS IN THE RES SECTOR

Portugal is dealing with a profound economical and financial crisis that has triggered an ongoing revision of the RES framework.

As a follow up to the moratorium, a new RES-E support regime has been published in October 2012. It has abolished the support for new projects which should now be fully integrated in the market. The only exceptions are micro and mini generation systems (≤ 250 kW) and the possibility of launching a specific tender for the support of electricity generation in extraordinary cases.

Measures to finance the reduction of the electricity tariff deficit (4,500 M€ in 2014) are in place, including a compensation regime applicable to RES-E (wind farms and small hydro power plants), published in February 2013.

A new RES-E licensing regime has been published in August 2013.

Overall, the new support and licensing regimes lack transparency, adequacy and have discretionary dispositions bringing great uncertainty for RES-E investments.

There is currently no direct support mechanism for RES-H&C. The EE Fund has not renewed the budget to support RES-H&C equipment installations in households. RES-H&C are indirectly supported via the RES-E micro generation regime but the dramatic cuts to the FiT might jeopardise it.

Dedicated small producers of biofuels are exempt from the petrol product tax.

A mandatory incorporation quota of 5.5% in energy content is in place for all biofuels for 2014. The quota will increase gradually until reaching 10% in 2019 and 2020. Moreover, there is a specific obligation to blend a minimum of 6.75% (v/v) of biodiesel in the diesel for road transports until the end of 2014, together with the specific obligation to incorporate 2.5% of biofuels that replace gasoline, in energy content, between 2015 and 2020.

Acquisition incentives for electro-vehicles have been abolished.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Revise existing support schemes, establishing a technology and country specific Feed-in Premium for more mature technologies and a FiT for emergent technologies

Reduce the regulatory instability introduced by the new support and licensing regimes through an enhanced dialogue amongst stakeholders avoiding retroactive changes and promoting an improvement of the current market design to allow the integration of renewable electricity.

Reduce the fiscal load being placed on RES-E through the definition of fair criteria for the municipal real estate tax, to allow for a tax depreciation of RES-E equipment and the removal of restrictions in the fiscal deductibility of financial costs of RES-E projects.

Implement a truly functional one-stop shop that includes the environmental licensing procedure and improves the integration of RES-E projects in land-use management instruments.

Redesign the overpowering regime in order to increase the efficiency of existent wind farms and avoid compromising the existing financing contracts.

Urgently revise the micro generation regime, regarding capacity allocation, tariff and fiscal issues, together with the establishment of a self-consumption regime.

Improve information provided on RES-E, including the clarification of real costs and benefits and the coordination of energy statistics to ameliorate public perception.

Define curtailment rules after prior agreements with RES-E producers.

Extend the offshore pilot zone to other national coastal areas.

HEATING AND COOLING SECTOR

Highlight the need to promote the development of the RES-H&C sector to avoid the reduction in RES-H&C shares foreseen in the NREAP and invert the tendency in the solar thermal market (annual average decrease in installed capacity of around 40% since 2011).

Implement a media campaign for the promotion of all RES-H&C technologies providing information on the benefits, costs and available incentives.

Promote fiscal incentives for the acquisition of RES-H&C equipment aiming at a faster return on investment.

Develop case-studies to replicate solar thermal projects in existing multifamily buildings.

Introduce the mandatory certification of installers, equipment and pellets for biomass consumption in households to ensure the proper functioning of the equipments and a market based on product quality.

TRANSPORT SECTOR

Rapid conclusion of the MOBI.E pilot phase, definition of the framework for the electro-mobility market and decision about the future infrastructure model of charging points. Creation of an Observatory for electro-mobility aiming at an evaluation of the results of the Pilot Phase of MOBI.E and monitoring the next phase.

Implement an attractive, efficient, transparent and stable incentive structure for electro-mobility to enable a faster return on investment. Incentives should include support for the acquisition of electric vehicles (EV) and transitory positive discrimination measures like no parking fees or the possibility of using bus lines, to enhance EV penetration.

Revise the technical specifications of road fuels in order to enable the increase of the quota of biofuel incorporation in road fuels.

Define incentives for the take-off of advanced biofuels to overcome the higher production costs of raw materials and innovative technologies.

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ROMANIA

KEY TRENDS IN THE RES SECTOR

Hydro power is the main renewable energy source in Romania. Apart from hydro power, the country ranks second best among the European wind regions with a wind potential of 14,000 MW, and has a solar potential of 1.2 TWh.

Until 2010 there was hardly any renewable energy generation except from hydro power. Nevertheless, a sharp increase of RES-E technologies other than large hydro power plants could be witnessed in 2012 and 2013, mostly wind and solar power. This positive development was mainly due to the application of a Green Certificate Scheme.

The support scheme set very favourable conditions for solar, wind and new small hydro power plants and contributed to the very positive development in 2012 and 2013. However, concerns arose that some technologies faced overcompensation, giving rise to new political intervention in the sector. Since then, the Renewable Energy Law is undergoing significant and ongoing modifications, also diminishing the support levels for RES.

Currently, there is still a high unexploited biomass potential. The support schemes for biomass are stable and reliable.

Small-scale RES heating and cooling projects are mainly promoted through subsidies under the so-called "Casa verde" programmes. However, there has been no call for applications since 2011.

Renewable energy sources in the transport sector are promoted by a quota system, with a quota of currently 6%.

Furthermore, a subsidy programme promotes e-mobility. It has been launched in October 2013 and supports the purchase of electric vehicles.

POLICY RECOMMENDATIONS

ELECTRICITY AND HEATING/COOLING SECTOR

Sharpen the RES-E strategy and set up an adequate support scheme (including a legal framework): The RES-E sector in Romania faces a large number of legal amendments, giving rise to a high degree of political instability. This discloses the lack of a coherent political strategy or an action plan with an adequate allocation of financial means. Furthermore, the Romanian government usually relies on emitting emergency ordinances in order to amend the current legislation, leading to legal instability and unpredictability.

Mitigate revenue risks under the given support scheme: There is a concern that green certificates suspended and withheld by the Energy Regulator ANRE might not be issued in the end and might thus reduce the support level plant operators are entitled to receive under the Green Certificate Scheme. Furthermore, in 2013 a proposal has been discussed by the Ministry of Economy aiming at reducing the maximum price for Green Certificates as stipulated by law. There is also a chance that the annual obligatory renewable energy quota could be adjusted by governmental decision, which could have a considerable impact on calculating the obligatory annual purchasing quota.

Create stable conditions in order to provide access to finance: The unstable legal situation complicates a proper estimation of the amortisation period of RES-E installations and additionally hinders access to finance. Therefore, it is also necessary to ensure a fair and independent regulation of the RES-E sector.

Provide information on the actual grid development progress and set incentives for investments in the distribution grid: The Romanian distribution grid of low, medium and high voltage (up to 110kV), including transformer stations and substations, is in bad condition and the grid development projects as outlined in the national grid development plan, partly based on EU funds, are mostly delayed. The TSO probably expected funds for grid development to be reallocated from the state budget and thus to avoid all the administrative and documentary work going along with the granting of EU funds.

Redesign the regulations on grid-access: Just a small number of all projects requesting grid connection has actually been realised and therefore a virtual saturation can be observed. This unnecessarily increased the duration and costs of the grid connection process.

Reduce the complexity and duration of administrative procedures: The problem is not so much receiving all necessary authorisations per se, rather than the high number of different licenses and permits that are necessary in the course of plant approval.

Increase the reliability of the RES-H&C support scheme: The Romanian RES-H&C sector faces significant unreliability of the existing subsidy programmes.

Provide incentives for the development of the heat network development: The energy infrastructure, such as the district heating infrastructure and the natural gas network, is poorly maintained and characterised by high energy losses.

TRANSPORT SECTOR

Increase the reliability of the RES-T support scheme: The current support scheme is not sufficient for a significant development of Romania's biofuel market. There are no financial incentives for fuel retailers to purchase biofuels.

Adjust the tax regime for biofuels: The fiscal code requires biofuel producers to pay a prepaid tax, indifferent from the amount of biofuels produced or marketed. This reduced the number of biofuel producers and retailers in Romania.

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SLOVAKIA

KEY TRENDS IN THE RES SECTOR

In the Slovak Republic, electricity from renewable sources is promoted through a feed-in tariff. The use of renewable energy sources is further incentivised through an exemption from excise tax and several subsidies. In the past years, renewable electricity has been supplied mainly by hydro power and to a small extent by biomass technologies. Other renewable energies did not play any role until mid-2011, when the PV sector increased sharply after several large scale installations were connected to the grid (RES Integration, 2011).

In November 2010, the Slovakian Parliament decided to promote PV projects with capacities exceeding 100 kW only until June 2011. The Slovak Association of Photovoltaic Industry (SAPI) believed that the disapproving attitude of the Slovak government was influenced by the cautionary tale of the neighbouring Czech Republic. The Czechs also had severe problems with speculative projects, which consequently blocked the grid capacity.

Biomass accounts for the highest proportion of heat generation from renewable sources. However, considering its potential, the use of biomass in Slovakia is still negligible in comparison to other EU countries.

The Slovak Association for electro mobility (SEVA), established in 2012, published a paper titled Background of the Proposal for an Electro Mobility Development Strategy in the Slovak Republic in March 2013, which was subsequently adopted by the Ministry of Economy. The adopted strategy seeks to identify the potential for electro mobility in Slovakia. It is primarily aimed at increasing competitiveness, fostering innovation, and creating new jobs (Energia.sk, 2013).

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Provide clear rules for grid connection and remove related bottlenecks: According to Slovakian legislation, the DSO is only obliged to connect new generating sources if there is free capacity in the distribution grid. If there are other PV sources present near the connection point and the capacity limit has been reached, the regional distribution system operator can deny the connection request. However, according to the latest amendment of the Renewable Energy Act, the DSOs are also obliged to disclose the capacity data for any individual connection point on request. Unfortunately, none of the DSOs fulfilled this obligation completely. Therefore, it is impossible for RES plant operators to verify if the capacity limit has truly been reached at the particular connection point. It is essential for the development and installation of new RES-E projects to mitigate this shortcoming.

According to stakeholders, the regulatory authority ÚRSO requires the installer to provide a lot of unnecessary documentation such as the final inspection of the building where a PV system is being installed, or electrical inspections of the building (re-frame.eu Database). These complexities have to be minimised and it has to be clearly specified which documentation is necessary.

The producer gets the FiT certificate and signs the contract with the regulatory office, the regulatory office informs the Ministry of Economy and both - the producer and the Ministry - have 40 days to disclaim the contract. After this period, the producer has to apply to the regulatory office to validate the FiT certificate. This step is prolonging the whole process (re-frame.eu Database).

HEATING AND COOLING SECTOR

Renewable energy in the heating sector receives very little attention by the decision makers. Currently, only CHP plants with capacities of more than 125 MW are entitled to receive state support in the form of feed-in tariffs. According to stakeholders, the Slovakian market is lacking a "first stimulus" which could help create an attractive investment climate for renewable energy companies. Under the current conditions, the initial investment for the installation of a biomass boiler is far too high for a Slovakian household.

Despite its potential, the biomass sector is not able to provide an added value for the Slovak economy. A sustainable subsidy programme in the RES-H&C sector is needed to provide incentives for renewable energy investors.

TRANSPORT SECTOR

The barriers which were identified within the RES-T sector are mostly connected with the existence and reliability of the general RES-T strategy and the support scheme. Furthermore, the development of electric vehicles and charging infrastructure is progressing very slowly in Slovakia.

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SLOVENIA

KEY TRENDS IN THE RES SECTOR

In Slovenia, electricity generated from renewable energy is supported mainly through a feed-in tariff and a premium tariff. So called "qualified producers" of electricity from renewable sources may choose between a guaranteed feed-in tariff and a bonus ("premium") on top of the free market price for electricity. The most substantial support for the RES-H&C sector in Slovenia is a grant scheme.

The unclear funding situation in Slovenia due to the annual degression rates for some technologies has shown effect in 2013, with a major reduction of installed power. It has to be noted however, that the installed PV power by 2012 has by far exceeded the projected targets for 2020.

A fair majority of households (51% in 2012) use wood biomass as a heating source, either in individual boiler systems or via district heating systems. Further investments are planned in district heating systems using wood biomass, financial incentives for the replacement of old and inefficient boiler systems, as well as in increased energy refurbishment of buildings.

There is no state-wide action plan in the field of RES-T, apart from projects targeting the RES-T sector indirectly: either via the promotion of the use of electric cars or the greater use of public transportation, including a replacement of public transportation buses with buses using biogas or natural gas.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Apply appropriate incentives for RES-E: Currently there is still potential for wind and hydropower in the RES-E sector. Thus, a transparent and reliable support scheme for the RES-E sector under the new Energy Act is needed.

Include wind (and other RES) in spatial planning and reduce the duration of administrative procedures: A major barrier for the further development of RES-E technologies in Slovenia (especially for non-established technologies such as wind power), remains the integration of RES-E in spatial and environmental planning and the duration of administrative procedure. Consequently, a clear perspective and a proactive governmental strategy are needed to streamline processes and increase the coordination among the involved authorities.

HEATING AND COOLING SECTOR

The key barriers within the RES-H&C sector are the lack and reliability of a general RES-H&C strategy and the appropriate design of related financial incentives, meaning that Slovenia does not use the full potential of RES that it has at its disposal.

An RES-H&C strategy and a related support scheme are needed to generate an impulse for the (state owned) energy suppliers, which could for example administer projects in the area of district heating systems. Within the scope of the current support schemes, smaller investors on the local level usually do not have the necessary financial capability to carry out a project that would otherwise be deemed appropriate. It also requires willpower and good management to execute an investment in this sector, as its success usually depends on the will of the entire local community that would want to use a district heating system.

TRANSPORT SECTOR

A key barrier for RES-T is the non-existence of a general RES-T strategy and a related support scheme. While Slovenia had and still has certain biofuel production facilities, most of them either stopped their production or are thinking of doing so, due to a lack of economic interest. Incentives for domestic biofuel production to achieve the annual biofuel targets should be implemented.

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SPAIN

KEY TRENDS IN THE RES SECTOR

The overarching problem in the Spanish electricity sector is the accumulated tariff deficit which reached 36.8 billion € at the end of 2012. The Spanish government considers the cost of RES to be the main reason for this. After introducing several retroactive measures for existing RES-E installations, the government presented a draft electricity reform package in July 2013, which once again includes drastic retroactive changes applying to current RES-E facilities.

The new overall electricity reform package, which is partly already in force through the Royal Decree-law 9/2013 of 12th July 2013 and Law 24/2013 of 26th December 2013 on the Electricity Sector, constitutes a further and decisive step in Spain's policy rollback regarding RES-E promotion. In this respect, the following stands out:

- The retroactive establishment of a new economic regime for RES-E based on economic parameters and standardised installations is still to be defined.
- A new definition/concept of what might be a "reasonable return of investment" (ROI), to be based on the average yield of a Spanish 10-year Government Bond, plus a spread of 3% which should lead to an average ROI of 7.5% before taxes.
- This new calculation method for the ROI will apply during the overall lifetime of existing RES-E installations. This means that if installations might have reached higher profit margins in the past, those additional revenues generated will be subtracted from the financial support the plant will receive in the future.
- Establishment of a new grid charge for self-consumed electricity, even in times of complete self-consumption of the produced electricity, when no usage at all is made of the grid.

ASSESSMENT OF THE EXISTING SUPPORT FOR HEAT

In April 2013, the Spanish Council of Ministers approved a legal package to stimulate the deployment of RES, mainly for RES-H&C in the residential sector (through the Royal Decrees (RD) 233, 235 and 238/2013). In the whole package, energy efficiency is included as a decisive factor in the evaluation of the building. However, the requirement to have nearly zero energy buildings by 2020 is barely reflected in those laws.

ASSESSMENT OF THE SUPPORT FOR TRANSPORT

In February 2013, the Spanish government approved a severe retroactive reduction of the biofuels obligation from the year 2013 onwards. The overall biofuels mandate was reduced from 6.5% to 4.1%, while biodiesel and bioethanol targets were respectively reduced from 7% to 4.1% and from 4.1% to 3.9%. This generates an important decrease of the biofuel

consumption in Spain and also affects the production rates of the Spanish production plants. These insufficient biofuel targets endanger the achievement of the 10% goal of RES-T by 2020.

The Spanish bioethanol industry is confronted with blending restrictions: all petrol stations are required to offer "protection grade petrol" with a maximum bioethanol content of 5% by volume and a maximum oxygen content of 2.7% by mass, which has to be the lower octane index petrol (95 OI). In practice, this obligation undermines the development and consumption of E10-petrol with a maximum bioethanol content of 10% by volume and a maximum oxygen content of 3.7% by mass.

The tax incentive for biofuels, established in Spain to compensate the higher production costs of biofuels, ended in 2012. Since that, the normal hydrocarbon tax for fossil fuels is also applied on biofuels. As a consequence, the consumption of higher biofuel blends has decreased.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Withdraw the proposed draft Royal Decree for RES-E at least until the new remuneration details based on standard facilities, the "regulatory useful life" of a facility or the term "reasonable ROI" have been precisely defined. As in the former promotion scheme, the new promotion parameters should allow for a minimum ROI level after taxes, at least sufficient to recover the investment made.

Skip the discriminatory new grid access fee for RES-E self-consumption, both in the new electricity sector law and in the draft Royal Decree for the new economic regime for RES-E installations.

HEATING AND COOLING SECTOR

Transpose the Directive on Energy Efficiency in Buildings (2010/31/EU) and on Energy Efficiency (2012/27/EU) completely and as soon as possible into Spanish law.

TRANSPORT SECTOR

Increase the biofuel targets for the following years up to levels that will ensure the fulfilment of the 10% RES-T target in 2020.

Change the "protection grade petrol" restriction, so as to allow the introduction of E10 in the Spanish market.

Reintroduce the tax incentive for biofuels contained in the higher blends.

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SWEDEN

KEY TRENDS IN THE RES SECTOR

Political situation

Sweden already reached its 2020 RES target of 49% in the year 2012. This success is at the same time the most severe barrier for the further development of renewable energy sources in all energy sectors in Sweden. The target has been set too low from the beginning.

Industry

The industry in Sweden has a high RES potential, a high willingness to develop RES and also an understanding of the vital importance of RES. However, there are many barriers that prevent deployment. As long as the Swedish government does not set higher targets, current barriers to RES deployment will most likely not be addressed.

ASSESSMENT OF THE EXISTING SUPPORT FOR ELECTRICITY

Green certificates

In Sweden, renewable electricity is supported through an inefficient system of green certificates. The system has led to a rapid expansion for some years, but now there is a high risk that the technological development in the industry is, among other things, hampered by the low price of electricity and green certificates for the producers.

Low electricity price

The insecurity of the investment into RES is high because of the low price of electricity on the energy market. The surplus of electricity caused by a high share of nuclear power contributes to a decrease of the price of electricity power in Sweden. The low price of electricity on the market combined with the insecurity of the certificate price hinders investments in the renewable electricity sector.

Military opposed to wind turbines

The Swedish Armed Forces are questioning the wind turbines in Sweden and believe that the turbines interfere with the JAS aircraft. This is a serious threat to achieving the planned target of 30 TWh of wind power in 2020.

No political plan for solar power

Small RES-E installations, e.g. solar power PV, are not enjoying as much support from the side of the Swedish government as large scale electricity producers. As an example, there is no political plan for solar power in Sweden, covering issues like economical support, educational measures and research investments.

ASSESSMENT OF THE EXISTING SUPPORT FOR HEAT

Tax exemptions

RES used for heating purposes are supported through numerous tax exemptions. First of all, renewable energy sources are exempt from energy, carbon dioxide and nitrogen oxide taxes. Furthermore, the installation of renewable energy devices and the replacement of conventional heating sources with renewable ones may be deducted from household tax.

The government does not dare to set energy requirements for new buildings

The government does not dare to specify the building

requirements for near zero energy houses, which leads to the fact that construction companies are reluctant to invest in skills development in energy-efficient construction, and new building systems for low energy houses.

Prohibition of heat pumps in some municipalities

Some municipalities in Sweden force property owners to connect their houses to the district heating network and thus prevent the property owner from installing heat pumps. The Swedish Competition Authority has sued the City of Växjö who had such a ban. It is hoped to get an indicative court order. The barrier affects all renewable energy sources except for district heating.

Electric heating

Most single family houses still use electric heating, as a direct consequence of Sweden's commitment to nuclear power plants in the 80's and 90's. Most of the bigger buildings, such as apartments and offices, and about 10% of households are connected to the district heating (DH) network. 50% of Sweden's total heat source is bioenergy.

POLICY RECOMMENDATIONS

The government should urgently raise the target for renewable energy corresponding to what Sweden can actually deliver, i.e. 70% or higher.

The government should establish clear and ambitious targets and interim targets, and further adapt the legislative and regulatory framework to achieve the targets of all sectors.

ELECTRICITY SECTOR

The government should introduce feed-in tariffs like most other European countries. The government should also oblige electricity-intensive industries to purchase electricity certificates according to their electricity consumption, in order to reduce the excessive amount of electricity certificates. Introduce a Swedish fixed-price system for new investments, according to the Finnish/German model. The government should introduce a guaranteed minimum price to make investments profitable and secure.

Introduce a political plan for solar power in Sweden, covering issues like economical support, educational measures and investments into research. This energy source has great potential and needs a sound support system to be able to develop.

HEATING AND COOLING SECTOR

The government and the parliament must set clear energy requirements for near zero energy houses. Halve the maximum allowed energy requirements per square meter of floor space and year in the Swedish Building Regulations (BBR). It is important to get uniform and stricter building regulations on energy in the whole country to avoid confusion. The energy requirements of the building regulations should be reviewed, both in terms of what should be included and in terms of requirements levels.

The municipalities, who are forcing property owners to access district heating networks, and thus prevent the property owners to install heat pumps, should be prohibited to use this type of contract.

TRANSPORT SECTOR

The target for renewable fuels in the transport sector in Sweden (10% until 2020) has already been reached. The government should establish new ambitious targets for the transport sector of 25% renewable fuel in fuel consumption (including 20% biofuel) until 2020.

Sweden lacks clear support schemes. This hampers investment in new facilities, thereby affecting the development of renewable fuels. The government should present clear and stable information on policy instruments and the legislative and regulatory framework concerning support schemes for biofuels. The government should unite and formulate visions of good and long-term targets and policy instruments.

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UNITED KINGDOM

KEY TRENDS IN THE RES SECTOR

Energy has now become a political football, with further instability likely in the run up to the next election (May 2015).

The Renewables Obligation is due to close to new entrants from April 2017. Its replacement is intended to be in place by Autumn 2014, but there are huge challenges remaining to the design of the new policy.

A cost control mechanism for non-PV technologies will take effect under the Feed in Tariff for the first time in 2014, with serious negative impacts likely.

A large number of changes and additions are due to be implemented to the Renewable Heat Incentive in 2014.
The UK has refused to set out how it will meet the binding 10% energy target for the transport sector until indirect land use change is addressed. This is hugely unhelpful to investment in existing and 'advanced' biofuels.

POLICY RECOMMENDATIONS

ELECTRICITY SECTOR

Revise the proposed State Aid guidelines to allow a 5 MW FiT threshold for all technologies.

Allow the UK Green Investment Bank to borrow in the market and permit funding of more technologies, especially emerging technologies. Implement standardised Power Purchase Agreements and make the Offtaker of Last Resort available to all technologies.

Incentivise the DSOs to offer timely grid connections at fair, transparent cost.

Confirm a workable system for regulating biomass power sustainability, support new stand-alone dedicated biomass generation and allow biomass CHP projects flexibility in heat offtaker requirements.

Ensure 'minima' budget for emerging technologies in the proposed new Contracts for Difference (CfD) allocation policy. Resolve numerous issues with CfD policy and transition from Renewables Obligation.

FiT cost control mechanism will prematurely reduce support for small-scale anaerobic digestion. Fix this urgently in 2014.

HEATING AND COOLING SECTOR

Successfully implement previously announced changes to the Renewable Heat Incentive (RHI) then have a period of stability. Sustainability regulation is a key concern; timing of introduction may need to be phased.

Secure confidence in the RHI scheme with long-term budget commitment, especially for larger projects.

Support industry learning/skills to support development and spread of good practice. Many of the risks intensify with the planned introduction of a domestic RHI from spring 2014.

TRANSPORT SECTOR

The UK government must set a trajectory for renewable transport to progress from the current target of 4.75% biofuels by volume in 2014 to the Directive target of 10% by energy in 2020.

Government should support the maximisation of the permitted levels of biofuel blending (B7 and E10) to give flexibility for fuel suppliers in meeting their obligations under the Renewable Transport Fuel Obligation.

Review the support levels for biomethane in the power, heat and transport sectors to maximise the uptake of biomethane in the transport sector.

Set out support policy to encourage advanced biofuels. This must include policy visibility both to and beyond 2020 to encourage investment.

The government should cease to support ILUC factors and a 5% cap on conventional biofuels. Re-appraise the benefits of conventional biofuels to ensure appropriate support post-2020.

The treatment of partially renewable fuels (Fatty Acid Methyl Ester and Hydro-treated Vegetable Oil) within UK legislation should be made consistent.

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DESIGN AND PRODUCTION
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Published in June 2014

Co-funded by the Intelligent Energy Europe Programme of the European Union