



# 2015

## POLICY RECOMMENDATIONS

REPORT





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## 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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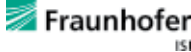












## THE KEEP ON TRACK! PROJECT

The 2009/28/EC Directive on the promotion of the use of energy from renewable sources<sup>1</sup> (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.

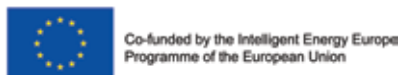
If a Member State is found to be lagging behind and is failing to overcome identified barriers for RES deployment, Keep on Track! will provide early warnings and suggest solutions on how to compensate any possible delay encountered.

### KEEP ON TRACK! PARTNERS:

 BEE - German Renewable Energy Federation	 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	 EÖ - Bundesverband Erneuerbare Energie Österreich
 EDORA - Fédération de l'Energie d'origine renouvelable et alternative	 GAREP - Greek Association of RES Producers	 PIGEOR - The Polish Economic Chamber of Renewable and Distributed Energy	 REA - Renewable Energy Association	 SERO - Swedish Renewable Energies Organisation

Visit the project website to learn more: [WWW.KEEPONTRACK.EU](http://WWW.KEEPONTRACK.EU)

Co-financed by IEE





# EU OVERVIEW

As it stands in 2013, the European Union is on track with an overall share of renewable energy of 14.95%, compared to a planned share of 13.53% according to the National Renewable Energy Action Plans (NREAPs). However, the growth in the overall RES share over those last three years (2010-2013) was slightly lower than the necessary average annual growth rate needed to achieve the 2020 target<sup>1</sup>, since the growth rate in the last few years up to 2020 has a much steeper planned trajectory. In the framework of creating a more secure and sustainable energy network in the European Union, a European Energy Union has been established, which has been at the centre of political discussions since the second half of 2014.

On the 1<sup>st</sup> of November 2014, a new European Commission (2014-2019) was nominated. Commission President Jean-Claude Juncker specified that one of the main priorities of the new Commission would be “a resilient energy union with a forward-looking climate change policy”<sup>2</sup>. Upon his appointment, President Juncker established a European Energy Union. In February 2015, the Commission gave shape to its Energy Union with the publication of three Communications: EU Energy Union; Paris Protocol; and Achieving the 10% electricity connection target.

The Energy Union Communication highlights the aim to make the “**European Union the world number one in renewable energies**”.<sup>3</sup> At its core lies the emphasis on

the achievement of secure, sustainable, competitive and affordable energy for all European citizens, which is to be attained through focusing on five “dimensions”, namely: **Energy security**, solidarity and trust; A fully integrated **European energy market**; **Energy efficiency** contributing to moderation of demand; **Decarbonising** the economy; and Research, **Innovation and Competitiveness**.

The Informal Meeting of Environment and Energy Ministers in Riga in mid-April 2015 added two horizontal topics to the five vertical one, namely **financing** and the **role of consumers** with regard to electricity production and to demand-side management.

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<sup>1</sup> Keep on Track! EU Tracking Roadmap 2015

<sup>2</sup> Jean-Claude Juncker, President-elect, in a statement made to the European Parliament on 15 July 2014: “A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change. Political Guidelines for the next European Commission”. Text available at: [http://ec.europa.eu/priorities/docs/pg\\_en.pdf](http://ec.europa.eu/priorities/docs/pg_en.pdf)

<sup>3</sup> European Commission, “ENERGY UNION PACKAGE”, COM(2015) 80 final

Within the next year, the Commission will develop its detailed proposals for a **new governance structure** as part of the European Commission 2030 Climate and Energy Framework; an ambitious **redesign of the electricity market**; and a **revised Renewable Energy Directive**.

Unfortunately, the European Council declared in October 2014 that the EU wide binding targets for 2030 should not be translated into national binding targets. This decision has created much investor uncertainty in the renewable energy sector. Furthermore, the International Energy Agency has also underlined that such policy uncertainty is a threat to the renewable energy impetus<sup>4</sup>.

The Commission will consult EU Governments about the **“New Governance Framework”** in the second half of 2015. Flexibility will likely be standing at the forefront of this new governance system, which aims to be built on existing plans, regional cooperation, transparency and predictability. The nature of this system will define whether the EU wide targets will be left to be political aspirations or drivers of continuation of an ambitious and stable legal framework for renewables and efficiency particularly.

Parallel to the development of a new governance structure, the Commission is in the process of preparing an ambitious **redesign of the electricity market**. Major topics under discussion include self-consumption of renewable energy; flexibility options; demand-side management; and priority dispatch for renewable energy technologies. Ideally, it should be designed for dominant shares of renewables in the EU energy mix. The Commission will submit a first draft for consultation by the summer of 2015, followed by legislation in 2016.

The European Commission is predicted to propose a **revision of the Renewable Energy Directive** in 2017. The reviewed version will look into setting up a new Renewable Energy Directive for 2030 and will likely seek to enhance convergence and cooperation amongst renewable energy support schemes. Supposedly a new sustainable bioenergy policy will be included in the revised Directive.

The European Commission will further prepare a **heating and cooling strategy** by the end of 2015. Major elements

will be energy efficiency and the usage of local sustainable energy sources. Heating and cooling in the EU’s buildings and industries accounts for nearly half of the EU’s energy consumption. As of today, only 15% of heating and cooling is produced from renewable energy<sup>5</sup>.

In addition to the Energy Union Communications, the Commission has proposed the **European Fund for Strategic Investment (EFSI)** which is expected to mobilise additional investments of up to €315 billion in various areas, among others in renewable energy, energy efficiency and infrastructure.

At the end of January 2015, the European Renewable Energies Federation (EREF) initiated annulment proceedings under Art. 263 TFEU specifically and exclusively against chapter 3.3.2. of the Guidelines for Environmental and Energy Aid 2014-2020 (case number T-694/14 at the General Court of the European Union). The case argues that the European Commission exceeded its competences curtailing the rights of EU Member States to choose their support mechanisms for RES in order to reach their binding 2020 targets. An answer of the court is pending.

Last but not least, there was progress on the **reform of the EU Emission Trading Scheme (ETS)**. The introduction of a “market stability reserve” (MSR) enables the removal of the enormous 2.1 billion “surplus” of carbon allowances that has accumulated in the market, equivalent to one full year of EU ETS emissions. It is expected that the CO<sub>2</sub>-price will considerably increase in the future if the reform process is completed.

These policy and legislation developments over the next two years offer the chance to develop renewables as the critical means for a stable, secure, affordable and democratic energy system for the European Union, a system which generates jobs and wealth and helps expanding and pacifying access to energy around the world.

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<sup>4</sup> IEA, 28 August 2014, <http://www.iea.org/newsroomandevents/pressreleases/2014/august/name-125080-en.html>

<sup>5</sup> European Commission, brochure, “Heating and Cooling in the European Energy Transition”, [http://heating-and-cooling-in-europe.eu/HEATING%20AND%20COOLING\\_brochure.pdf](http://heating-and-cooling-in-europe.eu/HEATING%20AND%20COOLING_brochure.pdf)

# 2015 POLICY RECOMMENDATIONS:

The KoT consortium sees the necessity to establish:

- > A more independent and secure energy supply in Europe
- > A sustainable energy use which avoids emissions that trigger climate change and other environmental damages
- > Affordable and stable energy prices for European consumers.

**AS RENEWABLE ENERGY IS THE ONLY ENERGY SOURCE THAT WILL MEET ALL THESE OBJECTIVES, WE RECOMMEND TO:**

**1 STRIVE FOR AN AMBITIOUS AND BINDING 2030 RENEWABLE ENERGY TARGET WHICH IS SIGNIFICANTLY HIGHER THAN 27%, ALONGSIDE ENERGY EFFICIENCY AND GREENHOUSE GAS EMISSION TARGETS. ADOPT A STRONG GOVERNANCE FRAMEWORK TO FACILITATE AND ENSURE THE ACHIEVEMENT OF THESE TARGETS.**

The absence of national binding targets calls for Member States to commit themselves to ambitious national policies and objectives.

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**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.

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**3 ESTABLISH AN ENERGY MARKET DESIGN BASED ON INCREASING SHARES OF RENEWABLE ENERGIES. REMOVE ALL SUBSIDIES FOR FOSSIL FUELS AND NUCLEAR.**

The market design has to provide a level playing field for all energy sources, in particular to account for the environmental and social costs and benefits

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**4 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 developments are not in line with the 2020 targets.

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**5 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 State aid guidelines are limiting the Member States' freedom of choice of support schemes that have proven to be effective.

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**6 ESTABLISH A CLEAR AND SUPPORTIVE FRAMEWORK FOR RES-T AT EUROPEAN LEVEL.**

Provide stable support conditions for biofuels. Create a reliable framework for electric mobility.

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**7 RETAIN THE FOCUS ON THE REMOVAL OF ADMINISTRATIVE BARRIERS.**

The duration and complexity of administrative procedures is still a major barrier identified by European stakeholders.

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# MEMBER STATE

**REPORTS**







# AUSTRIA



## KEY TRENDS IN THE RES SECTOR

Historically, Austria places high importance on the use of renewable energy (RE) and elaborates ideas for its continuous development. Overall, the share of RE in the different sectors is growing, but nevertheless last year's developments gave rise to concerns. The introduction of the Austrian Energieeffizienzgesetz (law on energy efficiency) has a mandatory target for the reduction of energy demand, which is a good step, but chose a very complicated regulative approach instead of a much easier eco tax reform. Low market prices, generally for electricity and also for fossil energy products, currently pose a severe threat to all sectors of the RE industry

The Austrian FiT system is characterized by a series of ups and downs. With its first introduction in 2002, it provided great impulses to the renewable energy industry. A later revision in 2006 resulted in a downturn and decrease of installations. In the aftermath of Fukushima, a new FiT was introduced leading to new investments in renewable electricity and a growing share of renewable power: 67% of electric energy were produced from renewable energy in 2013. Nevertheless, the current European Union initiatives concerning the state aid guidelines put pressure on the

existing FiT system, and adaptations are hardly possible, which will cause more and more problems.

Even though the renewable heat sector in Austria has seen some positive developments, market distortions were observed in the last few years. Some problems are related to the low prices of fossil fuels like heating oil. Along with that, two mild winters in a row led to a drop in sales of renewable heating systems. The solar-thermal industry is currently confronted with market difficulties, and new concepts for applying the technology have to be found, with less focus on household hot water appliances and more focus on solar heating systems - for houses as well as for district heating, especially in urban areas.

The total renewable energy share in the transport sector was 7.3% of final energy consumption in 2013. For example, the obligatory percentage of biofuel in the fuel mix is 5.75% in Austria, and the share of renewable electricity in the railway transport is approx. 93%, mainly delivered from large hydropower. Positive incentives for a higher RES-T share would be investments in the public transport sector and a shift in the modal split.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

**Continue the FiT system:** the FiT system in Austria is working and leading to a steady RES-E development at costs that are widely seen as acceptable. Solutions how to deal with the state aid guidelines are necessary for a clear and structured market design.

**Eliminate market distortions on the power imbalance market.** The imbalance market prices in Austria are unnecessarily high in comparison to neighboring countries.

**Set a binding renewable energy target** of 100% RES-E for 2020.

**Introduce of a carbon tax** of 30€/a with an annual increase of 5€/a until reaching a value of 60€/a.

**Introduce a carbon floor price** of 50€/t for power generation.

**Remove direct and indirect subsidies** for nuclear energy and fossil fuels.



### HEATING AND COOLING SECTOR

**Introduce a carbon tax** of 30€ with an annual increase of 5€/a until reaching a value of 60€/a as described for the RES-E sector.

**Change the legislation on the rental** of houses and apartments to facilitate investments in thermal insulation and RE heat sources.

**Ban the installation of oil-fueled heating systems** in new buildings.

**Increase the tax on heating oil** and use the revenue to replace old heating systems with modern renewable energy systems.

**Set clear incentives for solar thermal energy** development in urban areas.



### TRANSPORT SECTOR

**Support EU policies for more efficient cars:** 80g CO<sub>2</sub> per km in 2020 and 60g CO<sub>2</sub> per km in 2025.

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

**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 that e-mobility is used in urban traffic and competes with public transport.

**Shift railway investments** from large tunnel projects to commuter traffic projects in order to shift the modal split from car to train.

**Stabilize the use of biofuels** at the current level.



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# BELGIUM



## KEY TRENDS IN THE RES SECTOR

Although Belgium has been confronted with the closure of some nuclear reactors due to security problems, which gave rise to some energy security concerns, RES still have the negative image of cost-inducing technologies for some policy-makers. In 2014, several regions challenged the RES target commitments adopted by previous governments and are currently reviewing RES scenarios inducing major investment uncertainty for the renewable sector.

In addition, there is a dramatic lack of coordination between the federal government, which is responsible for energy security and the preparation of the nuclear phase-out to be achieved by 2025, and the regional governments, which are in charge of most of the renewable development but only interested in reducing the cost for consumers.

In Belgium, the RES-E support system has been amended at the different political levels and is now linked to the electricity price. The number of green certificates in Wallonia and Flanders is a function of a pre-determined IRR and the electricity price. For offshore energy, there is a fixed premium directly depending on the electricity price. In Wallonia, the precise relationship with the electricity price is not clearly defined, which leads to major investment uncertainty.

Regarding RES-H&C, there is still a lack of specific support mechanisms for RES heat production and biogas production and grid injection.

Regarding RES-T, a quota scheme must ensure that biofuels make up a defined percentage of a company's total annual fuel sales.



### ELECTRICITY SECTOR

**Coherent Belgian renewable strategy:** The federal government and the regional governments must rapidly cooperate and develop a common Belgian energy strategy in order to ensure energy security after the nuclear phase-out planned by 2025. Therefore, an alternative scenario must be collectively agreed in order to ensure sufficient energy capacity in 2025 based on a balanced energy mix. This scenario must integrate an increasing renewable energy share consisting of a mix of variable and dispatchable renewable energy sources and include a clear strategy on demand management and storage. Regional governments must base their renewable strategy on the challenges of energy security and climate change instead of adopting a traditional short-term cost reduction vision.

In line with the defined targets, a **clear framework must be implemented for each RES technology**. Such a framework must be based on scientific criteria and must be protected at the statutory level through **relevant legislative initiatives** in order to prevent any legal action over the granted permits.

**Provide more transparency in the support system:** When adapting the support system, the precise relationship between the support level and the electricity price must be clarified in order to provide higher transparency for renewable investments.

Make sure **grid reinforcements** are in line with the RES spatial planning schedule based on a previously defined medium-term energy strategy. The integration of a large amount of offshore and, **in Eastern Belgium**, onshore wind power in Eastern Belgium remains a major challenge. Curtailment must be reduced to the lowest possible level and be accompanied by systematic financial compensation.

**Implement a one-stop shop** for every permit-granting procedure and improve the coordination and coherence between decision-making bodies.

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

Launch public **promotion campaigns** for RES.



### HEATING AND COOLING SECTOR

Elaborate a **clear legal framework to promote RES development** in the heating sector. The framework should be supported by a **positive communication campaign** preventing any misunderstandings regarding a moratorium and based on **binding targets** in relevant sectors (e.g. in the building sector). A strategy based on **clear, objective and reasonable criteria**, with a balanced approach between the different uses (especially for biomass), must be finalized.

Integrate a **support system for RES-H&C with specific regulations 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 this network development.



### TRANSPORT SECTOR

Provide clear **sustainability criteria** related to biofuels in order to improve their social acceptance.

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



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# BULGARIA



## KEY TRENDS IN THE RES SECTOR

According to the government progress report, Bulgaria's share of renewable energy in final energy consumption reached 16.4% in 2013. The target for 2020 is 16%, so Bulgaria is well above the target specified by Directive 2009/28/EC.

Currently, Bulgaria has 690 MW of installed wind capacity and 1020 MW of PV capacity, while hydro-power plants (large and small) account to approximately 3800 MW. As the total installed capacity of the Bulgarian electricity system is approximately 14 000 MW, variable RES power plants account for approximately 13% thereof.

Despite the negligible installed RES capacity, the renewable energy installations were declared to be cost-inducing technologies and were further blamed by the last two Bulgarian governments to be the reason for increasing electricity bills.

In May 2014, the Electricity Trading Rules entered into force, and the balancing energy market was launched in June 2014. The Electricity Trading Rules do not take account of the characteristics of different types of technologies and do not provide a level playing field for all market participants. Under the existing provisions of the Electricity Trading Rules, the imbalance costs for wind power producers have reached up to 37% of their income.

In March 2015, the Bulgarian government revoked the feed-in tariffs for newly installed RES power plants because Bulgaria met its target of a 16% share of renewable energy in its gross final energy consumption.

Although over the last few years legal actions against the retroactive measures have been successful, renewable energy operators will not receive any compensation. Firstly, the Supreme Administrative Court revoked the provisional grid access fee of September 18th 2012. Then, in August 2014, the Constitutional Court revoked the 20% tax on the income of wind and solar energy producers, but its decisions have no retroactive force, and the collected sums will not be compensated for.

Regarding RES-H&C, there is still a lack of specific support mechanisms for RES heat production. This leads to insufficient profitability and an uncertainty of investments. Most of Bulgaria's renewable heat production is from solid biomass, and the high levels of consumption are causing sustainability issues.

The main support instrument in the RES-T sector is a quota obligation for biofuels, imposed on companies importing or producing fuels. In addition, financial reliefs are applicable to the consumers of transport fuels blended with biofuels.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

Improve the regulatory framework and its implementation:

- Fully transpose the Third Package Directives
- Fully transpose the Energy and Environmental State Aid Guidelines
- Develop transparent and fair balancing and curtailment rules in line with EU legislation
- Ensure that the network and balancing charges for renewables are fair and non-discriminatory

Set up day-ahead, intraday and balancing markets.

Review the renewable support scheme by shifting to a feed-in premium in line with the Energy and Environmental State Aid Guidelines.

Ensure that renewables are gradually integrated into the market.



### 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.

Elaborate a clear legal framework to promote RES development in the heating sector. The framework should

be based on binding targets in some sectors. Introduce a support scheme for RES-H&C with specific measures for biogas and district heating.

Introduce sustainability criteria for biomass.



### TRANSPORT SECTOR

Implement of a national action plan for electric mobility including the following measures:

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

Exempti of biofuels from excise duties.



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# CROATIA



## KEY TRENDS IN THE RES SECTOR

Croatia became an EU Member State in 2013. RES are regulated by general energy law as well as several regulations and decrees. The adoption of a comprehensive RES law is expected in 2015.

To support RES-E, Croatia applies a feed-in tariff, interest-free loans administered under a tendering process, and an additional loan programme by the Croatian Bank for Reconstruction and Development. A change from a feed-in tariff to a premium scheme is under discussion. Hydro power is already well developed in Croatia and is foreseen to dominate RES-E production until 2020 according to the NREAP. To a lesser extent, onshore wind, some solid biomass and biogas are to be developed. Technology-specific capacity caps apply. The 2020 caps for wind

and PV have already been reached and support was correspondingly stopped in early 2015.

Local and regional governments allocate investment grants to RES-H&C projects through tenders. A support scheme on national level does not exist but is expected to be in place by June 2015. However, the country seems to be on track with planned deployment so far. The Croatian NREAP puts the focus on solid biomass, with solar thermal installations and heat pumps also playing an important role.

Croatia applies a biofuels quota, a subsidy scheme for biofuel producers, and an exemption from the excise tax applied to fossil fuels. The NREAP puts a strong focus on biodiesel.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

Ensure a stable regulatory framework based on a consistent strategy, and communicate changes early. Some stakeholders claim the NREAP of 2013 to be partly inconsistent with the energy strategy of 2009. Furthermore, while the NREAP foresees a certain focus on wind power, the Minister of Economic Affairs recently proclaimed a government preference for biomass and biogas.

As Croatia has very good resources for solar power, reconsider the 52 MW cap on PV which has already been reached in 2014. The same applies for the 400 MW cap on wind.

Consider creating loan programmes or other support custom-tailored to small-scale RES-E.



### HEATING AND COOLING SECTOR

Put in place a comprehensive and reliable strategy for the development of the RES-H&C sector which coordinates the already introduced national support scheme with existing regional and municipal initiatives.

Encourage and support local authorities to improve the training of administrative staff responsible for designing

and managing investment grant tenders. Ensure better incorporation of industry stakeholders' knowledge and experience in the design of tenders and administrative processes.



### TRANSPORT SECTOR

Create a consistent and long-term strategy for the biofuel producing industry. Government incentives to producers have been decreasing and are uncertain in the near future, deterring investors, which will possibly lead to an increase in biodiesel imports in the future.

Ensure an appropriate development of charging infrastructure to go along with purchase incentives being provided to buyers of electric vehicles.



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# CYPRUS



## KEY TRENDS IN THE RES SECTOR

Cyprus is an isolated island with a poorly developed electricity infrastructure and no interconnections so far. This is why its electricity supply has been dominated by fossil fuel imports.

In Cyprus, PV electricity is currently supported through a combined subsidy and net metering scheme, while renewable energy systems for heating purposes are eligible for subsidies. According to its NREAP, Cyprus' RES contribution to gross final energy consumption was negligible in 2005. However, in 2011, RES-E accounted for 4% of primary energy consumption and 6% of final energy consumption. The share of RES-E had increased to 5.2% by 2012, and to 7.5% of primary energy consumption by 2013.

Since 2014, a new support scheme for RESH&C measures for SMEs has been in place. Up to 75% of the total investment will be refunded if a commercial building is upgraded to a Nearly Zero Emissions Building. Nevertheless, in 2013 the sector of solar thermal installations, showed a decline of 12.2% (after a decline of 0.8% in 2012) in the annual evolution of total installed capacity after a decade of continuous growth.

The use of renewable energy in the transport sector (RES-T) is developing slowly in Cyprus. A mandatory quota of biofuel use in transport has been imposed on the fuel suppliers to achieve a 6% reduction in GHGs by 2020.

## POLICY RECOMMENDATIONS



### ELECTRICITY AND HEATING/COOLING SECTOR

**Improve access to financing:** As a result of the economic crisis, the situation reached a critical point 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 planned, with bank deposits of more than € 100,000 to support the bailout. Under such adverse conditions, it is not surprising that the development of RES has not remained unaffected. Since March 2013, however, investments in new RES-E can be observed.

**Maintain long-term reliability for investors:** The whole process of designing new support schemes based on the annual budget creates uncertainties, which are further complicated by the fact that crucial details such as the duration of the support schemes as well as the submission deadlines for applications have not yet been revealed. This situation leads to unnecessary delays in the implementation 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 currently hinders the market entry of new producers. This is mainly due to the fact, that plant operators do not have a clear understanding of the process and especially of the charges e.g. for grid stability and grid use, defined by the Cyprus Regulatory Authority on Energy. This lack of transparency creates a certain degree of uncertainty, not only for RES-E plant operators but also for conventional fuel plant operators and prevents the liberalization 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, and a number of studies

should be submitted to different authorities. The complexity of these administrative procedures remains the most serious problem for the RES-E sector in Cyprus.

**Clear and transparent methodology on charging electricity losses:** A revised methodology for the calculation of charges for electricity losses lead to unexpected ex post costs for PV plants.



### TRANSPORT SECTOR

**Sharpen the strategy for the RES-T sector and set an adequate grant level:** There is only limited support for biofuels in Cyprus and this is directed exclusively towards the installation of biofuel plants. An excise vehicle duty is imposed on biofuels, and stringent criteria are imposed on the origin of crops used in the production of biofuels. However, in the next 30 years, a gradual temperature increase by 1-3°C is expected and could reach 3.5-7°C at the end of the century (IPCC, 2007). In correlation with the limited availability of agricultural fields, these changes create one of the basic barriers for the further deployment of biofuels in Cyprus that should be considered within the RES-T strategy of Cyprus.



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# CZECH REPUBLIC



## KEY TRENDS IN THE RES SECTOR

In the Czech Republic, electricity from RES used to be supported through either a guaranteed feed-in tariff or a premium paid on top of the market price. However, since 2013 the political support for renewable energy has declined significantly. In 2013, two amendments to the Act of Supported Energy Sources were adopted, which restricted the feed-in tariff to plants with an installed capacity of up to 100 kW and plants put into operation before 2014 (PV) or 2016 (biomass, wind and hydro, and only if the building permit was issued before the 2 October 2013), respectively. The latter amendment de facto abolished the entire feed-in and premium tariff scheme. In 2014, the Czech government approved another amendment to the country's Energy Act, which lacks any support for electricity from wind power.

Operators of RES-E plants are entitled to priority connection to the grid. The use and the expansion of the grid are subject to the general legislation on energy.

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

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

The Czech government has focused mainly on expanding the country's nuclear capacities rather than on developing the Czech Republic's electricity generation from RES.

The transmission grid operator ČEPS has decided to block the connection of new PV and wind plants to the grid and has declared a temporary connection moratorium.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

**Introduce a new support scheme for RES-E:** The guaranteed support for electricity generated by photovoltaic, wind, hydro or biomass plants in the form of feed-in tariffs or premium tariffs was de facto abolished in late 2013. Due to the “solar boom” in 2009 and 2010, the government introduced a retroactive tax on the revenues from the feed-in/premium tariff schemes, and a recycling fee for solar panels was introduced in 2012.

**Introduce a support scheme for electricity from wind power:** Wind power is currently the cheapest renewable energy source and has the potential of providing electricity to more than 2.5 million Czech households.

**Increase 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 calculation remains unknown to the public.

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

**Maintain objective provision of 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 willingness for the further development of RES was masked as a movement to save the general public from the unjustified prices of green energy production.



### HEATING AND COOLING SECTOR

**Sharpen the RES-H strategy and increase the reliability of support schemes:** In the past five years, changes and amendments of the support system occurred very often, which significantly hampered long-term planning on the

part of RES investors. Furthermore, the larger part of state subsidies was allocated to large industrial heating plants and not to the use of renewable energy in households. This support, however, turned out to be rather inefficient. Due to the fact that both industry and households are responsible for similar shares of carbon emissions, the Czech government should focus on supporting renewable heating installations in households.

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

**Secure the funds for the subsidy programs:** In 2014, the New Green Savings Program was missing about € 437 million of the planned budget.

**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 authorization issued by the Ministry of Industry and Trade. If one fails to do so, a fine in the amount of CZK 100.000 (approx. € 4.000) may be charged.



### TRANSPORT SECTOR

**Sharpen the RES-T strategy and adjust the support scheme accordingly:** One of the key reasons for the low use of electric vehicles in the Czech Republic is the lack of financial support. Due to this 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. In March 2012, the Danish parliament adopted an ambitious Energy Agreement. However, adjustments have been made, the latest one in the form of a Growth Package in 2014, which aimed to reduce RES support costs, for instance by postponing the construction or reducing the tendered capacities of planned offshore and near-shore wind parks.

RES-E technologies are mainly supported via 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. The feed-in premium levels depend on the technology employed and are mostly set by an administrative process. The one exception is offshore wind power, for which support levels are determined in a tendering procedure. Premiums for onshore wind power are now designed to incentivize larger rotors. The Danish support system has proven to be very effective in the past and can provide policy guidance to other Member States. The experiences Denmark has been gathering in tendered auctions since 2004 show, for instance, that the devil is in the details when designing tender mechanisms. Penalties were applied in the Danish tenders for delayed or non-implementation of power plants.

This constitutes best practice, as it ensures that bidders calculate the project realistically and are actually able to implement it in case they succeed in the tender. However, the Anholt tendering procedure has shown that penalties and time schedules, although necessary, should not be overly strict. Overly harsh penalties can deter potential bidders from applying, which leads to lower participation and competition in the tender procedure.

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 from the various taxes on the production, processing, possession, receipt and dispatch of fossil fuels in the heating sector. All RES-H&C technologies are eligible for these exemptions. Denmark also provides premium tariff payments to biogas used in heating. The tariff is paid per GJ of biogas used and increases or decreases annually depending on the price of natural gas.

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

## POLICY RECOMMENDATIONS



### OVERALL

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

Public budgets: “Green taxes”, for instance on fossil fuels, generate revenue for the state. This revenue bound to decrease as renewables, exempt from such taxes, replace conventional fuels. Plans for future public budgets need to take this effect into account in order to reduce investor insecurity regarding possible future taxes on renewable fuels.



### 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 increase the use wind electricity in the district heating sector by establishing large heat pumps.

Maintain and improve the public’s acceptance for RES plants: Finish and publish the study on the relationship

between noise from wind turbines and its effects on health. Clarify compensation and local ownership schemes for citizens living in the vicinity of near-shore wind farms.



### HEATING AND COOLING SECTOR

High consumption of biomass can cause sustainability issues. This applies to the RES-E sector, too, 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 has already achieved its 2020 RES target share.*

The previous support scheme for RES-E consisted of a technology-neutral feed-in premium, resulting in a focus on low-cost technologies such as onshore wind and solid biomass. This is in accordance with the Estonian NREAP. A support scheme revision has been under discussion for years. Recently planned amendments in the support scheme include features to make it coherent with the requirements of the new European state aid regulation. A tendering procedure is now foreseen to ensure that production each year is sufficient to achieve the annually targeted RES-E production. Details on the tendering mechanism are still unclear, but the amendments will possibly also apply to existing power plants as well as to small plants <100kW.

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. The RES-H sector benefits from investment grants for the reconstruction of boiler plants, heat grids, and CHP plants. CHP plants will also be affected by the above-mentioned adjustments to the RES-E premium scheme.

A subsidy scheme for the purchase of electric cars by consumers was very popular, but expired last year and will be replaced with non-financial measures. The recent decrease in oil prices has halted several bioethanol projects. Biomethane is foreseen to provide a major contribution to the 10% RES T target share in 2020.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

**Provide long-term security for investors:** Ensure an appropriate transition period after the final decision on support scheme amendments. It is definitely not advisable to apply the new tendering mechanism to existing power plants, as is currently being suggested. Such retrospective changes damage investor confidence and raise support costs in the long run. Consider an exemption from the tender procedure for small-scale installations, for which administratively set support levels may be more appropriate.

**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 and to standardise the required tests to a less detailed level similar to other Member States.

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



### 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 in 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 encouraging investment into grids in order to make investments into grid-connected RES-H plants more attractive.** Obliging communities to develop local heat management plans may also be helpful here.



### TRANSPORT SECTOR

If the use of biomethane is to increase in future years, infrastructure and sustainability considerations have to be included into the relevant plans early on. **Ensure appropriate transmission infrastructure for biomethane** (gas pipelines vs. transportation by conventionally fuelled trucks) and take this into account in sustainability assessments.



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# 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, Finland is also planning to produce significant amounts of electricity from liquid biofuels according to its NREAP, making it second only to Italy. Capacity caps apply to wind, biogas, and solid biomass. Investment grants are available to companies, municipalities, and 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” on their electricity feed-in

premium. Investment grants are available to companies and municipalities for heat pump, geothermal, biogas, biomass, and solar thermal installations. Farmers benefit from investment grants for heat pump, 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:** Most private households wanting to install RES 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 alignment of grid operators regarding grid connection.

**Wind deployment in Finland has been slower than planned.** Improve conditions for wind farm developers by removing non-financial barriers in the planning and permitting stage: These may include review of the rules allowing third parties to file complaints, and 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.



### 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 to best-practice. Also, consider improving the funding for RES-H&C for private persons.

**Adjust heat market regulations in order to make it easier for heat producers to feed heat into district grids.** Especially for

solar thermal installations, a simple and unified procedure for connection to district grids would be helpful.

Consider adjusting the formula for calculation of the energy efficiency of buildings, so that not only heat production units in buildings, but also those next 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.**

Incentivise municipalities to adjust their procurement procedures, for instance for public transport vehicles, and to explore options for synergies, for instance with municipally owned waste processing facilities.



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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, tidal and wave, and solid biomass 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 1500 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, biogas and solid biomass installations. France already produces significant amounts of hydro power and according to its NREAP is planning 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 pump, biogas, biomass, geothermal and solar thermal installations via a programme to support homeowners with modest incomes. A zero-interest loan for RES installation in the course of building renovation 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 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 tax reductions. 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 caused by frequent reforms in the legal framework, for instance as has recently been the case for environmental permits and even more prominently by the past failure of the French government to notify the feed-in tariff scheme as state aid to the European Commission. The predictability of tender calls would improve if they were held at regular intervals.

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

Improve planning and permitting procedures: Ensure better coordination between 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 decreases waiting times. Speed up court procedures regarding complaints against planned wind farms. Simplify the adaptation of land use plans for large PV installations.

Grid connection and access: Provide reliable long-term RES policies so grid operators are able to anticipate RES deployment in their area and can plan accordingly. Consider simplifying grid connection procedures and reducing the proportion of connection costs borne by RES producers.



### HEATING AND COOLING SECTOR

Consider encouraging investments into small RES-H installations. The most important support instrument

at present, the investment grant programme allocated through tenders, is targeted mainly at larger installations, and administrative processes under the scheme are also too complex for owners of small installations.

Improve energy efficiency of CHP plants: When tendering CHP plants, the tender design often focuses on electricity production. Consider the possibilities for including heat production, in connection with heat demand at the 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

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.



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# GERMANY



## KEY TRENDS IN THE RES SECTOR

The development of the renewable energy sector in Germany continued to be characterised by high levels of uncertainty in 2014. The Renewable Energy Sources Act underwent a fundamental change, with the support system shifting from a feed-in tariff to direct marketing and the inclusion of provisions introducing competitive bidding. The European Commission also played an important role, due to their investigation into the German support scheme and the special compensation scheme. Further, the Commission, in its guidelines on state aid for environmental protection and energy 2014-2020, forcefully introduced competitive bidding as the only way support schemes will not be regarded as contrary to European law. The political and energetic crisis in Ukraine also played a significant role.

The amendments of the Renewable Energy Sources Act are significant and will have a negative impact on the future development of the RES sector. The expansion goal of 100 MW and the low tariffs for bioenergy, the changes regarding

solar self-consumption, the inclusion of competitive bidding starting 2017 and the provision regarding negative market prices and RES may lead to market distortion and a lot of uncertainty among investors.

The heating sector has witnessed an upsurge in interest from policy makers. The discussions on tax relief for retrofitting the building stock restarted, but failed, the tariffs of the financing tool for renewable heating (MAP) were raised, and the Government initiated dialogue platforms which are supposed to deliver results by the end of 2015.

The transport sector has seen little change in 2014. The Government released the first part of a new e-mobility law and is planning the release of the second part in the course of 2015. As for biofuels, the uncertainty remains high, with the European institutions still discussing and not agreeing on the future of the sector.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

**Forego the introduction of competitive bidding:** Competitive bidding increases the support costs and threatens to exclude a large number of small and medium stakeholders from participating in the Energiewende. It increases investment uncertainty and negatively impacts public acceptance.

**Further develop the electricity markets:** The new challenges of the Energiewende and the growing share of RES at the center of our energy system require increasing the degree of flexibility of both generation and demand. Exploring these new options and introducing a strategic reserve also guarantee the security of supply.

**Strengthen the role of bioenergy:** Under current conditions, bioenergy and especially biogas cannot play a significant role in providing flexible and reliable electricity. Financial incentives are needed to increase the flexibility of biogas and spur investment.



### HEATING AND COOLING SECTOR

**Develop a concept for retrofitting the building stock:** By 2050, the building stock needs to be carbon neutral. There is an acute need for renovation roadmaps in order to achieve this goal. The roadmaps would implement necessary measures in a predetermined order, taking into account the age and the state of the building, the income and the age of the inhabitants, etc.

**Create a level playing field for renewable heating:** Falling oil and gas prices do not encourage consumers to replace their heating systems. Further, the total cost of renewable heating systems is not on a par with conventional ones.

**Provide better and clearer information:** The Government plans to address uncertainty and misinformation among consumers by labeling heating systems. The labeling scheme should be paired with heating system checks, and renewable heating systems should be among the options installers recommend to their customers.



### TRANSPORT SECTOR

**Create a clear and stable framework for biofuels with a clear perspective for after 2020 at both the national and European level:** The biofuel sector is grappling with enormous uncertainty about its future in the years to come and after 2020. The ILUC proposal with its planned provisions, such as multiple counting, and the introduction of a GHG quota in Germany, with the possibility of upstream emissions reductions counting towards fulfillment, have to be put on an objective footing to allow the biofuel industry to continue developing.

**Implement and further develop the incentives included in the e-mobility law:** The law grants electric vehicles a number of benefits, such as parking spaces in the city center, use of the bus lane, etc. These provisions should be fully implemented and complemented by further incentives, possibly financial ones.



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# GREECE



## KEY TRENDS IN THE RES SECTOR

The recent development of RES in Greece was marked by the parliamentary approval of a revised support framework called “New Deal” in April 2014.

The “New Deal” imposed significant retroactive/retrospective reductions in the FITs for all existing RE projects in exchange for an extension of the duration of their PPAs. It also set new, reduced FITs for all new RES projects. Moreover, it lifted a previously imposed moratorium on PV projects and allowed for the implementation of an additional 1.5 GW of PV, excluding small rooftop PV systems, on top of the 2.2 GW 2020 national PV target, which had already been reached in 2014.

The Greek government submitted the revised support framework to the EU Commission for approval in December

2014. The decision of the Commission is expected to profoundly influence the further implementation of RES in Greece.

The provisions of the “New Deal” resulted in a significant reduction of the short /medium term revenues of all operating RES projects. It exacerbated the already serious liquidity problems of RES IPPs, threatening their viability. Having intended to reduce the deficit in the account balance of the National Electricity Market Operator, the tariff reductions failed to ensure the viability of the account, and thus the serious delays in the payments of RES producers persist. This situation is expected to deteriorate unless the liquidity of the dominant market player, the PPC, improves. No changes relevant to the support of RES-H or RES-T projects occurred in 2014.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

**Improve the liquidity of the PPC:** The PPC controls 98% of the electricity supply in Greece. Currently, unpaid electricity bills to the PPC account for more than € 1.7 billion. This causes, among other market viability problems, serious delays in the contracted payments of RES electricity producers. Incentives have to be provided to debtors in the form of the possibility to pay back their debts in flexible monthly installments. Moreover, the PPC must further reduce its operational costs and seek more loans so as to strengthen its financial base and, thus, be able to pay RES IPPs.

**Change the way in which the support for RES in electricity is calculated and collected:** Despite efforts to improve it, the methodology to calculate and collect the support for RES-E in Greece remains flawed. It overestimates the amounts of public support required to finance RES projects, it reduces the cost for electricity suppliers and favors fossil fuels. The calculation needs to be based on the principle of avoided environmental cost. Furthermore, the existing corresponding levy has to be integrated in the suppliers' cost and should not be treated like a separate charge.

**Prepare to respond to the Commission's request to establish a new support framework for RES based on the new EU guidelines for State Aid:** The new guidelines foresee the establishment of a feed-in premium system with auctions for all new RES-E projects exceeding a certain capacity threshold after 1/1/2017. The implementation of such a system is expected to face serious barriers in Greece as there is no representative reference market price and the conditions for the successful organization of auctions for the premium are unfavorable. The Government needs to organize consultations with the market stakeholders at the national level to arrive at a viable plan to deal with this.



### HEATING AND COOLING SECTOR

**Establish a coherent and integrated support framework for RES-H:** There remains an urgent need for developing an integrated plan for the promotion of renewable technologies in heating and cooling. The Ministry of Environment and Energy should delegate this task to a competent public authority, e.g. the state-supervised Center for Renewable Energy Sources (CRES), and then subject the new plan to public consultation.



### TRANSPORT SECTOR

**Establish a coherent and integrated support framework for RES-T:** There remains an urgent need for developing an integrated plan for the promotion of renewable technologies in transport. The Ministry of Environment and Energy should delegate this task to a competent public authority, e.g. the state-supervised Center for Renewable Energy Sources (CRES), and then subject the new plan to public consultation.



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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. In 2012, the RES-E share slightly decreased to 6.3%, but progressed again to 6.7%.

Currently, the main renewable energy source used in Hungary is biomass, followed by wind and hydro power. Solar power has a low share in Hungary, summing up to 0.7 ktoe. Even though Hungary has a significant geothermal potential, there not a single 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 contrast to this, a clear preference for nuclear power in official energy planning can be observed.

In Hungary, the use of RES-H&C technologies is supported mainly through grants under the Environment and Energy Efficiency Operative Programmes and the Green Financing Programmes. Two improvements in these financing schemes from the perspective of RES-H&C support are that both the overall amount and the predictability of the availability of funds have increased through changes in the funding of the schemes.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

Hungary expects a significant expansion of nuclear generation capacity. For a certain transition period, more than four GW of nuclear generation capacity can be expected to be online, which may account for more than 80% of electricity demand (at current demand levels). Due to the requirement for nuclear power to run as base-load, this may impede the integration of significant amounts of volatile RES-E generation.

Another important aspect regards the consolidation and increase in transparency of the support framework for RES-E. On the one hand, the adoption of a renewable energy act has been announced in the NREAP of 2010 and would consolidate all relevant RES-E provisions in one legal act. On the other hand, the introduction of a further developed and more elaborated support framework for RES-E has been discussed under the label METÁR system. It would, however, be necessary to align these proposals with recent developments at the EU level; this particularly regards the requirement that changes made to support schemes must be compatible with the state aid guidelines.

The Hungarian electricity market is part of the Central Eastern European Market Coupling Initiative. The coupling of regional electricity markets has made quite some progress under the “Price Coupling of Regions” umbrella. This development should be further facilitated. A stronger coupling of electricity markets will support the efficient integration of RES-E in general and can help to alleviate the hampering effect of the planned nuclear capacity expansion in particular.

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

Regarding grid connection, clearly defined rules are missing, as only minimal obligations are defined by law.

There is no reliable overview of all the necessary documents and applications. Furthermore, 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 will significantly increase the number of authorities involved, which will increase the duration of the administrative procedure. A one-stop-scheme should be envisaged, and international best practices should be followed in this respect.



### HEATING AND COOLING SECTOR

In some cases, the limited availability of funds in relation to the market demand has led to a stop-and-go procedure caused by the very quick exhaustion of fund. In order to put industry on a steadier track, better alignment is required.

The development and expansion of the district heating network is hampered by the reduced ability of grid operators to pass on expenses for new infrastructure investments to their customers. The relevant regulation should be aligned with practices in other EU Member States.

The high number of authorities involved in the authorization of RES-H installations and partly overlapping competencies imposes high administrative costs on project developers. First steps have been taken to streamline this process through the introduction of the so-called “green authority”, and further steps should be taken to achieve the benchmark of “one-stop-shopping”.



### TRANSPORT SECTOR

Investments into biofuel generation and biomass cultivation are politically desirable. Foreign investors appreciate the good geopolitical conditions, the high agricultural potential and the very good availability of raw materials for biofuel production. Yet, a consistent strategy to increase domestic demand for biofuels produced in Hungary is missing. Consequently, approx. 90% of Hungary’s bioethanol production is exported.



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# IRELAND



## KEY TRENDS IN THE RES SECTOR

Ireland operates 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) benefit from a tax relief scheme. Adaptations to the scheme are underway and will expose some producers, especially wind power operators, to more market risks by paying them a premium instead of a fixed tariff. Ireland's RES strategy focuses on wind, around 12,000 GWh of wind (onshore and offshore) electricity production are planned for 2020. The electricity act ensures non-discriminatory access by all power plants to the transmission grid. The cost of grid expansion are borne by 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 and heat pumps. Other technologies such as solid biomass and biogas are currently not supported. Ireland is lagging behind the RES-H&C development foreseen in its NREAP. A strategic Bioenergy Plan is being developed and the introduction of a Renewable Heat Incentive (a feed-in tariff for heat) is being discussed along with it.

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. Second-generation fuels are counted double. Ireland is consuming less biofuels than planned. However, as total fuel consumption in the transport sector is also lower than expected, the RES-T share is close to its planned value.

## 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 should be created which handles all relevant procedures.



### HEATING AND COOLING SECTOR

**Create a reliable RES-H&C strategy and appropriate support schemes:** Ensure the timely introduction of support instruments as foreseen in the draft Bioenergy Plan. Ireland is currently experiencing less deployment of biogas and solid biomass than planned. Previous support programmes have expired and were not replaced. Drafting of the Bioenergy Plan has been subject to delays, and there is doubt among stakeholders about whether measures will be introduced by 2016 as planned.



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# ITALY



## KEY TRENDS IN THE RES SECTOR

In 2014, the number of connection requests decreased, mainly due to:

- **the inadequacy of the support scheme**, with many different instruments, fast modifications of already existing rules or introduction of new ones.
- **retroactive impacts of specific measures**, affecting the setting of several operators, forcing them to deal with different conditions from those in place at the time of the investment.
- **difficult access to financing**: Several decrees were enacted in July 2012, restricting access to the support scheme, which reduced the possibility to obtain bank loans.
- **the length of authorization procedures and grid connection**, which is mainly regulated at the regional

level. There are different regulations and procedures depending on the area in which the plant will be built.

- **Unclear taxation**. A complex tax structure, many bureaucratic requirements and different rule interpretations by local tax agencies confuse the operators.

Due to the abolition of support schemes for new PV installations and other RES plants, the incentive to invest in RES has decreased significantly. “Conto Termico” (Ministerial Decree 28/12/2012), continues to be in force: it provides subsidies for thermal energy from RES and energy efficiency in buildings through conversion projects.

A ministerial decree, published on 17 December 2013, set up an incentive system for the injection of biomethane into the gas grid and for its use in the transport sector.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

#### Guarantee clear and stable incentives over time

Frequent modifications to support scheme, uncertainty about eligibility and the amount of the incentive have a negative effect on market stability. Investors need a clear and long-lasting support framework with predictable changes.

#### Avoid the modification of existing support schemes with retroactive effects

Besides removing barriers, establish a gradual decrease in the incentive amount so as to guarantee the economic sustainability of the investment (i.e. a different based on energy source).

#### Simplification of administrative procedures through centralization of energy competences

The distribution of competences among different public bodies (national, regional, local) and the inhomogeneous implementation of national laws at the local level cause uncertainty and an excess of bureaucracy.

The decisional power in the energy sector should be kept at the national level, while the implementation of transparent and consistent administrative procedures should be kept at the regional level.

#### Provide clearer measures regarding taxation to avoid ambiguous interpretation

A complex and unclear tax structure (especially for raw materials affecting the biomass sector), many bureaucratic requirements and different interpretations of the same national rule by local tax agencies lead to an unequal treatment of operators. A revision of the laws, providing clearer and unambiguous rules, is strongly advisable.



### HEATING AND COOLING SECTOR

#### Improve incentives and access to financing for RES-H&C

It is crucial to provide financial incentives for RES-H&C over a longer period of time in order to compensate the higher costs of this technology and to increase its market share. Moreover, the banking system still reveals scarce maturity for financing RES-H&C solutions. Information and support to raise awareness among banks are needed.

#### Stimulate training for and certification of conventional operators

General lack of know-how concerning non-conventional technologies (heat pumps, biomass boilers, solar panels) make it necessary to create training programs and adopt EU certification standards to support the qualification of conventional operators.

#### Simplify the rules and implement a support scheme for district heating networks

Complex regulations and uncertain legislation make it difficult to develop DH networks. Moreover, the incentives for the implementation of new heating networks provided by D.Lgs. 28/2011 are still available. Quick and strong action is required to allow for a targeted development of the sector.

#### Improve the public perception of the RES-H&C sector

RES-H&C are still relatively unknown among citizens and installers. There is a need to increase the general awareness of different possible applications offered by the sector: domestic installations, industrial plants, public buildings (hospitals, schools, sports facilities).



### TRANSPORT SECTOR

#### Improve training and implement a comprehensive information system

The lack of knowledge and experts affects the whole RES-T sector, from the shaping of a targeted legislative framework to the identification of a suitable support scheme. Possible solutions include the further involvement of the Ministries of Transport and Agriculture, the promotion of an exchange of information and the development a comprehensive strategy to create a sustainable transport system.



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# LATVIA



## KEY TRENDS IN THE RES SECTOR

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 biogas and solid biomass before the scheme was put on hold. A tax of 5-10% was imposed on existing RES installations in January 2014. Without support, future investments can be expected to be much lower.

RES-H&C installations are supported through preferential tax treatment on 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 absolute consumption of renewable heat is foreseen. The consumption of renewable heat in households was below planned levels in 2012.

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. In 2012, Latvia was lagging behind its plans on the use of biodiesel, bioethanol/-ETBE, and other biofuels.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

The new revised RES-E support scheme needs to adhere to the most recent requirements by state aid regulation. For large-scale installations, possibilities for efficient tender design, custom-tailored to the country's market conditions, should be explored in detail. A 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. For small-scale installations, it is advisable to set support levels administratively, and to plan for regular adjustments, for instance triggered by how much capacity was 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 can be applied if there is strong concern about support costs getting too high.

Retrospective changes such as the new tax being applied to existing RES-E installations should be avoided in the future. Such unpredictable policy changes increase the necessary 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 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 potentials over Europe, it is advisable to ensure 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, for instance investment grants or tax deductions on the investment.



### TRANSPORT SECTOR

Biofuels 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 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, for which the level 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 that produced by the 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, biofuel producers are partly reimbursed for their expenses for raw materials such as rape seed and cereals.

## POLICY RECOMMENDATIONS



### OVERALL

Decrease investor insecurity by completing delayed elements of the regulatory framework for renewables, including secondary legislation for offshore wind and regulation regarding purified biogas injected into the gas grid



### ELECTRICITY SECTOR

The capacity caps are expected to be hit long before 2020, but are currently under revision. Consider increasing the capacity caps especially for low-cost technologies such as onshore wind. Announce cap extensions early to minimize stop-and-go effects.

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



### HEATING AND COOLING SECTOR

Biomass supply traded on the energy exchange Baltpool is currently dominated by few large suppliers who are therefore able to influence prices in their favour. Consider improving access to the market by small players and take measures to limit large incumbents' ability to influence prices.

Some deployment of heat pumps is foreseen in the NREAP, but there is virtually no support. Consider improving support

by either adapting the investment grant scheme to include more heat pumps, or by making operational the legal provisions ensuring reduced electricity prices for electricity consumed in heat pumps.



### TRANSPORT SECTOR

Biofuels produced in Lithuania are mostly 1st generation, the vast majority of which is exported. Policies favouring 2nd 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. Efforts to improve the charging infrastructure are already being taken and need to be kept up. The strategy might also 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, and relies on electricity imports rather than on indigenous production. However, the present discussion in Europe about a possible reduction in the share of first-generation biofuels from 10% to 5% calls Luxembourg's strategy into question.

There is also a lack of sectoral plans for the development of renewables. The government has announced to publish a sector plan for wind energy in 2015.

Electricity from renewable sources is supported through feed-in-tariffs, investment grants and an exemption from income tax for photovoltaic installations. In August 2014, a new regulation was published, which increased the existing feed-in tariff rates by between +11% (for solid biomass) and

+56% (for hydropower) and prolonged the tariff duration from 15 to 20 years for hydro power, biogas and biomass.

The use of gas for heating purposes is common in the country, which limits the potential of RES-H. Besides, regulations on the energy performance of residential buildings have been quite strict in Luxembourg in the past few years.

The transport sector is responsible for more than half of the country's final energy consumption. Therefore, a switch to RES in transport is highly relevant to reach the overall RES target. The use of renewable energy in the transport sector is promoted through a biofuel quota. Oil companies releasing petrol and diesel for consumption are obliged to fulfil a set quota of biofuels per year. Currently, the biofuel quota to be fulfilled by oil companies is 4.75%.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

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

**Integrate RES-E projects into spatial and environmental planning:** The creation of a national solar cadastral plan could inform citizens about the insulation efficiency of their roofs and therefore stimulate the employment of PV.

**Need for governmental communication of the available support schemes and the profitability** of certain technologies in order to stimulate the employment of the most efficient technologies.



### HEATING AND COOLING SECTOR

**Run a governmental campaign to raise public awareness on the existence of available support schemes:** the support system in place in Luxembourg provides financial support of up to 50% for heat production systems from solar energy. However, this funding is still too little known among households.

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

**Maintain quality standards of RES installations:** There is a lack of certification of installers regarding several renewable energy technologies. As an example, solar thermal systems

are often badly installed, which leads to energy loss and higher maintenance costs, thus affecting the acceptance of such technologies.



### TRANSPORT SECTOR

**Revise the strategy for RES development in the transport sector (including general public):** There is a lack of public acceptance of biofuels in the country. Numerous advocates of renewable energies in Luxembourg criticize the strategy of the government hitherto for focusing on the development of biofuels in the transport sector. In this regard, a communication platform including several non-governmental organisations has been created to protest against the further production and use of biofuels.

**Consistency in biofuel strategy and governmental communication:** The government of Luxembourg, which came to office in December 2013, has pronounced itself against first-generation biofuels and plans not only to limit their maximum share in the fuel mix, but also to condition their support on social and ecological criteria. This is inconsistent with the existing biofuel quota.



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# MALTA



## KEY TRENDS IN THE RES SECTOR

The planned offshore wind farm Sikka I-Bajda, which was expected to be a major contributor to the RES target of a 10% renewable share in gross final energy consumption by 2020, will not be considered further because of environmental and economic reasons. Instead, the majority of renewable electricity shall be generated from a high number of small capacity installations. One promising idea is the installation of solar car parks, which are considered to offer an efficient alternative considering the limited space.

In June 2014, the Malta Resources Authority has published amendments, which state that the feed-in tariff, which is granted for 20 years, amounts to € 0.155 per kWh for roof-mounted PV installations with a capacity of less than 40 kW and € 0.15 per kWh for roof-mounted PV installations of 40 kW or more installed between 1 November 2014 and 30 April 2015.

Malta's energy policy aims at stabilizing its energy supply. Regarding this aim, the Interconnector project to Sicily is being implemented, and after some delay it is now expected to be operative by June 2015.

The key policy instrument for RES-H&C is a subsidy scheme. Once-only grants for solar water heating systems to private house owners are available, funded only from the national budget.

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

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

#### Reduce the complexity of administrative procedures:

Guidelines for RES installations exist only at micro level. As for large-scale projects, there are no rules or guidelines, nor a clear sharing of responsibilities. The Malta Resource Authority, Malta Environment and Planning Authority and Enemalta (energy company) are answerable to three different ministries, and the responsibilities of each are not clear to the other two. Private investors have come to Malta to develop renewable energy projects. However, most of them have backed out because of administrative reasons (high time consumption, unclear procedures...). As of now, there are no established rules for the development of large-scale projects, and different authorities do not know how to deal with such request, resulting in a lack of coordination, unclear responsibilities and a time-consuming application process.

#### An integration of RES-E in spatial and environmental planning is needed:

The demographic and geographic characteristics of the country alone create issues for spatial planning, as Malta is a very small and densely populated state. Spatial planning, thus, takes into consideration the issue of devoting areas to RES, but often clashes with other planning needs. Large-scale RES installations are not possible in Malta, for this reason.

**Reduce the duration of administrative procedures:** The lead-time needed to establish grid connection, including the collection of all permits, may be several years.



### HEATING AND COOLING SECTOR

**The implementation of a reliable RES-H&C strategy and support scheme is needed:** The only scheme in place is the promotion scheme for domestic solar water heaters. The scheme has been active since May 2011 and will be re-launched annually at the end of the year, as it is linked to the National Budget. Hence, the long-term security of RES-H&C support measures is not guaranteed.

#### Raise the remuneration level for RES-H&C installations:

According to an analysis on the monetary sufficiency of the measures in the renewable heat sector, the analysed heat sources (i.e. district heating, heat pumps and biomass) have 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 last floors). In order to solve this problem, facade instalments may be an option, however the Malta Environment and Planning Authority does not easily grant permits, for aesthetic reasons or for lack of knowledge, as this is a rather new technology in Malta. Another argument is that most detached-house tenants are elderly couples who have a smaller interest in installing, also because there is a tendency, after their death, is to sell the property, demolish the house and build apartment buildings. Another example is that there are no solar rights in Malta, meaning that if a building has a new flat built at its top, which casts 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 at the filling station, forcing drivers to create the mix themselves by taking fuel from two separate pumps. This creates a barrier to the acceptance of biofuels, as it adds one 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 first-come-first-served basis, low-cost RES-H and biogas options are favoured by the scheme, rather than RES-E options like wind power. Preferential loans and tax benefits serve as secondary instruments to incentivise RES investments. The Dutch support scheme in the past was characterised by frequent adaptations and changes of the support instrument. This

led to investor confidence being rather low. The national Energy Agreement on Sustainable Growth of 2012 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. Transport biofuel production is incentivised via tax benefits. Tax reductions also apply for low-emission vehicles.

## 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 transparency and reliability of national RES strategies. The objectives and measures in the Agreement should now be realised. This includes, for instance, the timely introduction of an appropriate policy framework to allow annual offshore wind tenders to start in 2015 as planned.

**Improve spatial planning for onshore wind farm development:** Development zones designated to wind by provincial administrations are often not actually suitable for wind farms.

**The SDE+ allocates subsidies to new applicants once a year:** This cycle is too long especially for RES-H&C projects in the building sector with much shorter development cycles, causing delay or non-realisation of such projects.

**Improve access to finance:** The Green Deal is a first step in helping RES projects access banks' resources. Still, financing remains a central issue for the development of renewable project in the Netherlands. The Green Deal scheme should be closely monitored, and further research should be done regarding the reasons why some banks are so reluctant to provide credit to RES installations, and how this could be changed.

**Develop strategies to address the lack of public acceptance:** Developers of RES projects often face significant public opposition. This is especially the case for wind farms, but seems to be on the increase regarding biogas and solid biomass installations as well. Strategies shall be developed 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 at an early stage in the planning process to integrate their views. Consider repowering older wind parks to increase installed capacities.

Re-evaluate the strong biomass/biogas focus of the Dutch Renewable Energy Action Plan: Some stakeholders have expressed concern about the focus of the Dutch NREAP on solid biomass and biogas, rather than more wind and PV. The Netherlands produce little biomass themselves due to limited natural resources and are thus dependent on world market prices of biofuels. 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.



### TRANSPORT SECTOR

While the infrastructure for electric vehicles and is relatively good, this is not the case for biogas-fuelled vehicles passenger cars, as the focus so far has been on heavy goods 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. 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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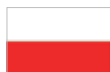
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# POLAND



## KEY TRENDS IN THE RES SECTOR

After four years of debates, the new RES Act was adopted in 2015, establishing the principles of RES support based on a technology-neutral auctioning system, which will not be active until 2016. Apart from the auction scheme, a feed-in tariff for micro-installations (<10 kW) is introduced.

Although prices of green certificates will stay very low, developers are trying to complete their installations in 2015, as they do not trust the new support system.

The RES Act establishes a very complicated administrative procedure and raises many questions concerning its interpretation; the Ministry of Economy has already proposed an amendment. It does not provide for predictability for developers, as auction quotas and reference prices are set solely by the Ministry of Economy every year. This illustrates a lack of political willingness to develop RES beyond EU requirements

The new RES Act only provides support for CHP; there is neither a sophisticated strategy nor support scheme for the heating and cooling sector.

There is still a possibility to obtain soft loans, but the scale is very limited.

EU laws are finally implemented by amending existing acts, introducing more effective promotion of the use of RES in fuels and a transition to E10 until 2020.

Methyl esters still dominate over bioethanol in biofuels, which contributes to a lack of interest among fuel businesses in introducing petroleum-based biofuels.

RES in transport is promoted only through a biofuels quota obligation.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

Set a long-term policy on RES development, including targets and a trajectory for the development of RES beyond 2020 as well as a strategy for the development of specific technologies (the technology neutral scheme introduced in the RES Act favors the cheapest and more mature technologies, which hampers the development of more advanced ones). The draft Energy Policy until 2050 treats RES development only in terms of compliance with the Climate-Energy Package 2020. Furthermore, adopt national targets for 2030 on the EU level.

Revise the RES Act in order to simplify and shorten administrative procedures and eliminate unclear provisions, and introduce auction quotas for specific technologies; although the Act entered into force in March 2015, it already needs amendment regarding definitions and procedures. It is perceived that the new RES Act creates more obstacles than incentives.

Increase the green certificate market price, which is very low because of an excess of certificates (10 PLE).

Secure guaranteed access of RES to the grid. The priority for RES applies only for the transmission of the electricity, but this is only applicable after connection. Moreover, improve the infrastructure of the transmission and distribution grids, which are not adjusted to distributed electricity generation.

Raise awareness among the public and the authorities in order to clarify the impact of on the environment and health and show the benefits of RES to the development of local communities.

Facilitate RES location procedures in spatial planning: the current process is very difficult and time-consuming, and it might be further complicated by the obligation to locate RES with a capacity of more than 10 kW solely on the basis of local spatial plans, which will practically stop the development of distributed systems.



### HEATING AND COOLING SECTOR

Set up a coherent scheme to support the development of heating and cooling systems. At the moment, it is indirectly supported through a certificate system, which will expire in 2018. Only CHP installations are included in the support scheme proposed in the new RES Act.

Introduce tax reliefs for the purchase of renewable energy equipment for heating purposes in order to create a suitable mechanism to support the installation of units generating heat from renewable sources like, for example, heat pumps, solar collectors and biomass boilers in residential buildings.



### TRANSPORT SECTOR

Revise the strict quality requirements on biofuels (not scientifically based), which can hinder the development of the sector.

To raise awareness on benefits coming from the use of biofuels (in particular related to advanced biofuels) among users and producers, here revision and full implementation of the Multiannual Plan for Promotion of biofuel is highly recommended.

To introduce an incentive system for advanced fuels in order to increase the producers willingness to switch to advanced products or to adopt a clear trajectory for renewable transport to and beyond 2020 on the EU and national levels.



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# PORTUGAL



## KEY TRENDS IN THE RES SECTOR

Since 2013, all new RES-E projects have been integrated in the liberalized electricity market (except small units) and remunerated according to market prices.

The government has established an over-taxation for wind power plants to reduce electricity tariff debt and, as compensation, extended the validity period of FiTs for another five or seven years. The government has decided to reduce the FiT period for SHPs installed before 2005, but the owners contested the decision.

The new RES-E licensing regime from August 2013 renders the accreditation process more difficult regarding the time stages for environmental impact studies.

An overpowering scheme was published allowing wind farms to install an additional capacity of up to 20%, although the ordinance regarding the technical issues has not yet been issued.

The new self-consumption and small production unit's regulation allows for the sale of surplus production from

self-consumption units and sets a new reference tariff for small production units.

There are only indirect schemes for RES-H&C through the Energy Performance of Buildings and the self-consumption RES-E regulations.

Furthermore, the green tax reform has imposed new taxes regarding fossil fuel consumption and CO<sub>2</sub> emissions in the transport sector.

The share of biofuels in the transportation sector is expected to reach 5.5% due to the implementation of a biofuels production certification system. This is still far from the targeted 10% share.

The target of 31% RES in final energy consumption by 2020 could be at stake if the national RES action plan was not followed. In 2014, the preliminary values point to a proportion of around 27%.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

Review existing support schemes with special emphasis on the market competition rules, redirecting subsidies to meet the binding targets and reduce fossil energy dependency.

Reduce the regulatory instability introduced by the new licensing schemes, through an enhanced dialogue amongst stakeholders avoiding retroactive changes, and promote a redefinition of the current regulation.

Speed-up and create the conditions (environmental, financial and political) for the implementation of the National Hydroelectric Power Plant Plan, which will double the current hydro pumping/storage capacity, creating thus more competitive conditions to meet demand using variable renewable sources like wind and solar.

Improve public awareness regarding RES-E, including the clarification of the actual costs and benefits and the coordination of energy statistics.

Set a clear strategy and binding targets for RES-E in 2030.

Continue the promotion of the cross-border interconnections capacity between Portugal and Spain and between the Iberian Peninsula, Europe and North Africa to create a more extensive, competitive and sustainable market, improving security of supply and allowing for further renewable energy development.

Promote R&D projects to encourage public and private investment into less mature technologies such as solar, bioenergy, marine energy and offshore wind technologies.

Create a green tariff option for final electricity consumers.

In 2014, Portugal reached a share of renewable energy in electricity generation of 51.7%, still far from the 2020 target of 60%. So, it will be necessary to review the current mechanism and define new approaches to promote private investment into large-scale projects.



### HEATING AND COOLING SECTOR

Promote public awareness through media campaigns to promote all RES-H&C technologies by providing information on the benefits, costs and available incentives.

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

Open a certification program for installers, equipment, as well as a life cycle assessment for pellets and biomass with low bureaucracy in order to ensure more reliability, product quality and improved public awareness.

Introduce obligatory “maintenance contracts” for RES-H&C systems.

Create of a monitoring program for solar thermal systems as well as for biomass and pellets consumption.

Set targets for installed RES-H&C capacity for 2020 and 2030.

Promote R&D and demonstration projects to encourage public and private investment into solar thermal cooling technology.



### TRANSPORT SECTOR

Review the 1990 energy management regulations of fleets.

Impose higher consumption reduction targets and incentives for the acquisition of electric vehicles as well as an incorporation of higher shares of biofuels.

Plan the future infrastructure model of charging points. Create a monitoring centre for electro-mobility aiming at evaluating the results of the pilot phase of MOBI.E and monitoring the next phase.

Set a national goal for 2030 regarding the share of electric vehicles within the national fleet.

Promote and coordinate public and private investment into R&D and demonstration projects for batteries and vehicles in order to develop long-term solutions for battery storage, grid supply and the combination of centralised and decentralized energy production.



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# ROMANIA



## KEY TRENDS IN THE RES SECTOR

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

Until 2010, there was hardly any renewable 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 has mainly been due to the application of a Green Certificate Scheme.

The Green Certificate Scheme has undergone some major revisions in 2014. The number of certificates issued per MWh has been cut across technologies due to the observed overcompensation in the past. Furthermore, the validity period of the green certificates has been reduced from 16

to 12 months. Moreover, energy-intensive industries have been partly exempt from the levy introduced with the Green Certificate Scheme.

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

Small-scale RES heating and cooling projects are mainly promoted through subsidies under the so-called “Casa Verde” programs. However, the last call for applications was in 2011.

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

Furthermore, a subsidy program promotes e-mobility. It is launched on an annual basis and supports the purchase of electric vehicles.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

Recent developments in the Romanian RES-E sector legislation have negatively impacted investor confidence. **The unpredictability of the annual RES-E quota should be eliminated, as it has caused unnecessary price volatility.** Most importantly however, there should be more political commitment to support RES-E in order to restore long-term investor confidence.

**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 generators are entitled to receive under the Green Certificate Scheme.

The current banding factor of one green certificate per MWh is not sufficient to trigger new deployment of wind power - if this was desired, the factor would have to be increased. In general, the drop in the certificate prices is only bordered by the minimum price, and the situation may not improve in the future, as even then an excess supply of certificates is expected. **An appropriate measure could be to take these out of the market.**

**Create stable conditions in order to provide access to financing:** The unstable legal situation makes a proper estimation of the amortisation period of RES-E installations even more difficult and additionally impedes access to financing. Therefore, it is also necessary to ensure a fair and independent regulation of the RES-E sector.

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

**Redesign grid-access regulation:** Just a small number of all project requests for grid connection have actually been implemented, which is why a virtual saturation can be observed. This situation unnecessarily increases 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 authorizations rather than the high number of different licenses and permits that are necessary in the course of plant approval. A one-stop-scheme has already been envisaged, and international best practices should be followed in this respect.



### HEATING AND COOLING SECTOR

**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:** The energy infrastructure, such as the district heating infrastructure and the natural gas network, is poorly maintained and characterized 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 in 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 independent of the amount of biofuels produced or marketed. This has led to a reduction in the number of biofuel producers and retailers in Romania.



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# SLOVAKIA



## KEY TRENDS IN THE RES SECTOR

In December 2013, all three DSOs and the TSO declared a connection moratorium for new renewable energy plants with a generating capacity of more than 10 kW. The distributors argued that the capacity limit for volatile electricity sources had been reached in their area of responsibility. According to Slovak legislation, the DSO is only obliged to connect new generating sources if there is free capacity in the distribution grid.

According to an amendment to the Renewable Energy Act, which came into force on 1 July 2013, the feed-in tariff for PV only applies to installations on buildings with a maximum capacity of 30 kW. All larger installations are no longer covered by the support mechanism. Slovak

decision-makers argued that this proposal would “reduce unfair practices of some electricity producers” and “reduce the impact on the end user of electricity”. Subsequently, the feed-in tariffs for all technologies were reduced on 1 July 2013 and were cut again on 1 January 2014.

In November 2014, a new Energy Policy (EP) of the Slovak Republic was approved by the government. In terms of energy security, the EP considers nuclear power as least vulnerable to supply disruptions. An NGO argues that in building a new nuclear power plant, the government only increases Slovakia’s dependence on nuclear fuel from Russia. Instead, the goal should be to increase electricity generation from renewable sources.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

**Provide a reliable RES-E strategy:** The legal amendments undertaken by the Slovak parliament and the regulatory authority ÚRSO (Úrad pre reguláciu sietových odvetví) between 2010 and 2013 discouraged investors from RES-E technologies. Since the amendment on 1 July 2013, the feed-in tariff for PV has only applied to installations on buildings with a maximum capacity of 30 kW instead of capacities of up to 100 kW as before. All larger installations are no longer covered by the support mechanism. A new reservation charge for electricity transmission and distribution has been introduced by the Regulatory Authority ÚRSO, which has to be paid by all producers of renewable and non-renewable electricity since 1 January 2014. The calculation of this fee is rather complicated and depends on the type of generating source. As such, this charge makes the market entry for RES-E generators more difficult.

**Provide clear rules for grid connection and lift the connection moratorium:** In December 2013, all three DSOs as well as the TSO declared a connection moratorium for new renewable energy plants with a capacity of more than 10 kW. Currently, only small installations which meet the technical requirements for connection to the distribution grid receive a connection approval. The distributors argue that the capacity limit for volatile electricity sources has been reached in their area of responsibility. However, according to the latest amendment to the Renewable Energy Act, the DSOs are obliged to disclose on request the capacity data for any individual connection point. Unfortunately, none of the DSOs has fulfilled this obligation completely. The mitigation of this shortcoming is essential for the development and installation of new RES-E projects.

**The connection procedure has to be predictable and transparent:** 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 in which the PV system is being installed or electrical inspections of the building (re-frame.eu Database). These complexities have to be minimized, and the requirements must be clearly specified.



### HEATING AND COOLING SECTOR

Renewable energy in the heating sector receives very little attention by the decision makers. Currently, only CHP plants may 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 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 existing subsidy programs for biofuels are hampered by unnecessary bureaucracy.** RES investors applying for subsidies are obliged to provide many legal documents which, according to the Slovak biomass association, are not needed in other EU Member States and thus pose an unnecessary administrative barrier.



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# SLOVENIA



## KEY TRENDS IN THE RES SECTOR

In Slovenia, electricity generated from renewable energy used to be supported mainly through a feed-in tariff and a premium tariff. So-called “qualified producers” of electricity from renewable sources could choose between a guaranteed feed-in tariff and a premium tariff with a duration of 15 years. In 2014, the scheme was changed to a tendering process, where the tender document should be annually prepared by the Energy Agency. In October 2014, the Energy Agency announced that no projects will be put out for tender in 2015 due to insufficient funds.

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 regression rates for some technologies remains a problem and has led to a major downfall of installed power. In 2014,

a total of approximately 180 new installations entered the support scheme, with a power output of approximately 18 MW. A fair majority of households use wood biomass as a source of heat 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 increased energy refurbishment of buildings. Since 2014, heat providers have been obliged to ensure that a certain percentage of their heat is generated from RES.

The main support mechanism for RES in transport is a quota system. Apart from that, there are projects which target the RES-T sector indirectly, either by promoting 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

**Provide appropriate incentives and funds for RES-E:** Currently, there is still potential for wind and hydropower in the RES-E sector, but there is a gap of around € 10 million to fully cover the financing of the support scheme. Thus, a transparent and reliable regulation of the RES-E sector though the support mechanism set out under the new Energy Act and sufficient funds for the planned support schemes are needed.

**Include wind turbines (and other RES) in spatial planning and reduce the duration of administrative procedures:** The integration of RES-E in spatial and environmental planning and the consequent duration of administrative procedure remains a major barrier to the further development of RES-E technologies.

**Simplify and speed up the permission procedure for RES-E:** Currently, the length and complexity of the permission procedure leads to severe delays in the deployment of RES-E. The responsible authorities usually do not adhere to the timeframe stipulated in the administrative procedure rules, which is also due to the fact that the authorities do not have the required manpower to address these issues.

**Improve the public perception of RES-E:** Due to a lack of governmental communication about the socio-economic and environmental benefits of RES-E, there is a general scepticism against RES-E, which quickly leads to a NIMBY effect. Also, potential investment yields of RES-E projects are not considered.



### HEATING AND COOLING SECTOR

**Introduce a clear and long-term strategy for the RES-H&C sector:** The key barriers within the RES-H&C sector are

the lack of an overall, reliable RES-H&C strategy and the appropriate design of related financial incentives. In other words, Slovenia does not use its full RES potential.

**Provide cheap loans or provide access to financing for small investors:** Smaller investors on the local level usually do not have the necessary financial resources to carry out a project that would otherwise be deemed appropriate even within the scope of the current support schemes. It also requires willingness and good management to execute an investment in this sector, as the implementation of a district heating system usually depends on the willingness of the entire local community.



### 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 has had certain biofuel production facilities, most of them either stopped their production or are thinking of doing so because of poor profitability. Incentives for domestic biofuel production to achieve Slovenia's yearly biofuel targets should be implemented.



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# SPAIN



## KEY TRENDS IN THE RES SECTOR

The economic crisis in Spain hugely impacted the RES sector. The lack of investors' confidence in the energy reform and the country's legal stability is leading Spain to be the world leader in the number of disputes at arbitration courts against government reforms.

Due to the economic crisis, the electricity demand decreased to the 2005 level in 2013, which had an impact on government revenue. As a result, the government launched an electricity reform in 2013, mainly focusing on a cost reduction for RES, cogeneration and waste.

The new electricity reform package (retroactive establishment of a new economic regime) has radically changed the support system for RES, moving from a feed-in tariff (paid for the generated energy) to a support per installed capacity, based on economic parameters, standardized installations and a "reasonable return on investment". The return on investment will be redefined every 6 years, which decreases the stability of the support scheme.

The incomplete implementation of EU regulations has led to a lack of reliability on the general H&C strategy, which hinders the development of the sector. Some regulations aiming at stimulating the deployment of RES were approved in April 2013, mainly for RES-H&C in the residential sector and for energy refurbishment. In the whole package, energy efficiency is considered a decisive factor in the evaluation of a building. However, the requirement to have nearly-zero-energy buildings by 2020 is barely reflected in those laws.

The severe retroactive reduction of the biofuels blending obligation from 6.5% to 4.1% as well as the blending restrictions on the bioethanol industry and the lack of further regulatory developments in the management and control of the double counting mechanism for biofuels radically change and undermine the development of consumption, thus endangering the achievement of the 10% RES-T target by 2020.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

Show political willingness to reestablish and guarantee a clear and stable political framework promoting RES, with no retroactive changes, fully respected priority access and dispatch for RES-E in the electricity regulation and create specific regulatory developments for each technology.

Undertake deep political interventions for a truly liberalized and transparent electricity market and impose audits on electricity companies in order to understand the real costs of the electrical system, so prices can be democratically discussed and reviewed, increasing transparency of and trust in the whole market.

Thoroughly revise the national electricity planning or a democratic national model without the hidden influence of electricity companies and increase interconnection capacities with the EU transmission grid.

Simplify the administrative procedures and allow for transversal coordination between the involved administrations. There is a big fragmentation of competences among national, regional and local bodies.

Unblock the approval of the Self-Consumption & Net Metering law and establish positive measures to promote it.



### HEATING AND COOLING SECTOR

Transpose the EU Directives (RES-Directive, Energy Efficiency in Buildings (2010/31/EU) and on Energy efficiency (2012/27/

EU)) completely and as soon as possible into Spanish law, in coherence with the EC targets for RES integration and energy saving.

Show real political willingness to make the RES H&C sector visible and functional. Despite the huge potential market, there is a lack of demand due to the high costs.

There are no records of the installed power from thermal renewable sources.



### TRANSPORT SECTOR

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

Change the “protection of grade gasoline” restriction in order to allow the introduction of E10 in the Spanish market.

Develop the necessary regulations to implement the double counting mechanism for biofuels.

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



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# SWEDEN



## KEY TRENDS IN THE RES SECTOR

The government has appointed a parliamentary commission to design proposals for new policies to ensure long-term energy supply. The Energy Commission's task will be to review the future energy needs based on current and existing research.

The industry in Sweden has a high RES potential, a high willingness to develop RES and also understands the vital importance of RES. However, as long as the Swedish government does not set higher targets, the current barriers to RES deployment will most likely not be removed.

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

The Swedish armed forces are questioning the use of wind turbines and believe that they among other things might interfere with important radio communications during major accidents.

Small RES-E installations, e.g. solar PV installations, do not enjoy as much support as the larger scale electricity producers.

RES used for heating purposes are supported through numerous tax exemptions, e.g. on energy, carbon dioxide and nitrogen oxide.

Due to relatively low energy requirements in the construction sector, the energy usage of newly built buildings is still above the desired levels. The construction requirements for "near zero houses" are not strict enough, which leads to low investments in skills development in energy-efficient constructions.

A large proportion of single-family homes in Sweden is provided with direct electric heating. Electrically heated houses are expensive and complicated to convert to another type of heating.

Bio-energy is the largest source of energy in terms of final energy use. However, the current lack of clear information about policy instruments for biofuels presents a relevant hurdle for further investments. The government has taxed all FAMES, both low- and high-blend, while HVO (hydrogenated vegetable oil) is entirely tax-exempt. Ethanol (both low blend and high blend E85) is planned to be taxed

## 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 as well as interim targets, and further adapt the legislative and regulatory framework to achieve the targets in all sectors.



### ELECTRICITY SECTOR

A further increase in the quota will have a positive effect on the demand for electricity certificates. Provide electricity intensive industries a certain quota, which they currently lack, to graze the huge surplus of certificates. This quota obligation for electricity-intensive industries can be gradually increased so that a continuous adaptation can take place. It is strongly recommended to continuously evaluate the electricity certificate system and make adjustments, if necessary. Introduce feed-in tariffs as in most other European countries, with a guaranteed minimum price.

Clearly define the areas in which the wind power is permitted and in which it is not, e.g. due to military requirements, habitat or landscape views.

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



### HEATING AND COOLING SECTOR

The government and the parliament must tighten the energy requirements of the building regulations and clearly show which requirements will apply in the long term. The energy requirements of the construction regulations should be re-

vised, both in terms of the requirements themselves and the requirement levels. It is important that government and parliament set clear energy requirements for near-zero houses to drive development towards more energy-efficient buildings.

Investment grants should be provided for the conversion from direct electric heating systems to renewable energy heating systems in existing houses.



### TRANSPORT SECTOR

It is of great importance that the government immediately encourages a debate with all parliamentary parties and creates a broad agreement on how to achieve the target of a fossil-free fleet of vehicles. Today, there is a broad consensus among transport operators on how future policy instruments should be designed. The political debate should be based on the conclusions of the investigation SOU 2013:84 (Fossil Freedom on the Road). Biofuels should be long-term tax exempt.

The recently implemented unilateral removal of the tax credit for FAME (transesterified vegetable oil) and E85 ethanol should be abolished. EU state aid rules on overcompensation should be revised to clearly allow support for biofuels.



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# UNITED KINGDOM



## KEY TRENDS IN THE RES SECTOR

Policy risk and uncertainty in the market remain the key barriers affecting all renewable technologies across all sectors and directly or indirectly impact all project development steps. This stems from continually changing policies and financial support schemes.

The last year has seen an ever increasing emphasis placed on the costs of energy politically, in the run up to the election. The electricity sector has mostly been preparing itself for the first auction based allocation round in Q1 2015. Large depressions in the Feed-in Tariffs and a solar FiT review have created uncertainty.

The Renewable Heat Incentive has supported a relatively large uptake of installations, but large depressions have

made RES-H&C installations less attractive, and, with current growth, the UK won't hit its 2020 RES-H&C target. The sustainability criteria have caused the industry grievances. The lack of RHI budget after 2016 and budget allocation between technologies has created uncertainty.

Support for transport has made very little progress since 2014, for two key reasons - the absence of a final decision to amend the RED following the Commission's proposals of October 2012 on ILUC and the UK General Election in May 2015. Some progress has been made to increase the support for gaseous fuels and to treat HVO biodiesel in the same way as FAME biodiesel. Hopefully, Ministerial decisions will allow the RES-T policy to move forward in late 2015, after a prolonged period of stagnation.

## POLICY RECOMMENDATIONS



### ELECTRICITY SECTOR

Fix the problems with allocating and administrating Contracts for Difference.

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.

Incentivise the DSOs to offer timely grid connections at fair, transparent costs as part of a strategic approach to grid reinforcement.

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.

Fix problems with FiT cost control mechanism for small-scale anaerobic digestion.

Ensure favourable solar PV FiT review in 2015



### HEATING AND COOLING SECTOR

Maintain and expand the RHI to at least 2020, confirming budgets from 2016-2020.

Review the RHI biomass banding structure.

Provide sufficient tariff certainty for project with long lead-in times (i.e. large biomass heat, CHP and geothermal)

Introduce framework and incentive to build crucial district heating.

Ensure careful implementation of sustainability regulation to avoid disrupting the market.



### TRANSPORT SECTOR

It is essential that the Government sets a trajectory out to 2020 to reach the 10% RED transport target from the current target of 4.75% by volume. Annual announcements of increases from 2016 will not be sufficient for industry confidence at this very late stage (Barrier - UK Government policy has put a cap on the development of the RES-T market).

Government must implement the final decisions taken by the EU institutions on the ILUC proposals, including a cap on crop-based biofuels at no less than 7%. (Barrier - Government officials have talked about setting a cap at 1.38% which would be disastrous for UK biofuel investments).

Government should take a decision no later than autumn 2015 to support the roll-out of B7 and E10 to enable fuels suppliers to meet their obligations under the Renewable Transport Fuels Obligation. (Barrier - Government has asked fuels suppliers to give 6 months' notice of their intention to blend up to E10)

Government should make an early announcement on measures to support the commercialization of advanced biofuels. (Barriers - the de facto market cap of 4.75% by volume has depressed investment in advanced biofuels.)

Government should set out its plan for RES-T post 2020 as soon as possible to give investor confidence. (Barrier - if here is no visibility of renewable transport policy post 2020 as soon as possible, this sector is unlikely to make much of a contribution post-2020.)



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