



— Executive Summary



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CA-RES II Foreword

The Renewable Energy Directive (2009/28/EC) laid down the legal framework to guide Member States in delivering their renewable energy commitments. Since each EU Member State has a different mix of renewable energy sources in its fuel mix and is faced with a number of country-specific challenges, there exists great potential for cooperation between Member States and for the sharing of lessons learned.

As a result of the success of the first phase of the Concerted Action on the Renewable Energy Sources Directive (CA-RES) (2011-2013), the European Commission decided to support the project for a second phase, from 2013-2016, through its Intelligent Energy Europe programme. The Concerted Action has the aim of helping Member States to work together to fully implement the renewable energy directive and to find common approaches.

The Concerted Action on the Renewable Energy Sources Directive is a confidential forum, in which representatives of national administrations, which are responsible for implementing the RES Directive, can exchange their knowledge and share their experiences. Participants come from a varied mix of authorities including ministries of energy, economy and agriculture as well as national energy agencies, regulators and TSOs.

Thanks to the active participation of Member States' representatives and the flawless organisation and support of the Austrian Energy Agency, CA-RES has been shown to be an invaluable forum for sharing information, learning from experiences across the EU Member States and for ensuring a thorough implementation of the renewable energy directive. The reports of the seven Core Themes highlight the progress achieved, provide examples of good practices from the participating countries and offer possible solutions to the remaining barriers. The Core Themes address the main areas covered in the RES Directive, namely support schemes for RES electricity, cooperation mechanisms, renewable heat in buildings and in district heating and cooling, electricity networks, guarantees of origin and disclosure, biomass mobilisation and sustainability, and renewables in transport.

In order to utilize synergies between the Renewable Energy Sources Directive and other EU directives such as the Energy Performance of Buildings Directive (EPBD) and the Energy Efficiency Directive (EED), CA-RES maintains a regular dialogue with the Concerted Action on the EPBD (CA EPBD) and the Concerted Action on the EED (CA EED, formerly known as CA ESD). Representatives from CA EPBD and CA EED have been invited on several occasions to participate in the CA-RES II plenary meetings, thereby sharing their experience and expertise with participants.

Looking ahead, there are a number of remaining challenges related to the implementation of the RES directive as we approach the target date of 2020.

Along this road, the CA-RES will continue to support officials in national administrations, who are responsible for implementing the Directive, through a structured confidential dialogue about solutions, good practice examples and common approaches.



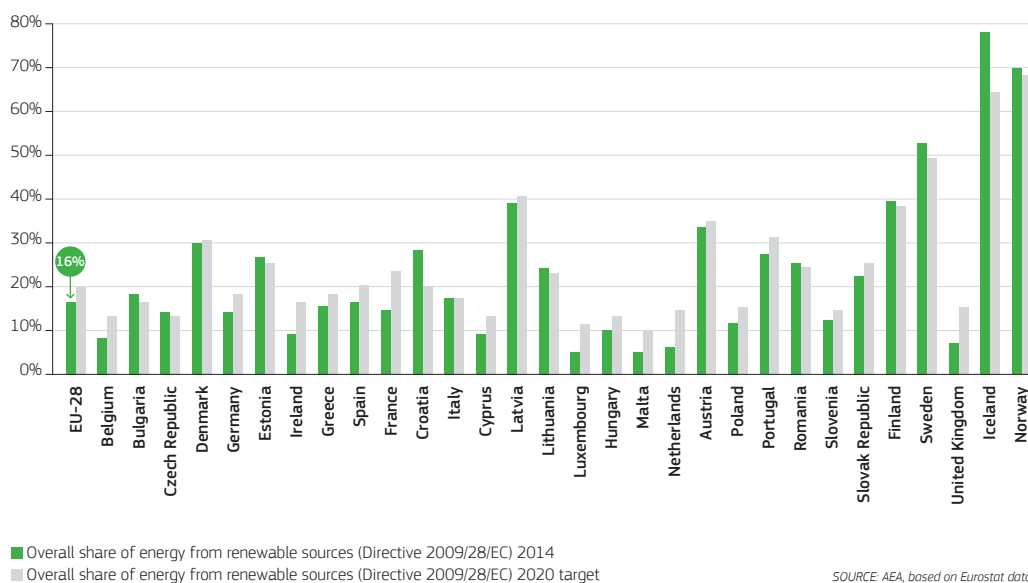
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Introduction

The legally binding targets for renewable energy enacted by the Renewable Energy Directive 2009/28/EC have led to a strong growth of RES in the European Union in recent years. The latest EU-wide report on Member States' progress in the promotion and use of renewable energy along the trajectory towards the 2020 target in line with the Renewable Energy Directive 2009/28/EC showed that twenty-six EU Member States had met their first 2011/2012 interim target and some had already reached their 2020 targets.¹ In 2014, energy from renewable sources met 16% of the gross final consumption of energy in the EU-28 and the share of RES in the transport sector was 5.9%, according to Eurostat.²

FIGURE 1 Overall Share of RES in Gross Final Energy Consumption in EU Member States, Iceland and Norway

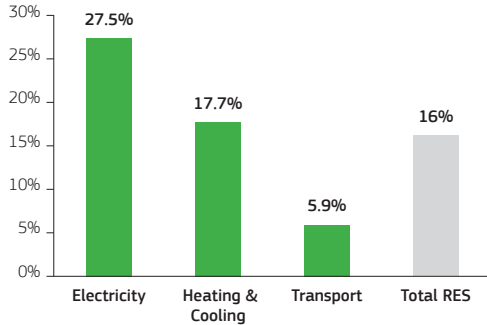


SOURCE: AEA, based on Eurostat data

¹ European Commission (2015). Renewable Energy Progress Report. SWD (2015) 117 final, Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels, 15th of June, 2015. http://eur-lex.europa.eu/resource.html?uri=cellar:4f8722ce-1347-11e5-8817-01aa75cd71a1.0001.02/DOC_1&format=PDF

² Eurostat (2016). Energy from Renewable Sources. Luxembourg, March, 2016. http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_from_renewable_sources

FIGURE 2 Share of Renewable Energy Sources by Sector in the EU-28



2014; SOURCE: AEA based on Eurostat data

Despite these encouraging figures, the European Commission has highlighted the need for further measures if the EU as a whole is to meet its 2020 target for renewables. At EU and Member State level, further efforts are needed to simplify administrative procedures, to clarify planning and permitting procedures and to improve infrastructure development and operation. Further efforts are required regarding the treatment and inclusion of renewable energy production within the electricity system, such as through appropriate support schemes for renewable energy. In the future, renewable energy is bound

to play a central role in the European commitment to building an Energy Union that guarantees affordable, secure and sustainable energy for its citizens.³ In this context, the importance of cooperation and coordination between EU Member States will increase.

The Concerted Action on the Renewable Energy Sources Directive 2009/28/EC is a confidential forum, in which representatives of national administrations, which are responsible for implementing the RES Directive, meet to share their experiences, exchange and enhance their knowledge and establish and strengthen the network of experts. Its participants come from a diverse mix of competent authorities including ministries of energy, economy and agriculture, as well as regulators, TSOs, and national energy agencies. The second phase of the Concerted Action, CA-RES II, complemented the cooperation of national, regional and local stakeholders, which usually happens through collaborative projects.

Based on the achievements of the CA-RES I, which created a platform for structured discussion and experience exchange among EU Member States, Norway and Iceland, and established a network of experts on renewable energy, the CA-RES II focussed on significant remaining challenges in implementing the RES Directive. Reacting flexibly to Member States' needs and priorities, which change with the progress in implementing the Directive, was therefore of utmost importance throughout the CA-RES II. This enabled more concrete discussions and a focus on specific details of implementation in some cases, while looking at the implementation in the wider policy context.

The second phase of the CA-RES has proven to be a valuable platform for knowledge and experience exchange across EU Member States with a spirit of open and mutual cooperation:

³ European Commission (2015). A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy. COM (2015) 80 final. Brussels, 25th of February, 2015. http://ec.europa.eu/priorities/energy-union/docs/energyunion_en.pdf

Evaluation results of participants' satisfaction showed that more than 90% of participants agree that the CA-RES II had a positive policy impact on the work in the participating countries, and that the CA-RES II has contributed to a better implementation of the RES Directive. 99% of participants are sure that the CA-RES II is a valuable platform for discussions and experience exchange, and a point of departure for further discussion and cooperation among the experts involved.

The seven Core Themes of the CA-RES II addressed important areas covered by the RES Directive: Support Schemes for Electricity, Cooperation Mechanisms, RES Heat, Electricity Networks, Guarantees of Origin/Disclosure, Biomass Mobilisation and Sustainability, and RES in Transport. While discussions in the Core Theme sessions are strictly confidential, the summarized main results of the work in the Core Themes, together with some good practice examples of Member State implementation, are published in the Core Theme Publications. The authors of the various Core Theme Publications use the term "Member States" interchangeably with the CA-RES participating countries.



1 4th Plenary Meeting in Dublin:
opening plenary session



2 Registration Desk



3 3rd Plenary Meeting in Budapest:
closing plenary session

The Concerted Action

The “Concerted Action supporting the transposition and implementation of Directive 2009/28/EC of the European Parliament and of the Council on the promotion of the use of energy from renewable sources (RES Directive) CA-RES” was a project supported by the Intelligent Energy Europe (IEE) programme. After a very successful first phase (July 2010 – July 2013) of CA-RES, the second phase started in August 2013, again with a duration period of 3 years. The CA-RES II was coordinated by the Austrian Energy Agency (AEA).

The Renewable Energy Sources Directive 2009/28/EC

Directive 2009/28/EC on the promotion of the use of energy from renewable sources, which entered into force in June 2009, establishes a common framework for the use of renewable energy within the European Union. It is one of the pillars of the EU climate and energy package, providing a legislative framework for the European Union targets for greenhouse gas emission reductions. The so-called RES Directive sets binding targets for the Member States so that the EU as a whole will reach a 20% share of energy from renewable sources in gross final energy consumption by 2020 and a 10% share of renewable energy specifically in the transport sector.

As part of their obligations under the RES Directive, EU Member States adopted and submitted National Renewable Energy Action Plans in 2010, and subsequently developed and submitted biennial progress reports on the advances made in the promotion and use of energy from renewable sources in 2011, 2013 and 2015.

CA-RES II at a Glance

In order to support Member States with the implementation of the RES Directive, the European Commission launched the Concerted Action on the RES Directive (CA-RES) through the Intelligent Energy Europe (IEE) Programme, which is managed by the Executive Agency for Small and Medium-sized Enterprises EASME (previously Executive Agency for Competitiveness and Innovation, EACI).

The Concerted Action enables a structured dialogue on the implementation of the RES Directive between the relevant national authorities. It allows these national authorities or their nominated representatives to enter into a dialogue, to exchange experiences and knowledge on a variety of topics covered by the RES Directive. Participating countries can thereby profit from each other's experience, develop common approaches and coordinate solutions wherever this is beneficial.

The second phase of the Concerted Action (CA-RES II) on the Renewable Energy Sources Directive 2009/28/EC:

- consolidated a structured sharing of information and experiences and promoted good practice in activities required of participating countries for implementation of the RES Directive.
- facilitated cross learning at the EU level and provided support to an effective implementation of the RES Directive in the participating countries.
- encouraged dialogue between the participating countries on common approaches for the effective implementation of particular provisions of the RES Directive.

The objectives of the CA-RES II were directly linked to the implementation of the RES Directive.

“The detailed discussions and information exchange in the different Core Themes regarding the different Articles of the Directive is very helpful in understanding its underlying objectives. Additionally, some aspects related to the clarification of certain provisions of the Directive or the practical implementation can be clarified with representatives of the Commission present at the plenary meetings.”

CA-RES II participant from PT

During the second phase of the CA-RES, a series of six plenary meetings was organised, where participating countries discussed relevant topics for the implementation of the RES Directive and in response to the thematic needs and priorities of the participants, which change with the progress in implementing the RES Directive. Topics related to the surrounding policy environment of the Directive, such as developments in the internal electricity market, state aid guidelines for energy and environment, the implications of the climate and energy package 2030 and considerations on security of energy supply, became more relevant over time. Additionally, linkages to other EU directives such as the Fuel Quality Directive, the Professional Qualifications Directive, the Energy Efficiency Directive, the Energy Performance of Buildings Directive, and the Electricity Market Directive, as well as to EU policies in the areas of climate change and agriculture and forestry gained in importance.

“The knowledge and discussions from the CT sessions have provided valuable information on the experiences with renewable energy policies in other countries and this has helped to inform the national political processes and policy development. This can especially be seen regarding the discussion of providing support for renewable energy production in hours with negative electricity prices and the implementation of national sustainability criteria for solid biomass in different MS.”

CA-RES II participant from DK



- 1 CA-RES II participants at the 5th Plenary Meeting in Larnaca: closing plenary session
- 2 Lively discussions during the CT parallel sessions
- 3 Participants from Core Theme 7
- 4 Participants from Core Theme 3

Each plenary meeting provided a valuable forum for structured discussions and cross learning between 150 - 170 experts from EU Member States, Norway and Iceland. This exchange of experiences, approaches and good practice examples in the Core Themes for the CA-RES II enhanced the implementation of the RES Directive in the participating countries. Participants expressed their satisfaction with the achievements of the CA-RES II to create a platform for discussion and a network of European experts, to raise awareness on the pitfalls as well as the chances and opportunities that lie in joint approaches.

“Through the exchange of information that takes place within the Concerted Action, participating countries can see how others improved their legislations and what kind of barriers they needed to overcome. Such an exchange allows us to decide which tailor-made solutions could be applied in Slovakia.”

CA-RES II participant from SK

The CA-RES II encompassed six plenary meetings throughout its three-year period as follows:

- PM1, Malta, 20th-21st November 2013
- PM2, Rome, 19th-20th May 2014
- PM3, Budapest, 19th-20th November 2014
- PM4, Dublin, 20th-21st May 2015
- PM5, Larnaca, 18th-19th November 2015
- PM6, Vienna, 18th-19th May 2016

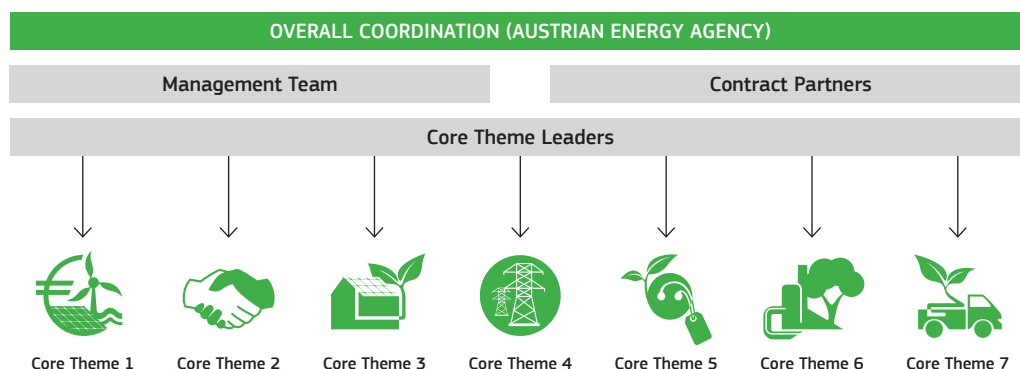
Two-day plenary meetings were held in different participating countries each time, reflecting the diversity of participating countries and their different framework conditions.

The plenary meetings were structured into an opening plenary session, Core Theme (CT) parallel sessions and a closing plenary session. After an overview of current EU policy developments and organisational matters in the opening plenary session, specific topics were discussed in the Core Theme parallel sessions. These discussions were supported by presentations on relevant country developments and activities, recent scientific findings or European policy developments. External experts from relevant projects, initiatives and institutions selectively fuel the discussions with their research, project results and findings. The closing plenary session was then dedicated to present the main insights from the discussions to the whole CA-RES community and to provide a comprehensive picture of the topics at stake and the situation in the participating countries. After each plenary meeting, Core Theme leaders developed highlights of the discussions, which were then published on the CA-RES website. Confidential Core Theme validated reports were developed as well, which summarized Member States' inputs and discussions at the plenary meeting and served as an internal outcome document of each plenary meeting.

Highlights of the Core Themes

Knowledge and experience exchange within the Concerted Action on the Renewable Energy Sources Directive is structured in seven Core Themes:

1. Support Schemes for Electricity (Art. 3)
2. Cooperation Mechanisms (Art. 3, 4, 6-11)
3. RES Heat (Art. 3, 13, 14, 16)
4. Electricity Networks (Art. 16)
5. Guarantees of Origin/Disclosure (Art. 15)
6. Biomass Mobilisation and Sustainability (Art. 4, 17 (9))
7. RES in Transport (Art. 17-19, 21)



A thematic framework was developed for each Core Theme at the beginning of the second phase of the CA-RES, which was coordinated between the Core Theme leaders, the coordination team, the European Commission (DG ENERGY) and EASME. Representatives of each of the participating countries are always invited to provide their input and further suggestions to the topics discussed in the respective Core Theme.

In the following sections, a general description of each Core Theme, as well as the topics discussed during all six plenary meetings, is presented.

CORE THEME 1: Support Schemes for Electricity (Art. 3)

The participating countries face new challenges when designing effective and efficient RES-E support measures. Support schemes need to be reformed in order to correspond to the need for more flexibility due to increasing RES shares in the electricity grid, the strive for a better market integration of renewables and the creation of a new energy market design, as well as technology development and increasing public concerns about RES cost-effectiveness.

One of the main aims of Core Theme 1 was to identify, present and exchange experience of good practices on support schemes for RES-E. Parallel to evaluating good practices, another principal aim of Core Theme 1 was to explore further areas and means of coordination of support schemes, building on the successful elements for coordination that have been developed in CA-RES I. Moreover, principles, successful approaches and design features of support schemes were identified, which could be commonly applied among participating countries. Such a bottom-up approach has been strongly supported by participating countries and could lead to a gradual convergence of support schemes.

“Through the experience exchange in parallel sessions of CA-RES II, we were able to get an overview of the progress in other Member States, while seeking methods to reach the national RES targets. It enabled us to identify potential cooperation partners and also encouraged us to draft the rules concerning the procedure of statistical transfers. Discussions during CT1 contributed to a better understanding of the newly published Guidelines on Environmental and Energy Aid for 2014-2020, which is particularly important for timely revision and optimization of national support schemes.”

CA-RES II participant from LT

During the course of the six plenary meetings, participants discussed the EU Commission’s guidance package on state intervention in electricity markets⁴, which emphasized the importance of enhanced market integration of renewables and cost reduction of RES support as key principles for reforming RES support schemes.

⁴ European Commission SWD(2013)439 final; Commission Staff Working Document: European Commission Guidance for the Design of Renewables Support Schemes; http://ec.europa.eu/energy/sites/ener/files/com_2013_public_intervention_swd04_en.pdf

Participants also discussed their experiences with different tendering schemes applied in EU Member States and the challenges that arose. The discussion topics for each plenary meeting took into account the relevant policy developments in the EU, for example the Commission's proposal on the EU Energy and Climate Framework 2030 and the New Guidelines on State Aid for Environmental Protection and Energy (EEAG)⁵. As such, participants from Member States discussed the relevance of diversified deployment of RES across Europe, as well as the need for balancing and the need for stronger emphasis on market integration. Furthermore, during the discussion on the EEAG, participants highlighted how the shift towards tendering presented one of the major challenges of adapting RES support schemes to the new guidelines. The role of flexibility - with a focus on interconnections - in the overall electricity system was also an important topic of discussion.

CORE THEME 2: Cooperation Mechanisms (Art. 3, 4, 6-11)

Building on the successful work within CA-RES I, participating countries further looked into design options for the implementation of the Cooperation Mechanisms (CoopMechs), focusing on the identification and facilitation of concrete cooperation projects. Core Theme 2 provided a forum to discuss possible approaches, but also went a step beyond general approaches, which have also been explored in CA-RES I, and enabled participants to conceive solutions to concrete cooperation opportunities.

Furthermore, Core Theme 2 focussed on cross-border access to support schemes, i.e. opening support schemes to foreign RES production through the use of CoopMechs. Physical import of RES-E is an area often considered when designing support schemes for the implementation of the CoopMechs, such as joint projects and joint support schemes.

During the course of the six plenary meetings, participants discussed the perceived challenges and various barriers, including public acceptance and technical complexity, which countries face during the deployment of Cooperation Mechanisms. Limited funding and grid infrastructure bottlenecks constitute major challenges in order to tap the full potential of cross-border cooperation. On the basis of current initiatives and projects in Member States to provide RES support for foreign RES installations, participants discussed options for controllable and mutually beneficial cross-border RES cooperation. Presentations on the potential for CoopMechs in the field of wind offshore showed that enhanced regional cooperation can lift cost reduction potentials of wind offshore deployment. Additionally, the importance of stronger coordination of regulatory regimes was emphasized to fully utilize the potential of CoopMechs. The Guidelines on State Aid for Environmental Protection and Energy (EEAG) 2014-2020⁶ emphasize the role of cooperation and encourage Member States to open their domestic support schemes. Participants discussed various design options Member States could choose when opening their tender schemes and the advantages and disadvantages from a national perspective. Participants also discussed a possible blueprint for voluntary cross-border opening of RES tenders, with a focus on the identification of potential elements that could serve as EU-wide good practice examples.

⁵ Communication from the Commission: Guidelines on State Aid for Environmental Protection and Energy 2014-2020 (2014/C 200/01); <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628%2801%29&from=EN>

⁶ Communication from the Commission: Guidelines on State Aid for Environmental Protection and Energy 2014-2020 (2014/C 200/01); <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628%2801%29&from=EN>

CORE THEME 3: RES Heat (Art. 3, 13, 14, 16)

Core Theme 3 covered on-site heating and cooling in buildings, as well as renewable district heating and cooling. Various aspects of these topics, such as policies to address financial barriers, non-financial barriers and regulation were discussed among CT3 participants. With regards to Article 3 of the RES Directive, support schemes for RES, this Core Theme dealt with support schemes for RES heating and cooling.

Regarding renewable heating and cooling, all scales are covered since all renewable heating and cooling (both large and small) either serve on-site heat demand or are exported to other sites (i.e. district heating and cooling).

“The discussions in CT3 were especially valuable for Cyprus. Learning from the information exchange on minimum requirements or training and hearing about good practices helped Cyprus in the development of a certification scheme for installers.”

CA-RES II participant from CY

Over the course of six plenary meetings, CA-RES II participants discussed financial instruments & mechanisms to overcome barriers in order to increase private sector funding for renewable energy. Various methods and processes to facilitate the comparison of schemes for RES installers and mutual recognition were also discussed; here the Professional Qualification Directive (PQD) constituted an important link and basis for the discussions. Participants exchanged experiences - regarding regulation and various approaches - with ensuring that a minimum level of renewables was incorporated into buildings. The importance of renewable district heating & cooling for the achievement of the 2020 EU targets was highlighted during several plenary meetings. Long-term goals and policies are needed to encourage investment and reduce risk. The Core Theme participants took the time to review policy successes since 2010 in order to assess remaining challenges and learn from existing good practices. The discussions showed that though good progress has been made, many challenges still remain. As support schemes have evolved, information and communication strategies targeting individual consumers have gained in importance. It is necessary to improve transparency and availability of information so that consumers can make informed decisions regarding their heating and cooling systems. CT3 offered the opportunity to address intersections with the other Concerted Actions, namely CA EPBD and CA EED, which should be continued to be explored in the future.

Under Core Theme 3, a Task Force on Certification of RES Installers has examined the topic in greater detail and presented its findings in the Core Theme discussions; the summary of the results are available as a separate report.

CORE THEME 4: Electricity Networks (Art. 16)

During CA-RES I, the focus of the group was very specifically on the issues arising from the implementation of the provisions of Article 16. The work undertaken in this regard clearly underscored the critical importance of understanding and tackling grid and system operation issues for the effective implementation of Directive 2009/28/EC. Having made progress on identifying the challenges facing system operators in implementing the RES Directive, the second phase of CA-RES built on this progress by looking at how best to meet these challenges in the context of wider EU energy policy requirements and regulatory frameworks, while maintaining focus on sharing good practices on implementation of the Directive, in particular Article 16.

Based on the progress made, Core Theme 4 aimed to identify the points of interaction between the three areas of system operation, policy and regulation. While doing so, it looked to ensure that the ongoing development of energy policy interventions and regulatory regimes was properly informed by the realities of planning and operating electricity networks with increasing amounts of renewable generation, and that the policy and regulatory responses to these system operation challenges were efficient and proportionate.

During the course of the discussions in CT4, the roles and responsibility of all players with regard to the deployment of necessary infrastructure, the security of supply and the integration of variable renewable generation were important topics dealt by the participants. The significance of flexibility options (including role of interconnections and demand side flexibility) in electricity systems was discussed and the two main drivers of flexibility, namely the evolution of electricity markets as they respond to market developments and EU market integration, were identified. Participants concluded that a stronger integration of electricity markets is needed, which requires stronger interconnections to achieve price convergence. Interconnections require a supportive policy framework and depend on cooperation between participating countries. Demand response and storage solutions can effectively enhance the integration of renewables and be scaled to larger markets with high shares of RES. The provision of system services is driving innovation and interest in demand response and storage. The issues of social acceptance and public opposition were also discussed during the topic of cross-border cooperation; here, participants worked together to identify the reasons and the different types of public oppositions. Barriers to enhancing participation of RES in ancillary services and balancing markets were addressed and ideas on practical solutions were exchanged.

“CA-RES II had a positive effect in encouraging cooperation with neighbouring countries considering technical and commercial aspects of RES integration. In January 2014, Slovenia, Croatia and Bosnia and Herzegovina signed an agreement on joint power reserves for the purpose of frequency regulation in a regulatory-control block. Cooperation in the block is very important because it will reduce the cost of ancillary services (which include the tertiary control reserve) that typically causes an increased share of intermittent renewable energy sources in a power system.”

CA-RES II participant from HR

CORE THEME 5: Guarantees of Origin/Disclosure (Art. 15)

In Core Theme 5, participating countries of CA-RES II work to further harmonize the implementation of Guarantees of Origin (GOs) and disclosure. Important topics discussed were the (ongoing) process of connecting all Member States to a harmonized implementation of GOs, facilitating international exchange of information for disclosure purposes and preventing double counting, as well as a need to strengthen the internal market for GOs for the benefit of all stakeholders.

One of the targets of this Core Theme was the inventory of any problem participating countries might still come across, and in doing so striving for an efficient implementation that is coherent on a European level. Double counting of (renewable) energy should be prevented. Implementation of national Guarantees of Origin and Disclosure systems, which will be coherent on a European level, will also prevent market distortion and contribute to the finalization of the internal energy market and therefore should be a high priority.

Along with the topic of a harmonized approach and the use of the existing AIB Hub interface, participants discussed the issue of trade of GOs on the basis of presentations from participating countries. Participants also took the time to identify methods to help speed up the process of linking all Member States to the same infrastructure. Participants of Core Theme 5 shared knowledge and information about national implementations of electricity disclosure by various participating countries. In this context, participants considered whether transmission losses should be disclosed by using GOs. Another important topic was covered during the course of six plenary meetings, namely the connection between GOs, the internal energy market and electricity disclosure, as well as the relationship between GOs and carbon.

Under Core Theme 5, a Task Force has been established that successfully operated on the interface with the Association of Issuing Bodies (AIB); its work focussed on the identification of barriers and the finding of solutions, which would work on identifying the remaining barriers for Member States to use the existing infrastructure and AIB Hub for exchanging GOs.



1 CA-RESII participants at the 2nd Plenary Meeting in Rome: opening plenary session

2 Participants from Core Theme 1



CORE THEME 6: Biomass Mobilisation and Sustainability (Art. 4, 17 (9))

The overall objective of Core Theme 6 was to exchange information and experience on the policy matters of importance in relation to biomass mobilisation and sustainability, taking into account the different circumstances in participating countries. This included taking a closer look at mobilisation of sustainable and efficient bioenergy value chains, from biomass feedstock to biomass- and biogas-based heating/cooling and power production and use in Europe. This included analysing the current situation concerning legislative frameworks, economics, markets, environmental/ecological and socio-economic issues, and suggesting policy and management measures for further development. Core Theme 6 aimed to contribute to the implementation of the EU energy-related policies, and as such, the three pillars of EU energy policy – sustainability, competitiveness and security of supply – all apply.

“The informal exchange of knowledge within the CA-RES II provided the opportunity to discuss problems and barriers in the implementation of the RES Directive. For instance, expert presentations and informal discussions between Member States facilitated the process for the acceptance and control of the use of solid biomass (pellets, exhaustive oil cakes, woodchips, etc.) for heating purposes throughout the Greek territory.”

CA-RES II participant from GR

The work in Core Theme 6 supported the targets and objectives of the CA-RES II

- By exchanging information and experiences from the participating countries in order to identify good practices in policies and measures.
- By exploring planned or existing national policy approaches, aimed at increasing and making a more efficient use of the biomass resources (also taking into account other uses (other than energy) of available bio resources).
- By reviewing opportunities and challenges for enhancing biomass supply and sustainable biomass value chains, and for promoting biomass use across the EU.
- By reviewing synergies and trade-offs between energy, agriculture, forestry, waste and environment policies at national and EU level, with a view to improve mobilisation of biomass resources.
- By exploring issues concerning the development of trade and the creation of efficient markets for biomass.

During the six plenary meetings of CA-RES II, participants of Core Theme 6 discussed policy developments affecting biomass mobilisation and sustainability. The topic of biomass mobilisation is closely linked to policy areas other than energy, such as agriculture and climate. Holistic, long-term policy planning is needed across all relevant areas to fully support biomass mobilisation within the Member States. The discussions during the plenary meetings focussed on increasing understanding between the areas of forestry and energy, as well as agriculture and energy, among policy makers. The role of biomass in the heating and cooling sector constituted another important topic for participants; additionally, barriers to the increase of renewable energy sources in district heating were looked at from the perspective of biomass. Furthermore, the topics of sustainable forest management and the competitiveness of biomass were also covered.

CORE THEME 7: RES in Transport (Art. 17-19, 21)

Renewable energy in transport refers to all energy carriers that can be used in transport. Apart from biofuels, biogas, electricity and hydrogen from renewable sources will also play a role. Even though the above-mentioned alternatives to biofuels are available, the renewable energy target in transport will be mainly met with liquid biofuels, requiring the consideration of a wide range of environmental, agricultural and industrial aspects. In this context, the policy framework must provide investment security for a long period. Many obstacles must still be overcome on the way to 2020.

The second phase of the Concerted Action helped participating countries continue sharing their expertise, in bringing the implementation of the RES Directive a significant step ahead and in harmonizing its implementation.

One of the main challenges that participating countries face regarding the integration of renewables in the transport sector is trying to make use of the available feedstocks for advanced biofuels. Factors, such as market penetration of certain technologies, competitiveness and sustainability, either make or break the widespread roll-out of a certain feedstock. Designing sustainable, long-term policy instruments that take all these aspects into consideration was an important topic of discussion. During the plenary meetings, participants tried to identify instruments that would stimulate the use of advanced biofuels in the Member States. Furthermore, participants' discussions focussed on the development of future fuel mix strategies with a focus on heavy duty vehicles, aviation and shipping in the Member States and the importance of the industry to mitigate CO₂ emissions. Other important topics were the achievability of RES Directive and FQD targets until 2020 with a focus on electric vehicles and high blend biofuels as well as the role of Upstream Emission Reductions (UER) to fulfil the FQD target and the implementation of the ILUC Directive. The renewable fuel mix of different Member States until 2020 depends strongly on the natural resources, agriculture and infrastructure. However, in the long-term, advanced biofuels are seen as an integral component of the mix. Throughout the discussions during the plenary meetings, participants emphasized the importance of a stable EU political framework for renewable energy in transport in order to provide a stable investment context and to make policy decisions on the country level.

Two Task Forces within Core Theme 7 examined the topics of (i) Biogas and (ii) Used Cooking Oils and Fraud of Double Counting, and subsequently shared and discussed their findings with the participants at the plenary meetings.

“For policy makers in The Netherlands, the Concerted Action has contributed to a better understanding on details of legislation and market developments. Specifically, details on how other Member States have introduced (or have considered to introduce) a mandate for advanced biofuels and how other Member States deal with the Mass Balance Principle (Renewable Energy Sources Directive Article 18.1) has helped improve understanding.”

CA-RES II participant from NL

Achievements of the CA-RES II

The CA-RES II has established a platform for knowledge and experience exchange and search for common ground between participating countries, which is expressed by an almost unanimous conviction among participants about its value.

The CA-RES II has consolidated the network of experts on the implementation of the RES Directive, which was established in the first phase, and participants consider the CA-RES II to be a point of departure for further discussion and cooperation among the experts involved.

The RES Directive encompasses a broad range of complex areas related to renewable sources of energy. The CA-RES II facilitated a structured dialogue and knowledge-sharing that supports participating countries in identifying and implementing effective solutions.

The Concerted Action operated as a “filter”, organising and prioritising information that participants should pay attention to. As such, the CA-RES II allows participants to concentrate on key pieces of information that can help them overcome the challenges of implementing the RES Directive. In doing so, the CA-RES II supported a cross-learning process that helped participants cope with the complexity of the tasks at hand.

The CA-RES II has established and continues to maintain a dialogue with other Concerted Actions:

There are synergies between the RES Directive and other EU directives such as the Energy Performance of Buildings Directive (EPBD) and the Energy Efficiency Directive (EED), which repealed the former Energy Services Directive. The CA-RES II has maintained a fruitful dialogue with the Concerted Action on the EPBD (CA EPBD) and the Concerted Action on the EED (CA EED, formerly known as CA ESD). This dialogue has resulted in cross learning on topics of common interest to the three Concerted Actions: a Joint Working Group (JWG) on Demand Side Flexibility was set up and a JWG session was held, which examined the topic from the perspectives of the three directives, which showed that this flexibility option is underutilised in today’s electricity markets and offers substantial potential. Additionally, participants from the CA EPBD and CA EED were invited as guest speakers to attend plenary meetings of CA-RES II in order to share their expertise and knowledge with participants.



Outlook

The RES landscape in the EU is evolving to accommodate new developments in policy, technologies, economic and financial conditions and social aspects, among others. In these times of change, the CA-RES network remains valuable and cooperation between participating countries becomes even more relevant to achieve the EU 20-20-20 targets and ensure a sustainable post-2020 development, even beyond the CA-RES itself. The success of the CA-RES naturally stands or falls with the active collaboration of the institutions in charge of the national transposition and implementation of Directive 2009/28/EC. This requires the provision of national input for discussions, as well as active contribution to the discussions in its Core Themes at the plenary meetings. Building on the Concerted Action, participating institutions can make use of this network of experts to develop further initiatives, and to engage in joint projects or other forms of cooperation with their peers to address the challenges posed by the changing landscape.

“Through CA-RES II, participants from Latvia received contact information on representatives in other EU Member States, who are responsible for the implementation of the RES Directive. As a result, there are opportunities to exchange views not only during CA-RES II meetings, but also in smaller groups. We often have information exchanges with representatives from the neighbouring countries, like Lithuania and Estonia.”




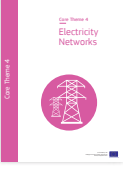



CA-RES II participant from LV

Organizations and individuals that are part of the CA-RES network are always on the lookout for new answers and innovative solutions to the implementation of the RES Directive in a rapidly changing environment. The CA-RES facilitates the corresponding knowledge exchange leading to those answers. Furthermore, it provides a forum for useful exchanges to take place to discuss common ways forward.

Despite the enormous strides that participating countries have already made toward reaching the EU RES 2020 goals, many challenges, legal, economic and social in nature, exist. In order to tackle the remaining challenges that were identified over the project duration and to support participating countries in addressing these challenges, a third phase of the Concerted Action will be launched with the support from the H2020 programme.

Core Theme Leaders

Core Themes and Core Theme Leaders of CA-RES II are:

Abbreviation	Core Theme	Core Theme Leaders
CT1	 Support Schemes for Electricity	<ul style="list-style-type: none"> - Anne-Maria Ide (BMW, DE) - André Poschmann (BMW, DE) - Karin Franzen (BMW, DE) (from April 2015 – until April 2016) - Robert Sachso Lorentz (BMW, DE) (from November 2015) - Natascia Falcucci (GSE, IT) - Agime Gerbeti (GSE, IT)
CT2	 Cooperation Mechanisms	<ul style="list-style-type: none"> - Sofía Martínez (IDAE, ES) (until November 2015) - Natalia Caldes Gomez (CIEMAT, ES) (from November 2015) - Anne-Maria Ide (BMW, DE) - André Poschmann (BMW, DE) - Karin Franzen (BMW, DE) (from April 2015 – until April 2016)
CT3	 RES Heat	<ul style="list-style-type: none"> - Emilie Carmichael (EST, UK) - Emma Creasey (EST, UK) - Frances Downy (EST, UK) (until October 2015)
CT4	 Electricity Networks	<ul style="list-style-type: none"> - Rebecca Minch (DCENR, IE) (until December 2014) - Brian T. Carroll (DCENR, IE) (until March 2015) - Bernadette Comey (DCENR, IE) (from April 2015)
CT5	 Guarantees of Origin/ Disclosure	<ul style="list-style-type: none"> - Michael Lenzen (CertiQ, NL) - Pierre-Yves Cornelis (CWaPE, BE) (from May 2015)
CT6	 Biomass Mobilisation and Sustainability	<ul style="list-style-type: none"> - Carola Lindberg (STEM, SE) - Matti Parikka (STEM, SE)
CT7	 RES in Transport	<ul style="list-style-type: none"> - Thorsten Wege (MINIENM, NL)

Abbreviations

Participating countries are referred to according to their two-letter country codes as defined by ISO 3166-1 alpha-2 standard (AT – Austria, BE – Belgium, etc.).

Abbreviation	Meaning
AEA	Austrian Energy Agency
AIB	Association of Issuing Bodies
Art.	Article
BMWi	Federal Ministry for Economic Affairs and Energy (Germany)
CA EED	Concerted Action on the Energy Efficiency Directive
CA EPBD	Concerted Action on the Energy Performance of Buildings Directive
CA ESD	Former name of the Concerted Action on the Energy Efficiency Directive
CA-RES	Concerted Action on the Renewable Energy Sources Directive
CA-RES I	First phase of the Concerted Action on the Renewable Energy Sources Directive
CA-RES II	Second phase of the Concerted Action on the Renewable Energy Sources Directive
CoopMechs	Cooperation Mechanisms
CO ₂	Carbon Dioxide
CT	Core Theme
CWaPE	Walloon Energy Commission (Belgium)
DCENR	Department of Communications, Energy and Natural Resources (Ireland)
EC	European Commission
EACI	Executive Agency for Competitiveness and Innovation
EASME	Executive Agency for Small and Medium-sized Enterprises
EEAG	Environmental and Energy State Aid Guidelines
EED	Energy Efficiency Directive (Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC)
EPBD	Energy Performance of Buildings Directive (Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings)
EST	Energy Saving Trust (United Kingdom)
EU	European Union
FQD	Fuel Quality Directive
GO	Guarantee of Origin
GSE	Energetic Service System Operator (Italy)
H2020	Horizon 2020
IDAE	Institute for Diversification and Energy Saving (Spain)
IEE	Intelligent Energy Europe
ILUC	Indirect Land Use Change
JWG	Joint Working Group
MINIENM	Ministry of Infrastructure and the Environment (The Netherlands)
PQD	Professional Qualifications Directive (Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications)
RES	Renewable energy sources
RES-E	Electricity from renewable energy sources
RVO	Netherlands Enterprise Agency
STEM	Swedish Energy Agency
TSO	Transmission system operator
UER	Upstream Emission Reductions

CA-RES Coordination Team

Coordination Team	Institution
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Shruti Athavale (from April 2014)	
Carmen Marksteiner	
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This is a public CA-RES report

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For further information please visit www.ca-res.eu

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