



# Final Highlights

## 2<sup>nd</sup> CA-RES3 Plenary Meeting

22<sup>nd</sup>-23<sup>rd</sup> November 2017, Zagreb



# Core Theme 1: RES Electricity

## Headline 1: The Role of Self-Consumption of Renewable Electricity in Different Market Environments

The first session of Core Theme 1 on RES Electricity looked at the different market environments and experiences of self-consumption practices in the Member States. Through the presentation of several Member States, including Denmark, Germany, Italy and the United Kingdom, benefits and challenges of RES self-consumption were identified.

Attendees of the session discussed the different approaches and considered aspects of RES self-consumption in the context of consumer empowerment and political acceptance, which are the main drivers so far for Member States to encourage self-consumption. It was noted that a large number of Member States encourage RES-self-consumption, usually through a partial or complete exemption from grid fees and other charges. These incentives can have a strong distributive effect, especially in market environments that are characterized by comparatively higher fees and charges on electricity. Thus, the attendees concluded that a targeted definition and support of self-consumption is key to reap benefits for the overall electricity system.

## Headline 2: Sector Coupling and its Contribution to System Integration of Renewables

The second session focused on the renewable electricity as an option for sector coupling and identified two main objectives: decarbonisation and flexibilisation. The increased usage of renewable electricity contributes to the decarbonization of transport as well as the heating and cooling sector. Moreover, sector coupling can flexibilise the electricity system and thereby contribute to system integration of variable renewables. A number of technologies that could facilitate sector coupling are already available or in the process of being developed.

However, in most Member States, the current regulatory framework targets each sector independently. This problem was examined in more depth in a simulation game focusing on the implications of regulatory price components on profitability of different sector coupling technologies. An important lesson learnt from this simulation game was that if fees and charges are higher for electricity than for fossil fuels used in other sectors, which is the case in many Member States, this acts as a significant barrier for sector coupling. Moreover, it was noted that this effect persists even if the costs for sector coupling technologies will decrease in the coming years due to technological development. In addition, other market entry barriers were also discussed, for example the double charging of storage.

## Headline 3: Cross-Border Auctions and Regulatory Convergence

At the beginning of the session, a brief presentation about the groundbreaking signing of cooperation agreements on statistical transfers between Luxembourg and Lithuania as well as Luxembourg and Estonia was given.

Afterwards, the impact of national regulatory frameworks on the costs of onshore wind deployment was presented on the basis of the preliminary results of a study conducted in the PENTA region. RES deployment costs are not only determined by natural potential (i.e. wind conditions, sun radiation) and market values – regulatory framework conditions, such as rules for grid connection, planning and permitting, taxation and financing costs are also factors to be taken into account. The study aims to quantify the effects of the most important regulatory framework conditions in the PENTA countries



on the costs of wind onshore deployment. The preliminary results show that regulatory framework conditions are indeed an important factor and cost effects of such framework conditions differ between Member States.

Through the course of the third session, a simulation game also took place, during which participants simulated the mutual effects of cross-border auctions and regulatory frameworks by negotiating for two fictional countries. The simulation game showed that cross-border auctions can lead to a dynamic where Member States adapt their regulatory framework to lower costs, in order to render domestic sites more competitive. Participants concluded that this dynamic should be used as an opportunity for a “race for best practices” in order to foster regulatory convergence; a “race to the bottom” should be avoided.



## Core Theme 2: RES Heat

### Headline 1: Smart Finance for Renewable Heat and Cool in the Residential Sector

The first session of the Core Theme on RES Heat focused on the variety of existing support schemes in the residential sector of the Member States. In preparation for the Plenary Meeting, participating countries were asked to answer in which different ways Member States provide financial support to consumers in order to increase the use of renewables. The findings show that the majority of Member States support households through subsidies. A lot of grants and subsidies come directly from central government funding and European funds or from the combination of the two. Good practice presentations from the Netherlands and Italy showcased different scheme types and how schemes' impacts can be increased. In addition, the lack of consumer awareness and trust are still remaining barriers. Moreover, fossil fuels offer a cheaper alternative in the competition, which is detrimental to the uptake of renewables. There are also split incentives between building owners and tenants that must be overcome, for instance through schemes that allow both to profit from energy and costs savings resulting from building renovation and changes to RES heating systems. Stability of the scheme is also a requirement for finance schemes to incentivize RES Heat.

### Headline 2: Access to Finance for RES Heat and Cooling through the Eyes of the Households

The second session explored the patterns across different schemes that are currently targeting households. According to the answers of the Member States, a third of the schemes target specific building or occupant segments. Alongside the development of the financial incentives, professionals need to be trained and information needs to be disseminated in order to support householders in accessing suitable eligible support schemes and choosing qualified professionals they can trust.

During the course of the session, different advisory systems were highlighted, for example, local info renovation centers, telephone support lines, online advisory platforms and consultancy options for multi-apartment dwellings. Participants were also provided with a comprehensive overview about the ENSPOL project that supports Member States in establishing and setting up new Energy Efficiency Obligations (EEOs) and additional measures that support the requirements of the Article 7 of the Energy Efficiency Directive - 2012/27/EU. Also from the energy efficiency side, the group heard that it is important to have a complementary policy mix in place, i.e. combining different policies including information, quality assurance and advice for citizens.

### Headline 3: Prosumers - Self Production and Consumption of Renewable Energy in Residential Buildings

First findings and inputs from the recently established Task Force on the topic of prosumers within the Core Theme were presented. In order to reach a higher level of renewable penetration in the heating and cooling sector, the use of flexibility tools, such as demand response and storage need to be addressed in the residential building sector. The attendees of the session became more familiar with the best-practice examples of Portugal and its support mechanisms. In addition, the case studies of Cyprus and Poland sparked the discussion on net-metering schemes and utility support schemes. Among others, awareness about the potential of technical options needs to be increased and support instruments must be adapted because they were not specifically designed for this purpose and would not be adequate to encourage combined use of renewable energy sources in this context. There was consent within the group that self-consumption is an important topic that should be continued to be discussed.



#### **Headline 4: Renewable Cooling and Topics for the 3<sup>rd</sup> Plenary Meeting**

An identified topic of interest was Renewable District Heating and Cooling. In preparation for the Renewable Cooling aspect – as it is a less understood and researched topic than Renewable Heating – a Task Force on Renewable Cooling has been established. The first half of the session gave an introduction to Renewable Cooling and participants heard about activities in this area from the Netherlands and France. More detailed research questions will be scoped out after the meeting.

The second half of this session was used to identify future topics and possible cross-cutting themes between CA-RES, the Concerted Action on the Energy Efficiency Directive (CA EED), and the Concerted Action on the Energy Performance of Buildings Directive (CA EPBD). Heat storage and the self-consumption support schemes were considered to be topics of future interest.



## Core Theme 3: Guarantees of Origin & Disclosure

### Headline 1: Conversion and its Consequences: From RES Electricity to Other Forms of Energy and Vice Versa

CT3 participants followed up on the issue presented at the last meeting in Bratislava. As more and more countries think about or are currently implementing other GO-systems for renewable energy, in parallel to the GO for Renewable Electricity, participants discussed common principles which could bring solutions to the risk of double counting (including double selling) of renewable energy when one energy vector is converted into another. It was agreed that the prevention of double counting is important for all energy vectors and it was acknowledged that GOs contribute to achieve solid statistics. As the issue of sector coupling gains more importance, participants highlighted that further interaction and coordination between the Core Themes will be needed in the future, for example in the form of joint sessions.

### Headline 2: Status of GO and Disclosure Implementation and Remaining Challenges (including EU disclosure 2016)

During the second CT3 session, the 2016 total supplier energy mix (usually named 'disclosure'), based on residual mix calculations, for each member-state was presented by an external representative from the Association of Issuing Bodies. E-Control, the Austrian energy regulator, provided valuable insights into the Austrian approach to disclosure. Out of its experience, requiring cancellation of GOs for all consumed electricity ("full disclosure") clearly appears to be easier than using residual mix.

### Headline 3: On Varied Methods of Financing the GO System between Member States

During the 3<sup>rd</sup> session, CT3 participants shared their knowledge about current practices on methods for financing the GO system. Most countries apply transaction fees, from which there is a large variety, some add an entrance fee or a yearly contribution, and a minority of systems are being funded by taxes, levies or surcharges. Furthermore, the running costs of the GO system (installation, registration, etc.), which are currently being financed differently amongst European countries, were intensely discussed.



# Core Theme 4: Biomass Mobilisation and Sustainability

## Headline 1: Bioenergy Policies in the Various Member States

The first session focused on policies to be implemented in the Member States due to the increased use of solid biomass and biogas. Denmark presented policy developments for the use of sustainable solid biomass for heat and electricity as a basis for discussion. Participants discussed the benefits of the increased import and export flows of solid biomass inside Europe to reaching the 2020 RES targets. For large-scale application, concerns about the sustainable production of the biomass appear to be the main bottleneck even in countries with a large biomass use tradition. Participants discussed whether sustainability schemes could help Member States overcome this problem and build an internal European market for solid biomass trade. For the small-scale (residential) heating sector, air quality issues will probably reduce the use of biomass in several Member States.

## Headline 2: Methods to Improve Mobilisation of Domestic Biomass

Many countries have developed strategies and instruments in order to stimulate the availability of domestic biomass feedstocks and the use of these resources for bioenergy purposes. However, a good matching between domestic bioenergy policies and markets is still challenging. A representative from the H2020 Bioenergy4Business project (<http://www.bioenergy4business.eu>), which looked at business opportunities for heating with local available bioenergy sources, presented selected case studies defining the most promising market segments for a fuel switch from fossil fuels to bioenergy. Municipalities located in areas near the forest and far away from gas infrastructure and other energy sources hold potential for a fuel switch to solid biomass. CT4 participants discussed whether these examples could be replicated in other Member States. The discussions showed that promising market segments for biomass heating are mainly driven by local biomass suppliers and need adapted financial instruments to expand given that investors primarily face CAPEX barriers, rather than OPEX barriers. For biogas, a vivid discussion shows local solutions are manifold depending on a variety of policy and physical parameters. This appears to be a good topic for a next workshop.

## Headline 3: Flexibility Potential of Bioenergy on the Energy Markets

Unlike variable renewable energy (solar, wind, etc.), “dispatchable” renewable energy such as bioenergy can play a central role in balancing current and future energy systems. However, a recent study<sup>1</sup> published by IEA Bioenergy (Task41) showed that very little attention has been paid to the role of bioenergy as an effective management and storage option. During the session, the level of flexibility currently provided by bioenergy systems in MS was discussed and compared in order to identify regional differences and existing barriers. Participants came to the conclusion that for most Member States, flexibility is not an issue that is given much consideration today, but that it will gain more importance after 2020. Indeed, since the development of the required infrastructure has to start in the near future, it is important to address this topic now when many countries are considering new capacities and infrastructure needs. A joint workshop with CT 1 could be a good option to proceed.

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<sup>1</sup> [www.ieabioenergy.com/wp-content/uploads/2017/02/IEA-Bioenergy-bio-in-balancing-grid\\_master-FINAL.pdf](http://www.ieabioenergy.com/wp-content/uploads/2017/02/IEA-Bioenergy-bio-in-balancing-grid_master-FINAL.pdf)

## Core Theme 5: RES in Transport

### Headline 1: RES-T 2020 Target

CT5 participants discussed the progress Member States have made in reaching the 2020 target for 10% RES in transport as well as feedstocks and renewable fuels currently in use in the Member States and main policies. The UK implementation of the ILUC Directive was presented as a case study. It was stressed that policies must have built-in flexibility to handle several uncertainties regarding waste availability, technological developments and carbon budget requirements, while guaranteeing minimum levels of deployment of low-carbon fuels.

### Headline 2: Advanced Biofuels – Feedstock Availability and Technology

The discussions turned to the topic of advanced biofuels, in particular to feedstock availability and updates on technology developments. Recent findings from studies conducted, on the sustainable availability of waste and residual advanced biofuel feedstocks were presented. Some Annex IX part A feedstocks have indirect greenhouse gas emissions, but the total EU potential for using wastes and residues is still high. Agricultural residues present the largest potentially sustainable available resource, but technical potentials will be limited by economics of collection. It was highlighted that the technologies for the production of advanced biofuels exist, but that further support is needed to support sector growth..

### Headline 3: Advanced Biofuels – Projects and Investment

In the second CT5 parallel session on advanced biofuels, the challenges advanced biofuels projects face were presented, including regulatory, technical, logistical and financial barriers to the deployment of advanced biofuels. Participants then discussed feedstocks, fuels and challenges. During the discussions, participants emphasized that lower barriers to private-public partnerships, enlarged finance & credit schemes and clear long-term policy frameworks that diminish uncertainty are needed to promote the development of the advanced biofuel industry.

