



Coordinating energy research  
for a low Carbon Europe

# The EERA Newsletter

## December 2013

### **Content**

EERA ExCo Editorial

The Stakeholder

Save the date – EERA Annual Congress 2014

From the EERA Joint programmes

From the EERA Secretariat



# Coordinating energy research for a low Carbon Europe

## EERA ExCo Editorial

The EERA Executive Committee (ExCo) is made up of representatives from 15 of the biggest contributors to EERA. Each newsletter an ExCo representative will contribute with the editorial covering important initiatives under way or important events that have taken place. For this newsletter, ExCo member from [UKERC](#), **John Loughhead** has penned the contribution.



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It was a particular pleasure to host the most recent EERA Executive Committee meeting in London earlier in November. The surroundings of Westminster, historic seat of Government in the UK, were particularly appropriate for the meeting outcomes which will change the governance of EERA and directly lead to its establishment as a non-for-profit **legal entity** early in the New Year. This is an important step forward in achieving the ambitions for EERA and our membership of more than 150 participating organisations across Europe.

Even with this historic agreement the level of excitement in 2013 surrounding energy issues still continues to rise, but as it draws to a close it seems that 2014 may yet be an even more interesting year. In December the **first Work programmes for Horizon 2020**, the new EU framework programme for research and innovation, will be published signalling a new era for everyone involved in European research, not least for us in EERA. For energy research, Horizon2020 is particularly good news as the funding for energy research increases to €5.3 billion over the 7 year period.

To strengthen the coordination of energy research in Europe, the European Commission took the initiative this autumn to launch the process of developing an **Integrated Roadmap for the SET-plan**. Representatives from EERA and some 30 other organisations are currently working with the Commission to produce a comprehensive roadmap for energy research and innovation that will highlight priorities and areas of common interest across the different technologies. This is certainly no easy task and we await with great interest the draft roadmap which will be published in spring 2014. While the support that EERA has provided in shaping the initiative has been substantial the larger challenge will be putting it to action. This will be an opportunity for EERA to further demonstrate its strengths in developing effective collaborative partnerships and delivering additional value from the strategic alignment of resources.

It is these strengths that have ensured that EERA continues to grow and thrive. 2013 has been a particularly special year since, on the 24<sup>th</sup> of October, we celebrated its **5 year anniversary**, a milestone achievement that we all celebrate.

From the UK perspective **the role that EERA has played in aligning research and building partnerships is increasingly important**. The UK research and innovation system is structured



## Coordinating energy research for a low Carbon Europe

differently to that in many other European countries. The most obvious difference is that in the UK there are no large-scale public research institutes for energy, or indeed most technical areas. Instead most energy research activities take place in industry, in a small number of independent commercial research organisations, or in universities. However, this apparently fragmented system is actively managed so as to deliver a wide range of outputs, including many classically provided by public research institutes.

In the case of energy there is a coordinated national research programme operated by the UK's primary funding bodies the Research Councils. The Research Councils' Energy Programme (RCEP) exploits the specialist research capabilities of various universities, depending on what expertise is needed, through a managed project portfolio to deliver specific programme objectives and outcomes. There is a close linkage and a designed complementarity between this programme and those operated by other agencies such as the Technology Strategy Board, the UK's innovation agency, and the Energy Technologies Institute, a public-private partnership which undertakes later stage collaborative developments between government and industry.

In order to ensure this distributed, but carefully managed, system can effectively interact with others, especially outside the UK, the **UK Energy Research Centre (UKERC)** represents the UK internationally where appropriate. UKERC has its own substantial programme of systems level research, but also provides a single interface for the whole RCEP Programme. In the case of EERA, UKERC organises and delivers the UK contribution to EERA's joint programmes from within the activities of the RCEP; individual contributors may be based in various universities but they represent the national programme.

Over the five years of its existence EERA has created more efficient and productive working relationships between European research institutes and UK researchers at a national level, than under any previous programme. While this collaborative relationship is alone sufficient cause for celebration, the underlying development of a common vision for European research and the sharing of research management philosophy across the best institutes in Europe is something that should not be undervalued. While the next five years will present new challenges for EERA, it can only continue to develop its position at the heart of European energy research through demonstrating it can devise practical and efficient means of leveraging existing national research efforts to mutual benefit. Funding support from Europe is of course important, but alone it is not enough. We need to develop projects that are of inherent value to each participant, and that produce outputs of genuine use to several countries. That should be our priority, and the financial support will certainly follow.

Returning to Westminster, some 360 years ago Oliver Cromwell lost his patience with Parliament and said to them "You have sat too long for any good you have been doing. Depart, I say, and let us have done with you. In the name of God, go!" Through our work and vision let us ensure that the EERA ExCo never hears similar words from a frustrated SET Steering Group!



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**Annual Congress 2014 of the European Energy Research Alliance**

**Save the date: 9<sup>th</sup> April 2014**

**The Hotel, Boulevard de Waterloo 38, 1000 Brussels**

Invited speakers include high level representatives from the European Commission, Member states and Industry. This year's congress will feature a dedicated session on the state of play of the **SET-Plan** integrated roadmap.



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### The Stake- holder

EERA is committed to strengthen collaboration not only within the EERA community but also with other stakeholder organisations working in relation to the SET-plan. As part of this we invite a representative from another organisation to contribute to the EERA newsletter with an article on topics of relevance to EERA. This newsletter we are happy to welcome Greg Arrowsmith from [EUREC](#) to offer his view on the first impression of energy in Horizon2020.



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### Energy in Horizon 2020 – first impressions\*

Was it the most followed Info Day in seven years? The melee at the registration desk suggested as much. Last Thursday 5 December the EC set out the first energy Work Programme of the Horizon 2020 era and explained the differences from FP7. The €5.244 bn on offer is a substantial increase on the €3.080 bn available under FP7 and Intelligent Energy Europe even after allowing for inflation. While national treasuries are wont to cut spending on research in order to focus on areas believed to have more electoral appeal (teachers, healthcare, the police,...), Europe's budget pitches research spending against agriculture and cohesion policy spending, making it an easier sell. That has helped EU-level spending in energy to the position of accounting for roughly 20% of all public spending on research.

The Commission hopes it will be easier than ever for consortia to apply for this money and to manage it. "Simplification" has, since H2020's conception, been its mantra. But not every novelty of H2020 will make life simpler for bidders. The downside of putting various different kinds of renewable heating and electricity technology in competition with each other in the topics LCE 2 and LCE 3 will, for example, mean that it is much harder for bidders to estimate their chance of successfully winning funding. LCE 2 partly gets around this by using two-stage evaluation, where the filter applied to the first stage can be opened or relaxed to ensure that in the second stage, where most of the effort to prepare a proposal lies, a target average success rate is reached. No such safeguard has been built into the LCE 3 topic for demonstration projects, however.

The application of the TRL (Technology Readiness Level) system might also be a source of confusion. LCE 2, for example, simultaneously calls for techniques for spectrum conversion in PV and improvements in construction, operation and maintenance in CSP. Funding will only be available for technologies that address these aims that are currently at TRL 3 or 4. What penalty is applied to a project that states its TRL to be at that level and the proposal evaluators disagree? The EC has not said. What happens if the TRL of 3 or 4 is poorly chosen for the eligible topics under one technology (say PV) but much better suited for another (say CSP) – does that introduce a systematic penalty for all PV proposals? The EC will need to explain.



# Coordinating energy research for a low Carbon Europe

\*Please note that the views expressed in the invited article are the views of the writer and does not necessarily represent the views of EERA.

## From the EERA Joint Programmes

The following is a selection of news from the EERA Joint Programmes. The Joint Programmes are the cornerstone of EERA's activities. This is where researchers from the more than 150 research organizations participating in EERA meet to coordinate activities, exchange knowledge and strengthen their networks.

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### Kick off meeting for the new EERA Socio-Economic Joint Programme e3s

Just three months after the official start to the new EERA joint programme, e3s had a successful kick-off meeting with almost 50 participants during the week of the San Sebastian International Film Festival in September. Day 1 of the meeting was entirely dedicated to clarifying the details of cooperation in the joint programme itself and the planning of the work to be done in the five sub-programmes of e3s, followed by a short sight-seeing tour of the city and *Basque Cuisine*. Day 2 was rather short, as most participants had to leave at noon, but offered very interesting presentations on the spirit and challenges of Horizon 2020, as well as the particular problem of energy poverty in Eastern Europe, thanks to the interventions of Martin Huemer (European Commission, DG Research) and Stefan Bouzarovski (Manchester University).

The participants appreciated the opportunity to interchange information on related areas of research and the interesting discussion during the meetings and the social gatherings, but also enjoyed the late summer temperatures in San Sebastian. The ride on the open tourist bus was a bit of an adventure for the tallest visitors, due to low-hanging branches, but we are all still looking forward to the next workshops and joint undertakings in e3s.





## Coordinating energy research for a low Carbon Europe

### Lunch event in the European Parliament on Energy Storage

In collaboration with the European Association for the Storage of Energy (EASE), the EERA Joint Programme for Energy Storage organised a lunch event in the European Parliament hosted by MEP Ms. Da Graça Carvalho. Joint Programme Coordinator, Professor Hans Jürgen Seifert from (KIT), presented an overview of the state of energy storage research at the event and EERA Executive Committee member, Hans H. Larsen (DTU), presented a sneak preview of the DTU 2013 international Energy report on Energy storage. See the report and the pictures from the event [here](#).

### Bioenergy beyond 2020 – new report available

The EERA Joint Programme for Bioenergy has published a new report entitled the 'Longer Term Research and Development (R&D) Needs and Priorities on Bioenergy' which focuses on bioenergy beyond 2020. It was prepared in association with the European Industrial Bioenergy Initiative (EIBI) and benefitted from the contribution of the participants in the workshop held in Brussels on 7th and 8th May 2013 which focused on this report topic.

To prepare for the post-2020 scenario, it is necessary to accelerate the development of advanced bioenergy technologies that already exist at pilot, or small demonstration scale, but are unlikely to yield impacts before 2020.

Beyond 2020, additional measures will be needed and it is necessary to begin to develop a new wave of biofuel technologies, which may be at a very early stage of development today, but offer considerable potential, or significant advantages with respect to current technologies, in the medium and longer term.

Hence the promotion and initiation of R&D in these new and longer range potential technologies is of great importance within existing and future research programmes at national and EU levels.

The report focuses on both evolutionary and disruptive developments in both thermochemical and biochemical-based technologies.

It concludes with an overview of longer term visions and recommendations for the power, heat and transport sectors. To download a full copy of the report visit the 'Publications' section of the EERA Bioenergy website ([www.eera-bioenergy.eu](http://www.eera-bioenergy.eu))



## Coordinating energy research for a low Carbon Europe

### From the EERA Secretariat

The EERA Secretariat is responsible for the daily operation of EERA activities in Brussels and the support of activities in the EERA ExCo and the Joint Programmes. This section of the newsletter reflects ongoing and planned activities in the EERA secretariat. For this newsletter, our colleague Salvatore Amico-Roxas from ENEA has written the contribution.



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The European Energy Research Alliance celebrated its **5 year anniversary** on October 24. See the pictures and the summary [here](#).

#### **An EERA – EARTO seminar on cross border research collaboration in a competitive environment**

On October 4 at the ENEA premises the EERA and the European Association of Research and Technology Organisations (EARTO) organised a lunch seminar in Brussels with the aim of reflecting on the particular challenges related to cross border collaboration in research. The discussion focused also on the way research institutions are funded and on the issues related to collaboration in environment of competitive funding. Read the seminar report and see the pictures [here](#).

#### **Integrated Roadmap**

This autumn the EC launched the activities for the preparation of an Integrated Roadmap, which is part of the key measure indicated in the EC Communication on [Energy Technologies and Innovation](#). The objective of the Integrated Roadmap is to develop priorities for the development of innovative holistic solutions, which will respond to the needs of the European energy system by 2020, 2030 and beyond. In this frame, the roadmap aims at addressing the entire energy system in an integrated way, including supply chains of the proposed innovative solutions and research and innovation chains consolidated at EU level.

EERA is involved in this exercise through its representatives in the Coordination Group (Mr Erkki Leppävuori) and in the Working Group (Ms Teresa Leao, Mr Hans-Martin Neumann, Mr Darion Chello).

#### **EERA Business model**

The EERA recently established a working group with the aim of stimulating the discussion on how EERA should develop in the near and more remote future. The outcome of the discussion within the Working Group will serve as input for the Executive Committee work. The working group has already started to draft a document which sketches some main aspects to be tackled (e.g. the management and allocation of the resources, the consensus on the research agenda of the JPs etc.).