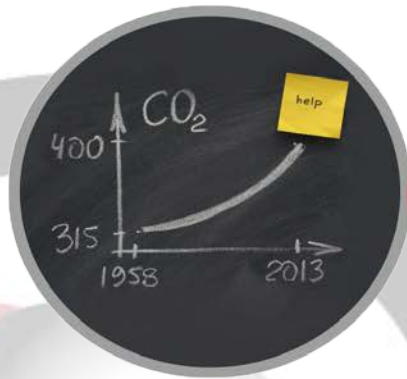


CCS IN H2020: OVERVIEW, LESSONS LEARNED AND NEXT STEPS



**Webinar hosted by the UKCCSRC and given by the
EU Energy Focus team**

H2020 - Enabling the sustainable use of fossil fuels in the transition to a low-carbon economy

July 2014

EU Energy Focus



Overview

- Horizon 2020 Overview
- Simplification of financial and legal arrangements
- Energy Challenge Work Programme and Calls for Proposals
- Stakeholder Engagement
- EU Energy Focus Support services

EU Energy Focus

- Funded by the Department of Energy and Climate Change
- Provide support for UK organisations on European energy programmes
- Part of European National Contact Point network



Horizon 2020 – What's new?

- Horizon 2020 is the EU's new Research and Innovation framework
- A single programme bringing together three separate programmes/initiatives*
- Coupling research to innovation – from research to retail, all forms of innovation
- Focus on societal challenges facing EU society, e.g. health, clean energy and transport
- Simplified access, for all companies, universities, institutes in all EU countries and beyond

* The 7th Research Framework Programme (FP7), innovation aspects of Competitiveness and Innovation Framework Programme (CIP), EU contribution to the European Institute of Innovation and Technology (EIT)

Key aspects of Horizon 2020

- Research, innovation and market transformation
- Collaborative in majority of cases
- Cost sharing (no profit)
- Commission defined priorities
- Innovative at European level
- European impact

Horizon 2020 - priorities

1. Excellent science
2. Industrial leadership
3. Societal challenges

Proposed funding 2014-2020 (B€)

Societal challenges:

• Health, demographic change and wellbeing	8.0
• Food security, sustainable agriculture, marine and maritime research & the bioeconomy	4.2
• Secure, clean and efficient energy*	5.6 **
• Smart, green and integrated transport	6.8
• Climate action, resource efficiency and raw materials	3.2
• Inclusive, innovative and secure societies	3.8

** Additional €1788m for nuclear safety and security from the Euratom Treaty activities (2014-2018). Does not include ITER.*

*** Figure to be finalised.*

Energy in H2020 – opportunities & challenges

- Increased energy budget – approx €6 bn over 7 years*
- Challenge driven – increased emphasis on impact
- Integration of RDD, innovation and market transformation within restructured Work Programme – coherent picture for all market actors
- Energy programme 2014-15 allows longer lead in time to 2015 calls

* from Energy Challenge and cross-cutting themes

Simplification in Horizon 2020

- Single set of simpler and more coherent participation rules
- New balance between trust and control
- Moving from several funding rates for different beneficiaries and activities to just two
- Replacing the four methods to calculate indirect costs with a single flat rate
- Major simplification under the forthcoming financial regulation
- Successful applicants to get working more quickly: reduction of average time to grant by 100 days (current average of around 350 days under FP7)

H2020 simplification: implications for Energy

- Funding Actions: Research and Innovation Actions, Innovation Actions, Coordination and Support Actions, SME instrument and ERANET Cofund
- Two basic funding rates: 100% of total eligible costs and 70% of total eligible costs
- One flat rate for overhead – 25% of eligible direct costs excluding subcontracting and 3rd party resources
- Restructured Work Programme – covers research, innovation, demonstration and market uptake and transformation
- Broader Work Programme topics, focus on Technology Readiness Levels (TRL)
- New participant portal – one access point. Will cover ongoing actions under FP7 and IEE and expert opportunities

Funding Actions – eligibility and funding rates

Research and Innovation Actions (RIA):

- Includes basic and applied research, technology development and integration, testing and validation on a small scale prototype or simulated environment
- 3 independent legal entities from different Member States or Associated Countries
- Funding rate: maximum 100%
- Only Funding action for LCE 15,16 and 17

Costing

Direct Costs

Eligible direct costs are funded at 70% or 100% depending on type of action and type of organisation

(RIA funded at 100% - only funding action for LCE 15,16 and 17)

Indirect Costs

Flat rate – 25% of total direct eligible costs excluding direct eligible costs for subcontracting and the costs of resources made available by third parties which are not used on the premises of the beneficiaries, as well as financial support to third parties

Energy Challenge WP 2014-2015

- 2014/2015 Work Programme covers both 2014 and 2015 call topics/priorities
- 4 call areas:
 - Energy Efficiency
 - **Competitive Low Carbon Energy**
 - Smart Cities and Communities
 - SMEs and Fast Track to Innovation for Energy
- 2014 call launch was launched 11th December 2013 – one remaining Call deadline for LCE (September 2014)
- 2015 call launch expected July 2014 **(to be confirmed)**

Competitive Low Carbon Energy call

Overview of topics:

LCE-15-2014/2015: Enabling decarbonisation of the fossil fuel-based power sector and energy intensive industry through CCS

LCE-16-2014: Understanding, preventing and mitigating the potential environmental impacts and risks of shale gas exploration and exploitation

LCE -17-2015: Highly flexible and efficient fossil fuel power plants

Low Carbon Energy Call (1)

Topic	EU contribution (M€)
<p>LCE15 2015: Enabling decarbonisation of the fossil fuel-based power sector and energy intensive industry through CCS (RIA)</p> <p>Scope - For geological storage, projects should enable, under "real life" conditions, the development and demonstration of best practices for the entire storage cycle, from site characterisation to operation, risk assessment, monitoring and mitigation/remediation of leakage, and including education and training. Progressing technologies at TRL4-5 to TRL6</p> <p>For industrial applications, proposals should aim at integrating CCS technology in the best possible way so as to optimise the use of energy in the capture process, minimise process efficiency losses, achieve a suitable CO₂ purity for transport and storage, and maintain the quality of the industrial end product.</p> <p>Impact - Pilot-scale demonstration projects that contribute to accelerating the development and deployment of CCS.</p>	<p>Geo storage – 9 to 16</p> <p>Industrial – 4 to 9</p>

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Low Carbon Energy (2)

Topic	EU contribution (M€) per project
<p>LCE16 2014: Understanding, preventing and mitigating the potential environmental impacts and risks of shale gas exploration and exploitation (RIA)</p> <p>Scope – Data collection (which could include satellite observation data), model development and identification/assessment of environmental impacts and risks of different exploration and exploitation techniques, and establishment of scientific recommendations for best practices.</p> <p>Impact - Resulting knowledge base and scientific recommendations for best practices will contribute to efforts aimed at minimising the environmental footprint of shale gas extraction.</p>	<p>1 to 3</p>

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Low Carbon Energy Call (3)

Topic	EU contribution (M€) per project
<p>LCE17 2015: Highly flexible and efficient fossil fuel power plants (RIA)</p> <p>Scope - With the growing share of renewable power fossil fuel power plants will have to increasingly shift their role from providing base-load power to providing fluctuating back-up power to meet unpredictable and short-noticed demand peaks, in order to control and stabilise the grid. Plants should be able to run both at the lowest part load possible at the highest possible efficiency. Focus on progressing solutions that have already reached TRL 3 to TRL 4-6 .</p> <p>Impact - Projects should lead to new and cost-effective solutions for highly flexible new and existing fossil fuel power plants, capable of meeting demand peaks and renewable output reductions, at minimal fuel consumption and emissions, while mitigating the effects of cycling operation to avoid excessive service life expenditure, and not impeding the potential CO₂ capture readiness of the power plants.</p>	<p>3 to 6</p>

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Two stage submission process

Stage 1 proposals

- Shorter proposal based on 2 key sections of proposal template
- Evaluation on 2 criteria – must reach threshold of 4/5 for each
- Consortium must meet eligibility requirements but don't need all partners on board
- No detailed costing necessary – budget indication only

Stage 2 proposals

- Full proposal submission including budget
- Can include new partners but must not change fundamental idea
- Previous evaluation not taken into account

Stage 1 submission

Evaluation on 2 criteria

Excellence - clarity and pertinence of objectives, credibility of proposed approach, soundness of concept, extent that proposed work is ambitious , has innovation potential and is beyond SOA

Impact – extent to which outputs of project should contribute at European and/or international level to impacts listed in the topic. Includes enhancing innovation capacity and integration of new knowledge; strengthening competitiveness, relevant environmental impacts, effectiveness of propose measures to exploit and disseminate project results

Stage two submission

Evaluation on 3 criteria

- **Excellence**
- **Impact**
- **Quality and efficiency of the implementation:**
 - Coherence and effectiveness of the work plan including appropriateness of allocation of tasks and resources; complementarity of consortium participants; appropriateness of management structures and procedures, including risk and innovation management

ERANET Co-fund opportunities

- Public-public partnerships only including joint programming initiatives between Member States
- Specific funding arrangements
- Opportunities in follow-up Joint Calls for transnational Proposals

Indicative Timeline – 2015 calls

- Launch July 2014 (to be confirmed)
- EU Energy Focus support - ongoing
 - Webinar programme
 - Support services – on going basis
 - Factsheets e.g. partner searching, impact
 - Draft proposal review
- Deadlines for 2015 Calls (provisional)
 - Stage 1: LCE-15 and LCE-17 3 September 2014;
 - If successful Stage 2 submission 5 May 2015
- Deadline for 2014 Calls
 - Stage 2: LCE's 15 & 16: 23 September – only open if successful at Stage 1

Stakeholder involvement

Strategic Energy Technology Plan

- EU's response to the challenge of **accelerating** the development of low carbon technologies
- will guide the content of H2020 Energy Calls in the future
- **Integrated Roadmap** – expected autumn 2014

European Industrial Initiatives

- Aim to strengthen industrial participation in energy research and demonstration and boost innovation
- Priorities identified by EII have been reflected in FP7 and H2020
- UK Stakeholder Groups established to help UK benefit from EII work

EERA joint programmes – CCS launched in 2012

UK EII Stakeholder Groups

Aims include

- to ensure that UK industry players and researchers benefit as much as possible from being part of this EU level activity, in terms of funding; knowledge sharing; and the building of strategic partnerships for the future.
- to ensure that the UK positions itself to maximise its influence on research, development and demonstration (R,D&D) sector developments in Europe.

Activities include

- to bring together parties to share information on developments in, and opportunities from, European funding, in particular H2020**
- to create a forum where stakeholders' views can be taken into account and UK interests fed into the process of agreeing future EU funded WPs**

2016/2017 Work programme and Stakeholder involvement

- Scoping paper on 2016/17 work programme

EU Energy Focus Support Services

- Telephone and email helpline
- Monthly email bulletins and alerts to new information
- Website www.euenergyfocus.co.uk
- Factsheets
- Webinar sessions on H2020, Work Programme and proposal development
- Proposal clinics in person or conference call
- Proposal review service
- UK Stakeholder Groups

EU Energy Focus

Contact details

0845 6000 430

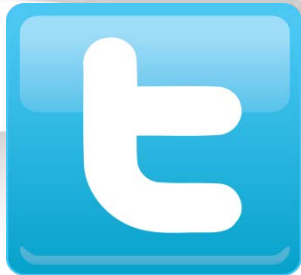
mail@euenergyfocus.co.uk

www.euenergyfocus.co.uk



THANK YOU

Dr. Michael Edwards
Strategy & Business Development Manager
mike@ukccsrc.ac.uk



@UKCCSRC



UKCCSRC group



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www.ukccsrc.ac.uk