



Agentschap NL
Ministerie van Economische Zaken

Horizon 2020

Introduction to Horizon 2020 &
the Societal challenge Energy
including wind energy

23 december 2013

Kathrin Braun

» *Als het gaat om duurzaamheid,
innovatie en internationaal*



A new programme



2007-2013

2014-2020



Horizon 2020 – three pillars

1. Excellent science

- European Research Council
- Future and Emerging Technologies
- Marie Curie actions
- Research infrastructures

2. Industrial Leadership

- **Enabling and industrial technologies**
ICT, nanotechnologies, materials, biotechnology, manufacturing, space
- Access to risk finance
- Innovation in SMEs

3. Societal Challenges

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



Types of actions

Instruments (in pillar 2 en 3):

- Research & Innovation (100%) – **min 3 participants from 3 different countries**
- Innovation (70%) - – **min 3 participants from 3 different countries**
- SME – **one legal entity is sufficient, collabo. with knowledge institue can be a good idea esp. In phase 2**
- Fast Track to Innovation (vanaf 2015?)
- Procurement (PCP / PPI)
- Prize
- Coordination and Support Action (CSA)
- ERA-NET



Types of actions

Technology Readiness Levels (TRLs)





Energy Challenge

3 priority areas in 2014/2015 = 3 calls

- **Energy Efficiency**
- **Low-carbon energy**
- **Smart cities**



Wind

Recent support focused mainly on larger turbines, offshore (fixed and floating)

Challenges for the sector at this moment

- Improving the overall performance of turbines, for both on and offshore applications
- Developing the offshore sector
- Integrated system approach - Mass manufacturing of turbines and components, for both on and offshore applications
- Actively supporting grid operators in stabilizing and managing the system
- Improving siting and spatial planning techniques
- Reducing the environmental impact and increasing social acceptance



Wind

Strategy – to reduce costs

2014-2015

Develop control strategies, innovative substructure concepts, integrated dedicated offshore systems

Demonstration and testing of new nacelle and rotor prototypes, innovative substructures and floating concepts

2016 -2017

New business and/or manufacturing concepts for the whole wind supply chain

New approaches for wind forecasting, advanced aerodynamics, new life cycle approaches

Demonstration of 10-20 MW Wind turbines, O&M and End-of-life cycle management of wind turbines and farms, Definition of methods and standards for testing large wind turbine components



2014/2015

AREA		TRL	TYPE
Renewable electricity and heating/cooling			
LCE 2	Developing the next generation technologies of renewable electricity and heating/cooling	3-4 > 4-5	RIA
LCE 3	Demonstration of renewable electricity and heating/cooling	5-6 > 6-7	IA
LCE 4	Market uptake of existing and emerging renewable electricity, heating and cooling technologies	7-9	CSA



LCE 2 – 2014/2015: Developing the next generation technologies of renewable electricity and heating/cooling

2014: *Develop control strategies and innovative substructure concepts* - There is a need for i) **control strategies and systems for new and/or large rotors and wind farms** (on- and offshore); ii) **new innovative substructure concepts**, including floating platforms, to reduce production, installation and O&M costs **for water depths of more than 50m.**

2015: *Substantially reduce the costs of wind energy* - There is a need for i) innovative integrated dedicated offshore systems (e.g. with a significant lower mass per unit power installed) to reduce production, installation and O&M costs **for water depths of more than 50m.**

Average project size = 3-6 million euro



LCE3 – 2014/2015: **Demonstration** of renewable electricity and heating/cooling technologies

2014: *Demonstrating and testing of **new nacelle and rotor prototypes*** - There is a need for i) demonstration and testing of new nacelle and rotor prototypes, with a significant lower mass and material intensity and applicable to several types of large-scale wind turbines.

2015: *Demonstrating innovative substructure and floating concepts* - There is a need for i) demonstration of innovative bottom-fixed substructure concepts for water depths of **30 to 50m** capable of reducing costs; and ii) demonstration of innovative floating wind turbine concepts

Average project size = 5-20 million euro



Evaluation of LCE 2 & 3

Two topics open for all renewables!

The share of the EU contribution benefitting one single technology area:

1) from topics LCE 2 and LCE 11, research & innovation actions in the field of renewables (electricity, heat, cooling and fuels), shall not exceed 25% of the total budget dedicated to these topics,

2) from topics LCE 3 and LCE 12, innovation actions in the field of renewables (electricity, heat, cooling and fuels), shall not exceed 33% of the total budget dedicated to these topics.

EC Project officer = Matthijs Soede



Budgets

Topics*	Short-hand Description	2014	2015
LCE1	New knoweldge & tech.	20	
LCE2, LCE11	RES – Research	60*	59*
LCE3, LCE12	RES - Demonstration	73*	80*
LCE4, LCE14	Market uptake	20	20



Deadlines

Topics*	2014		2015
LCE1, LCE2, LCE11, LCE15, LCE16	01/04/2014 (Stage 1)	23/09/2014 (Stage 2)	
LCE22	01/04/2014		
LCE4, LCE7, LCE8, LCE10, LCE14, LCE18	07/05/2014		
LCE1, LCE2, LCE11, LCE15, LCE17	03/09/2014 (Stage 1)		03/03/2015 (Stage 2)
LCE3, LCE12, LCE19, LCE20	10/09/2014		
LCE3, LCE12, LCE19, LCE21 LCE4, LCE5, LCE6, LCE9, LCE14			03/03/2015
LCE18			28/04/2015
LCE13			05/05/2015



LCE-04 – 2014 & 2015 - Challenges

Ensuring the level of growth needed to deliver the EU targets for renewable energy, and creating the appropriate business environment for EU industrial leadership

→ *The challenges are*

- Ensuring sustained public acceptance
- Ensuring speedy and user friendly permitting procedures
- Implementing renewable energy policies, codes and legislations ... in a coordinated manner using best practice
- Capacity building and contributing to the further development of renewable energy policy, legislation and regulation
- Capacity building and facilitating the deployment of improved business models and innovative financing schemes for mobilising investments



Other relevant topics in the Energy challenge

Smart Grids

2014: Distribution grid and retail market

2015: Transmission grid and wholesale market

2015: Innovation and technologies for the deployment of meshed off-shore grids

Storage

2014: Local / small-scale storage

2014: Next generation technologies for energy storage

2015: Large scale storage



Simplification of rules for participation

Subsidy:

- Direct costs+ 25% overhead
Incl research infrastructur
- Subsidy 100% except for *close-to-market* = 70%
Non-profit poss.100% *close-to-market*
- Shorter *time-to-grant*
- Max 1 audit per project
- Digital signing of documents via Participant Portal
- ...



Call for Experts

have high-level of expertise in the relevant fields of research and innovation
([see call](#) for details on types of expertise)

can be available for occasional, short-term assignments

Experts, as peer reviewers, assist in the:
evaluation of proposals
monitoring of actions

In addition, experts assist in the :
preparation, implementation or evaluation of programmes and **design**
of **policies**.

Assignments mainly concern research and innovation, falling within the Horizon 2020 programme designed to address the challenges Europe is facing through funding excellent science, technology and innovation.

Go to
<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>
to register as an expert!



What has been done so far?

Go to Cordis – **Find a project** (database)

http://cordis.europa.eu/fp7/projects_en.html

(1899 hits `wind`!!)

Or

Agentschap NL - **Dashbord**

http://kp7.eglwiki.nl/_php/dashboard.php?landcode=NL&nutscode=&pic=&zoekterm=



How can
Agentschap NL
help you?



Your National Contact Point for Horizon 2020

Agentschap NL

Expertisecentrum Internationaal onderzoek & Innovatie (EiOI)



Website and newsletter



Knowledge & advice



Trainings & workshops



Partnersearch



Call us, email us of meet us

In welke Europese call kan ik indienen?

Welke partners heb ik nodig?

Maak ik kans?

Wat zijn de financiële en juridische consequenties?

Hoe schrijf ik een succesvol proposal?

Hoe leg ik Contact met Brussel?



Contact

Agentschap NL

Expertisecentrum Internationaal onderzoek & Innovatie (EiOI)



www.agentschapnl.nl/horizon2020



eioi@agentschapnl.nl



088 602 5260