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Initial view of Horizon 2020 (FP8)

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6 Dec 2012

Outline

- **Headlines**
- **Energy chapter**
- **Revolution!**

International cooperation

European Research Area

Shared objectives and principles

Societal Challenges

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

Industrial Leadership

- Leadership in enabling and industrial technologies (ICT, photonics, micro- and nano-electronics, nanotechnology, advanced materials and advanced manufacturing and processing, biotechnologies, space)
- Innovation in SMEs
- Access to risk finance

Seamless connections

Excellent science

- ERC
- FET
- Marie Curie actions on skills, training and career development
- European research infrastructures (incl e-infrastructures)

Simplified access

Coherent with other EU and MS actions

Common rules, toolkit of funding schemes

RESEARCH



European Renewable Energy Research Centres Agency

Faster

MGQ: "Horizon 2020 aims to reduce the time to grant by 100 days on the current average of 350 days."

EC press conference 30 Nov 2011

Targeted at bigger companies, or not?

MGQ: "We have designed Horizon 2020 to encourage the active participation of the biggest companies in Europe. They are the major creator of wealth and jobs. [...] But SMEs are the backbone of the European economy, so Horizon 2020 will also champion the interests of small firms."

EC press conference 30 Nov 2011

First exploitation in Europe?

MGQ: "For specific cases or projects, for instance where there's a very high investment from the Commission and/or a strategic interest of the EU involved, the EC can set additional exploitation conditions in the work programme or grant agreement."

Response to journalist question, "Why is it necessary to have a first exploitation in Europe clause?" – EC press conference 30 Nov 2011

"Horizon 2020 will continue with the principle of general openness, while encouraging reciprocal access to third country programmes"

- Horizon 2020 Communication

Mid term review

■ By end of 2017

Half of EIT's budget is contingent on positive review by that date.

SMEs

■ An 'ERC for SMEs'

- A contract can be with just one SME
- Support for different phases of development of an idea
 - responding to a technology of interest to Horizon 2020 and
 - European dimension
 - "of interest to SMEs"

■ Target: (a little under) 15% of total budget of Horizon 2020 technology areas

■ "Energy" to allocate an amount to this kind of SME action

Finance

■ 'Debt facility'

- Loans to single beneficiary
- Guarantees to an entity lending to an ultimate beneficiary
- Combine with grants and equity

■ 'Equity facility'

- early-stage venture capital funds providing venture capital and/or mezzanine capital to individual portfolio enterprises.
- stakes not <20%

■ Both mediated by a third party financial institution (prob. EIB/EIF)

■ Complementarity with the facilities of the Programme for the Competitiveness of Enterprises and SMEs.

“Seamlessness”

- **“Horizon 2020 will promote exchange of ideas and perspectives by deploying a seamless approach across all of its constituent parts. The same rules will apply, allowing participants to move swiftly between different parts.”**

Horizon 2020 Communication COM(2011) 808 (page 9)

Externalisation

5 MORE EFFECTIVE AND EFFICIENT MANAGEMENT MODALITIES

As identified in the note to the January College seminar, there is a high potential for greater externalisation of EU research and innovation expenditure in the CSF. Detailed assessments are ongoing and subject to overall budget levels, but the current estimate is that up to 60-70% of the budget of the CSF could be externalised (the level of externalisation under current programmes will reach 38 % in 2013), as well as more external governance (i.e. stakeholders setting the priorities themselves in a bottom-up way).

Dated 1 July 2011

Many, but less specific, references to externalisation appear in the adopted texts.

Selection criteria

FP7	Horizon 2020
scientific and/or technological excellence, (only criterion for ERC)	excellence; (only criterion for ERC)
relevance to the objectives of these specific programmes	-
the potential impact through the development, dissemination and use of project results	impact
the quality and efficiency of the implementation and management	quality and efficiency of the implementation.

Funding rates (1)


		FP7	Horizon 2020
EC reimbursement rates (% of total eligible costs)	Demo	max 50%	max 70%
	Research	max 50% (75%)	max 100%
	Management	max 100%	n/a
	Dissemination & training	max 100%	n/a
	Programme co-fund actions	max 33% (ERA-NET-PLUS)	max 70%
Indirect costs flat rates (% of direct costs)	Any participant	20% (or real)	Everything 20% (no option for real). Derogation possible in WP for lump sums and scale of unit costs
	Higher education, RTOs	60% (")	
	Co-ordination actions	7% (")	

Funding rates (2) – evolution of negotiations

	Early Sept	Late Sept (ISC)	Early Nov	Adopted end Nov
EC reimbursement rates (% of total eligible costs)	<ul style="list-style-type: none"> max 75% (RTD) max 50% (demo) max 60 % (for combined demo and RTD) max 100% (training, mobility, coordination and support ERC) 	100%	75% except... <ul style="list-style-type: none"> max 50% (demo) max 100% (training, mobility, coordination and support ERC) 	max 100% except... max 70% (demo, programme co-fund)
Indirect costs flat rates (% of direct costs unless otherwise stated)	75% of personnel costs	20 % (or real for non-profits)	75% (or real for non-profits) 20% ERC	Everything 20% (no option for real). Derogation possible in WP for lump sums and scale of unit costs

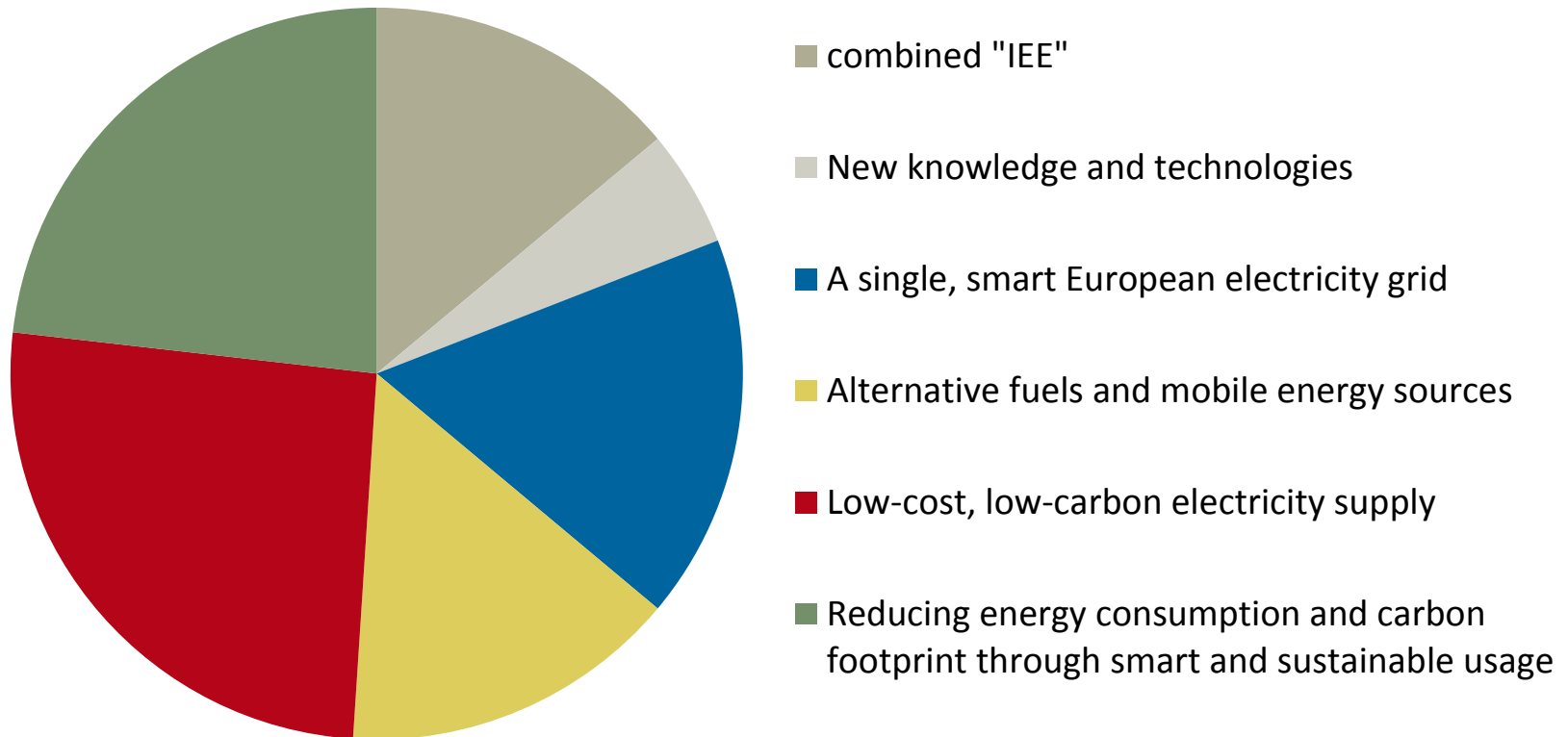
Budget – biggest winners

bn €	FP7	Horizon 2020	Increase (%)
ERC	7.5	15.0	100
EIT	0.3	3.2	939
Food & sea	1.9	5.1	160
Inclusive innovative and secure societies	2.0	4.3	110
non-nuclear Energy	3.1 (incl IEE)	6.3	110



One should also take account of EPR and NER300 1st call, making the increase less than it appears here

Energy – importance by amount of space on page



Horizon 2020's remarks about technology

- Energy efficiency mentioned ahead of all else
- Wind: "Reduce cost of offshore and onshore wind by about 20% by 2020 compared to 2010"
- Solar: "The cost of solar (CSP, PV) should be halved by 2020 compared to 2010 if it is to gain market share"
- Fuel cells: "Need 10x reduction in cost 2010-2020"
- Biorefineries: focus on high value-added products
- CCS for industry necessary

Hello, demonstration

- **Wind: serial manufacturing**

- **PV: mass production**

(Only PV gets a reference to “long-term research”)

- **CSP: first of a kind demonstrations**

Future Intelligent Energy Europe (1)

■ 3.6: Robust decision making and public engagement

- Databases and analyses (technologies (SETIS), markets, infrastructure, consumer behaviour)
- Scenarios (e.g. enlargement)
- Tools
- Models
- Large scale demonstrators for service innovation (“Living Labs”)

Future Intelligent Energy Europe (2)

■ 3.7: Market uptake of energy innovation, empowering markets and consumers

- Uptake and replication solutions
- Develop, apply, share and replicate non-technological innovations
- Capacity building, public acceptance
- Administrative, financing barriers
- Dissemination, exchange of best practice

Specific references to SET Plan (1)

- **EIIs: “It may be envisaged, on a case by case basis, that existing EIIs are turned into formalised public-private partnerships, if considered appropriate, to increase the level and coherence of national funding and to stimulate joint research and innovation actions among Member States.”**

Something as formal as JTIs or JUs will be used only in a limited number of cases.

- **1 bn EUR from risk capital instrument**
- **EERA: suggestion that support could be provided under Art 185 of TFEU**

Specific references to SET Plan (2)

- **Comitology simplified: “The SET Plan governance structure will be used as a principal basis for strategic priority setting and the coordination of energy research and innovation across the EU”**
- **“The SET Plan roadmaps and implementation plans will [...] provide a valuable input for the formulation of work programmes”**
- **References to listening to Technology Platforms, but not explicitly for energy.**

Revolution!

- **“Get away from a logic of work packages” (no management w.ps., no dissemination w.ps.)**
- **“Get away from a logic of instruments” (hardly any mention of specific instruments)**
- **Much devolved to the work programme / proposers**
 - Freedom to propose deviations from the eligibility and evaluation criteria
 - Freedom to opt for output-based financing, lump sums and prizes
 - Freedom for a “consortium” to be just one participant from an MS or associated state
 - Freedom for work programme / grant agreement to specify “in Europe first” exploitation
 - Flexibility on funding rates (...)

Question: All this freedom... is it really simplification or a source of complexity?