



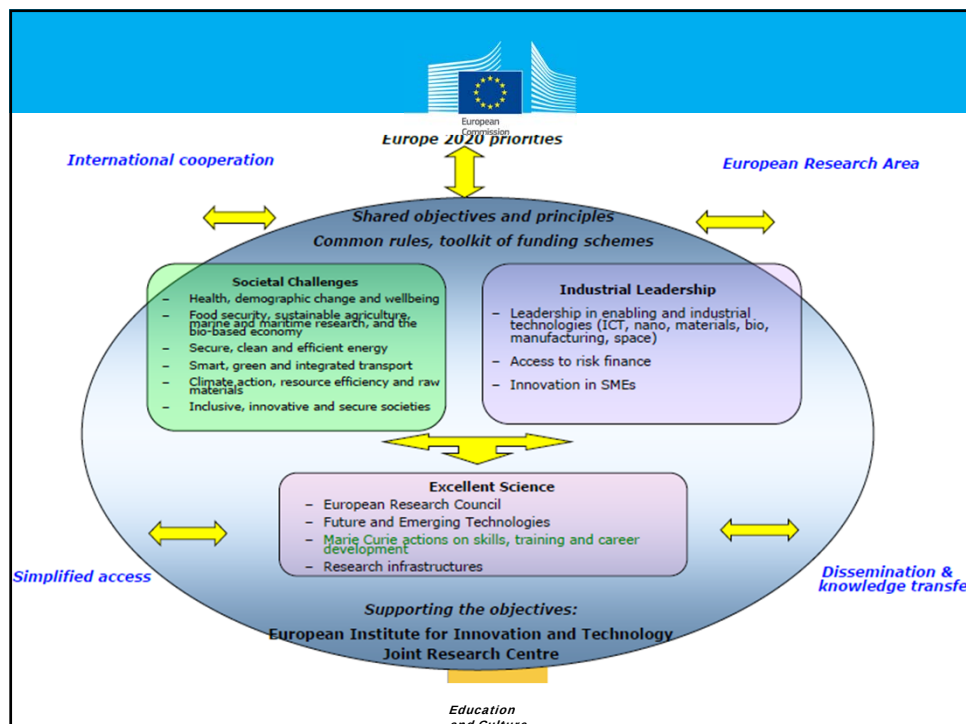
CURRENT EU POLICY FW AND ACHIEVEMENTS

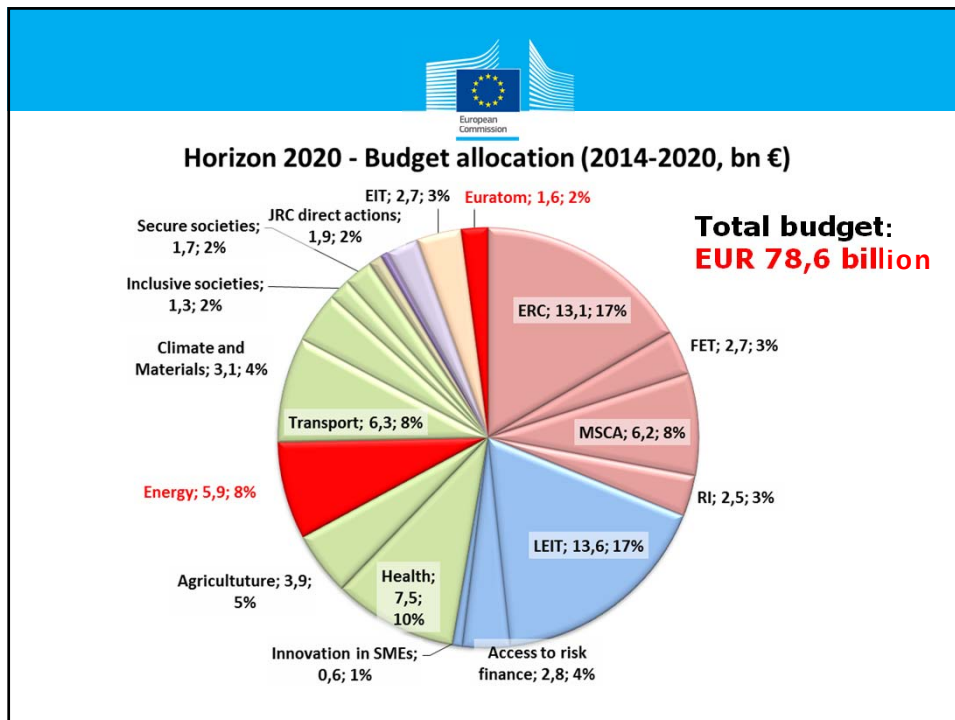
- Clear EU framework and support by SET-Plan
- Three **headline targets 20/20/20** + specific transport targets
- **2011 GHG** emissions estimated at **16 % below 1990** - EU on track
- Progress: **2010 EU renewables share 12.7 % vs. 8.5 % in 2005** - new measures needed for most MS to achieve their 2020 targets
- **Energy savings target** not legally binding but significant progress made – but current policy targets likely to be missed



Horizon 2020 - What's new

- **A single programme** bringing together three separate programmes/initiatives (former FP7, CIP, EIT)
- **Coupling research to innovation** – from research to retail, all forms of innovation
- **Focus on societal challenges** facing EU society, e.g. clean energy, health and transport
- **Simplified access**, for all companies, universities, institutes in all EU countries and beyond






European Commission

Energy Challenge - main challenges

Support the transition to a reliable, sustainable and competitive energy system

- Reducing energy *consumption* and *carbon footprint*
- Boosting development of *renewable and alternative energy* technologies and their *integration in the energy system*
- Making the *grid* more flexible (inclusion of new energy sources, lowering costs of necessary infrastructure upgrades)
- *Decarbonising* the power and other industrial sectors

Increase the competitiveness of European industry

- Addressing the whole *supply chain*
- Increase *energy efficiency* in industry, decrease energy costs

Building a European Research Area in the field of energy

- *Coordinating research activities* of Member States, Associated States and Regions (promoting SET-Plan)



Energy Challenge - scope

- **Reducing energy consumption and carbon footprint by smart and sustainable use:** *New concepts, non-technological solutions, technology components and systems for buildings, cities/districts, industry and individuals*
- **Low-cost, low-carbon electricity supply:** *innovative renewables, efficient and flexible fossil fuel power plants and carbon capture and storage, or CO2 re-use technologies*
- **Alternative fuels and mobile energy sources:** *bio-energy; power and heat; surface, maritime and air transport; hydrogen and fuel cells; new options*



Energy Challenge - scope

- **A single, smart European electricity grid:** *smart energy grid technologies, including storage; systems and market designs to plan, monitor, control and safely operate interoperable networks; standardisation issues; emergency conditions*
- **New knowledge and technologies:** *multi-disciplinary research for energy technologies (including visionary actions)*
- **Robust decision making and public engagement:** *tools, methods, models and perspective scenarios for a robust and transparent policy support*
- **Market uptake of energy innovation:** *applied innovation; promotion of standards; non-technological barriers; smart and sustainable use of existing technologies*



Secure, Clean and efficient Energy Work Programme 2014-2015



Basic principles

- **2-year work programme** to allow for better preparation of applicants
- **Challenge-based** approach
 - Definition of specific challenge to be tackled - broader scope of topics
 - Applicant can propose the most appropriate solution to the challenge
- Integration of **cross-cutting issues** (social sciences, international cooperation, etc.)
- Cross-thematic cooperation in strategic '**focus areas**'
- Covering the **full innovation cycle** (use of TRLs to specify scope of activities)

Publication of the first calls for proposals: **11 December 2013**

First deadlines: as of **April 2014**



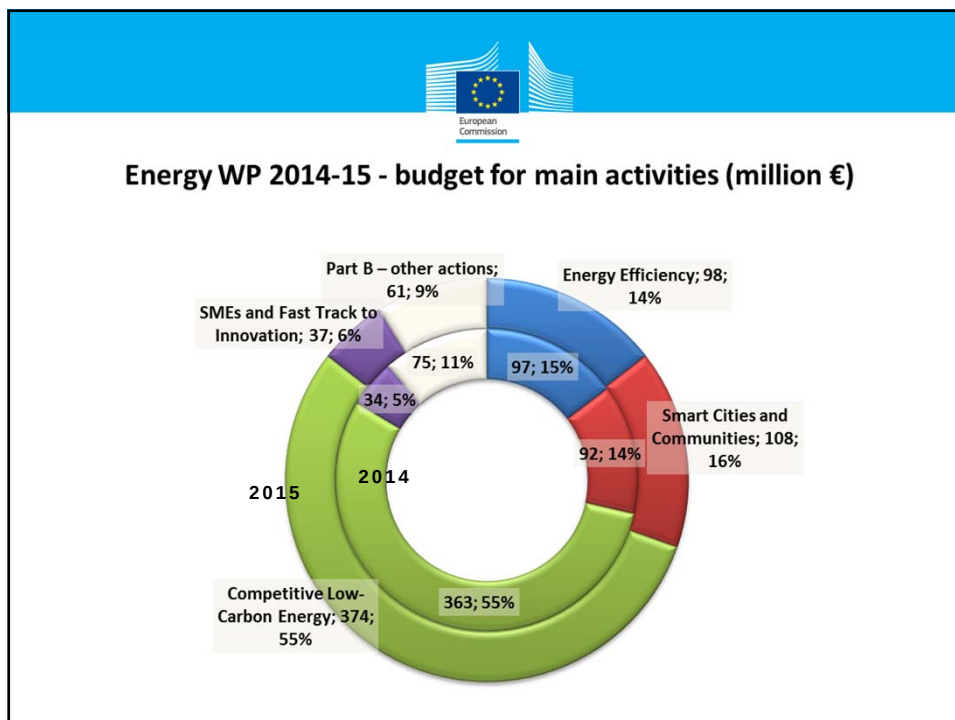
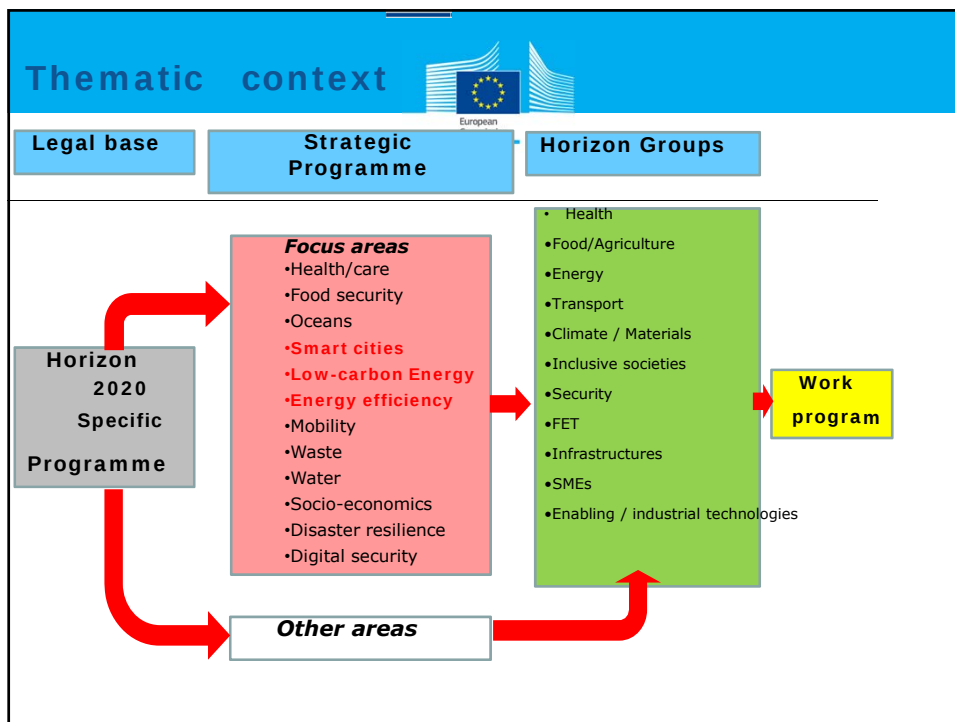
Technology Readiness Levels

- TRL 0: Idea.** Unproven concept, no testing has been performed.
- TRL 1: Basic research.** Principles postulated and observed but no experimental proof available.
- TRL 2: Technology formulation.** Concept and application have been formulated.
- TRL 3: Applied research.** First laboratory tests completed; proof of concept.
- TRL 4: Small scale prototype** built in a laboratory environment ("ugly" prototype).
- TRL 5: Large scale prototype** tested in intended environment.
- TRL 6: Prototype system** tested in intended environment close to expected performance.
- TRL 7: Demonstration system** operating in operational environment at pre-commercial scale.
- TRL 8: First of a kind commercial system.** Manufacturing issues solved.
- TRL 9: Full commercial application,** technology available for consumers.



The overall approach - a pipeline of research funding

- 
- From **basic research**
LCE 1: TRL 2 to TRL 3-4
 - To **technological development**
LCE 2 and LCE 11: TRL 3-4 to TRL 4-5
 - To **demonstration and supply-side market readiness**
LCE 3, LCE 12, LCE 13: from TRL 5-6 to TRL 6-7
 - To support for **market replication** of renewable plants
LCE 24: from TRL 6-7 to TRL 8
 - To **demand-side market up-take**
LCE 4, LCE 14 for technologies at TRL 7-9





Energy Efficiency Call

- Buildings and Consumers
- Heating and Cooling
- Industry and Products
- Finance for sustainable energy

ENERGY EFFICIENCY
DOING MORE WITH LESS



Energy Efficiency Call (1)

Buildings and Consumers

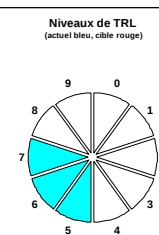
Research and demonstration activities targeting:

- **Prefabricated modules** for renovation of building (EE1)
- **Buildings design** for new buildings (EE2)
- Deep renovation of **historic buildings** (EE3)
- **Demand response** in blocks of buildings (EE6)
- Developing new **ICT-based solutions** for improving energy efficiency (EE11)
- **Socioeconomic research** on energy efficiency (EE12)

EE 2 – 2015: Buildings design for new highly energy performing buildings



- **Specific Challenge: By the end of 2020 (2018 for buildings occupied and owned by public authorities), *all new buildings* should comply with the Energy Performance of Buildings Directive obligations and thus meet '*nearly zero-energy*' performance levels**
- **PPP on Energy-efficient Buildings**
- **3 – 5 M€**



EE 2 – 2015: Buildings design for new highly energy performing buildings



Expected impact:

- **Reduction in total buildings (primary) energy consumption by at *least a factor of 2* with respect to the current situation, and a cost-level better than traditional renovation activities.**
- **Significant *reduction of renovation operations* while ensuring low intrusiveness and impact for users.**
- ***Reduction in installation time by at least 30%*, compared to a typical renovation process for the building type.**
- **Better quality standard and performance guarantee for the installed prefabricated modules and their integrated components, while enhancing indoor air quality.**
- **Demonstration of the replicability potential.**
- **A maximum *return on investment below 10 years* for end-users.**
- **Generation of new high-tech SMEs specialised in renovation with prefabricated modules.**
- **High-skill jobs for workers that could master innovative construction tools.**

The Energy-efficient Buildings PPP: research for low energy consumption buildings in the EU

- Development of innovative construction and retrofitting technologies;
- Definition of the research priorities in close collaboration with the EU construction sector;
- New market opportunities for EU companies;
- New jobs for high skilled EU professionals.



http://ec.europa.eu/research/press/2013/pdf/ppp/eeb_facsheet.pdf



The Energy-efficient Buildings PPP: research for low energy consumption buildings in the EU

What results and benefits can we expect?

The EeB cPPP intends:

- to create and integrate technologies and solutions enabling to reduce energy consumption and GHG emissions in line with the 2020 goals;
- to turn the building industry into a knowledge-driven sustainable business, with higher productivity and high skilled employees;
- to develop innovative and smart systemic approaches for green buildings and districts, helping to improve the competitiveness of the EU building industry.

Quantitative objectives of EeB are:

- to increase private investment in research & innovation up to 3% of turnover;

- to create 10 new types of high-skilled jobs implemented through knowledge transfer and training;
- to develop the technology to reduce energy and CO2 by 50% and by 80% respectively compared to 2010 levels;
- to present at least 100 demonstration buildings and districts, which are expected to be retrofitted with ICT-based solutions and monitored to reduce up to 75% energy use.

http://ec.europa.eu/research/press/2013/pdf/ppp/eeb_facsheet.pdf



Energy Efficiency Call (2)

Buildings and Consumers

Accompanying support actions aiming at:

- Improving **skills** of construction workforce (EE4)
- Improve market conditions and **remove barriers for renovation** (EE5)
- **Building capacities** of public authorities for sustainable energy policies and plans (EE7)
- Helping public **procurement authorities** to purchase best available sustainable energy products (EE8)
- **Empowering stakeholders** to assist public authorities in sustainable energy policies and measures (EE9)
- Changing **consumer behaviour** (EE10)



Energy Efficiency Call (3)

Heating and Cooling

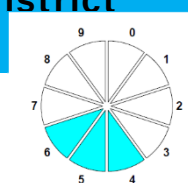
- Improving technologies for **district heating and cooling** (EE13)
- Accompanying **support measures** for removing non-technological market barriers for efficient heating and cooling solutions (EE14)

EE 13 – 2014/2015: Technology for district heating and cooling



- **Specific Challenge:** District heating and cooling systems need to be more **efficient, intelligent and cheaper**. It is necessary to develop and deploy intelligent systems using **smart metering and control** solutions for optimisation and consumer empowerment and exploiting **multiple energy resources**, including waste heat recovery, heat pumps, thermal storage, cogeneration and renewable energy integration, and to roll-out solutions for the integration of intelligent thermal network with smart electricity grids.
- **Scope**
 - * Develop, demonstrate and deploy a new generation of highly efficient, **intelligent district heating and cooling systems** which are capable of integrating multiple efficient generation sources, : Project proposals should address one or more of the including different kinds of renewable energy, cogeneration, waste heat from industrial or other sources and storage, and temperature
 - **Bring down heat distribution losses** and integrate storage
 - Develop optimisation, **control, metering, planning** and modelling
 - Develop new solutions for **low temperature** heat recovery and recirculation

EE 13 – 2014/2015: Technology for district heating and cooling



Expected impact:

- ***Design development and demonstration of economically viable solutions and technologies allowing **recovering 15% of process heat and/or saving at least 15% of the plant energy use**, compared to current practices.***
- ***Adaptable technical, organisational and operational modules and producers to internal and external heat recovery***
- ***In parallel, perceived technical and business risks will be reduced leading to widespread uptake of the technical solutions with a high impact in several industrial sectors***
- ***The technologies developed should integrate well in the current industrial landscape ultimately leading to turn-key solutions with a pay-back time appropriate for industrial applications.***
- **1.5 – 2M€**



Energy Efficiency Call (4)

Industry and Products

Demonstration actions

- New technologies for recovering **waste heat** from industrial processes and transforming it into useful energy forms (EE18)

Accompanying support actions aiming at

- effective **implementation** of ambitious EU product efficiency **legislation** (EE15)
- Removing market barriers for energy efficiency in industry through **organisational innovations** (EE16)
- Helping **large buyer groups** to demand energy products with high performance levels (EE17)



Energy Efficiency Call (5)

Finance for Sustainable Energy

Support Actions aiming at

- Improving financeability of sustainable energy investments by stimulating **new financial products** and **business models** (EE19)
- Supporting **project developers** to set up innovative bankable sustainable energy investment schemes and projects (EE20)
- **Rolling-out** innovative energy services and financial schemes for sustainable energy (EE21)



Call Energy Efficiency: Deadlines

Topics*	2014	2015
Implemented via PPP EeB or SPIRE (EE1, EE3, EE18)	20/03/2014	
All other topics (EE4, EE5, EE7, EE8, EE9, EE10, EE11, EE12, EE13, EE14, EE15, EE16, EE19, EE20, EE21)	05/06/2014	
Implemented via PPP EeB or SPIRE (EE2, EE18)	09/12/2014	
All other topics (EE5, EE6, EE7, EE9, EE10, EE11, EE13, EE14, EE15, EE16, EE17, EE19, EE20, EE21)		10/06/2015

* Corresponds to the topic code in the work-programme



Call Energy Efficiency: Budget

Topics*	Short-hand Description	2014 (M€)	2015 (M€)
EE1, EE2	EeB PPP: Pre-fabricated modules and New Energy Efficient Buildings	8	9
EE3	EeB PPP: Historic Buildings	5	
EE18	SPIRE Topic PPP: Heat recovery	8	8
EE6, EE12, EE13	Demand response in building blocks, socio- economic research and technology for DHC	8,5	13,35
EE11	ICT for energy efficiency	8,5	8,5
EE4, EE5, EE7, EE8, EE9, EE10, EE14, EE15, EE16, EE17	Market uptake in Buildings, Consumers, Industry and Products; Empowering public authorities and its stakeholders	34,5	32,8
EE19, EE20, EE21	Finance for sustainable energy including project development assistance	25	26,5

Call Energy Efficiency: TRL and budgets



Titres	Objectifs	Action	Taille budgétaire (millions €)	Date(s) Limite(s)
EE 1 – 2014: Modules préfabriqués pour la rénovation des bâtiments Implémentation sous le PPP EeB	Procédés de fabrication de masse de produits qui améliorent les performances énergétiques tout au long du cycle de vie 8 M puis 9 M avec EE 2	Innovation 1-stage TRL 5-7	3-5	20/03/2014
EE 2 – 2015: Conception de bâtiments à très haute performance énergétique Implémentation sous le PPP EeB	Solutions pour réduire les coûts et les délais de construction des bâtiments à énergie nulle ou positive (nouveaux quartiers) 8 M puis 9 M avec EE 1	Innovation 1-stage TRL 5-7	3-5	9/12/2015
EE3 – 2014: Stratégies et solutions pour la rénovation et l'énergie des bâtiments historiques Implémentation sous le PPP EeB	Solutions non invasives, réversibles, économiquement accessibles pour améliorer significativement les performances énergétiques tout en respectant le confort intérieur 5 M	Recherche Innovation 1-stage TRL 4-6	3-5	20/03/2014
EE 4 – 2014: Compétences dans le domaine de la construction	Améliorer les compétences en efficacité énergétique et en énergies renouvelables de tous les professionnels du secteur bâtiment et immobilier 34,5 M puis 32,83 M avec EE 5, 7-10, 14-17	Support et coordination 1-stage	1-1,5	5/06/2014



Titre - Date - N° page



Call Energy Efficiency: TRL and budgets



Titres	Objectifs	Action	Taille budgétaire (millions €)	Date(s) Limite(s)
EE 5 – 2014/2015: Innovations de procédés et d'organisation pour accroître la performance énergétique des bâtiments existants et création du marché de la rénovation lourde	-Innovation produit et procédé -Mécanismes d'incitation et de régulation -Conditions de financement de la rénovation lourde 34,5 M puis 32,83 M avec EE 4, 7-10, 14-17	Support et coordination 1-stage	1,5-2	5/06/2014 10/06/2015
EE 6 – 2015: Comportement de la demande dans l'habitat collectif à l'échelle de l'îlot (3 bâtiments)	Solutions rentables et interopérables qui optimisent en temps réel la demande et la fourniture en d'énergie grâce à des systèmes de management à l'échelle de l'îlot 8,5 M puis 13,35 M avec EE 12, 13	Innovation 1-stage TRL 6-7	3-5	10/06/2015
EE 7 – 2014/2015: Améliorer la capacité des autorités publiques à planifier et à implémenter des politiques et des mesures en faveur de l'énergie durable	Renforcement de capacité, coordination, mise en réseau d'acteurs, établissement de standards 34,5 M puis 32,83 M avec EE 4, 5, 7-10, 14-17	Support et coordination 1-stage	1,5-2	5/06/2014 10/06/2015
EE 8 – 2014: Achats publics de solutions innovantes pour l'énergie durable	Renforcer les compétences et la coopération entre acheteurs, mobiliser les centrales d'achats 34,5 M puis 32,83 M avec EE 5, 7-10, 14-17	Support et coordination 1-stage	1-1,5	5/06/2014



Call Energy Efficiency: TRL and budgets



Titres	Objectifs	Action	Taille budgétaire (millions €)	Date(s) Limite(s)
EE 9– 2014/2015 : Donner les moyens aux parties prenantes d'aider les autorités publiques à définir et à implémenter les politiques et les mesures en faveur de l'énergie durable	Besoin de renforcer la coordination et les capacités et les engagements à large échelle auprès des parties prenantes. 34,5 M puis 32,83 M avec EE 5, 7-10, 14-17	Support et coordination 1-stage	1,5-2	5/06/2014 10/06/2015
EE 10 – 2014/2015 : L'engagement des consommateurs pour l'énergie durable	Favoriser le passage à l'action dans la vie quotidienne (et pas seulement informer ou susciter l'intérêt ou le désir), pour les usages les plus consommateurs 34,5 M puis 32,83 M avec EE 5, 7-10, 14-17	Support et coordination 1-stage	1-1,5	5/06/2014 10/06/2015
EE 11 –2014/2015 : Nouvelles solutions TIC pour l'efficacité énergétique	Accélérer le développement à grande échelle des solutions innovantes TIC pour l'efficacité énergétique 8,5 M puis 8,5 M	Recherche Innovation 1-stage	1,5-2	5/06/2014 10/06/2015
EE 12 – 2014 : Recherche socio-économique sur l'efficacité énergétique	Comprendre le comportement des consommateurs et les grandes tendances technologiques et sociales 8,5 M puis 13,35 M avec EE 6,13	Recherche Innovation 1-stage	1	5/06/2014



Titre - Date – N° page



Call Energy Efficiency: TRL and budgets



Titres	Objectifs	Action	Taille budgétaire (millions €)	Date(s) Limite(s)
EE 13 – 2014/2015 : Technologies de chauffages collectifs	Systèmes intelligents , ressources multiples, hybridations. 8,5 M puis 13,35 M avec EE6 et EE12	Recherche & Innovation 1-stage TRL 4-6	1,5 - 2	05/06/2014 10/06/2015
EE 14 – 2014/2015 : Lever les contraintes des marchés pour l'intégration des modes efficaces de chauffage et refroidissement	Chauffage et clim individuel chauffages collectifs, secteur industriel, échangeurs, co-génération, solaire, récupération d'énergie 34,5 M puis 32,8 M avec EE 4,5,7-10,15-17	Support et coordination 1-stage	1,5 - 2	05/06/2014 10/06/2015



Titre - Date – N° page



Call Energy Efficiency: TRL and budgets

Titres	Objectifs	Action	Taille budgétaire (millions €)	Date(s) Limite(s)
EE 15 – 2014/2015 : Assurer l'application efficace de la réglementation européenne en matière d'efficacité énergétique des produits	Solutions pour développer le suivi, le contrôle et l'application de la réglementation européenne en matière d'efficacité énergétique des produits 34,5 M puis 32,83 M avec EE 4, 5, 7-10, 14-17	Support et coordination 1-stage	1,5 - 2	05/06/2014 puis 10/06/2015
EE 16 – 2014/2015 : Innovation organisationnelle pour l'efficacité énergétique dans l'industrie	Solutions pour la diffusion et l'adoption de technologies innovantes d'EE; Solutions à l'échelle d'un site pour identifier les potentiels d'économies d'énergie, suivre les améliorations, et concevoir des solutions de récupération et de stockage 34,5 M puis 32,83 M avec EE 4, 5, 7-10, 14-17	Support et coordination 1-stage	1,5 - 2	05/06/2014 puis 10/06/2015
EE 17 – 2015 : Actionner l'innovation énergétique grâce à des grands groupes d'acheteurs	Actions par lesquelles des groupes d'acheteurs (distributeurs) importants et influents établissent des niveaux de performances supérieures au meilleur niveau actuel que les fabricants devront atteindre par l'innovation. 34,5 M puis 32,83 M avec EE 4, 5, 7-10, 14-17	Support et coordination 1-stage	1,5 - 2	10/06/2015
EE 18 – 2014/2015 : Nouvelles technologies pour l'utilisation de la récupération de chaleur dans les grands systèmes industriels, prenant en compte l'ensemble du cycle de l'énergie / implémentation sous PPP SPIRE	Projet de recherche et de démonstration de technologies et d'approches techniques et opérationnelles pour récupérer la chaleur fatale des process industriels, des flux de matières et la transformer en énergie utile. 8 M puis 8 M €	Recherche & Innovation 1-stage TRL 4-7	3-4	20/03/2014 puis 09/12/2014

Call Energy Efficiency: TRL and budgets

Titres	Objectifs	Action	Taille budgétaire (millions €)	Date(s) Limite(s)
EE 19 – 2014/2015 : Améliorer le financement et l'attractivité des investissements pour l'énergie durable	Développer de nouveaux business models et produits financiers, favoriser les synergies entre la finance privée et publique 25 M puis 26,5 M avec EE 20, 21	Support et coordination 1-stage	1,5-2	5/06/2014 puis 10/06/2015
EE 20 – 2014/2015: Assistance au développement de projet : schémas de financement innovants et agrégés pour l'énergie durable	Assistance aux porteurs de projets publics et privés (ciblage des investissements, études de faisabilité, ingénierie financière, conseil juridique et procédures administratives) pour des investissements de 6 à 50 millions 25 M puis 26,5 M avec EE 19, 21	Support et coordination 1-stage	0,5-2	5/06/2014 puis 10/06/2015
EE 21 – 2014/2015: Développement et lancement sur le marché de services énergétiques innovants et de schémas de financements pour l'énergie durable	Augmenter le CA des sociétés de services énergétiques et améliorer la monétisation des économies d'énergies par la réplification de solutions financières innovantes et le renforcement des capacités des autorités publiques ou des PME à mettre en place ou à utiliser les schémas de financement pour l'énergie durable 25 M puis 26,5 M avec EE18, 19	Support et coordination 1-stage	1-1,5	5/06/2014 puis 10/06/2015



Competitive Low-Carbon Energy

Renewable electricity and heating / cooling

Support for

- **Research activities** to develop the next generation technologies (including photovoltaics, concentrated solar power, wind energy, ocean energy, hydropower, deep geothermal energy and renewable heating and cooling) (LCE2),
- **Demonstration** of renewable electricity and heating/cooling technologies (including photovoltaics, concentrated solar power, wind energy, ocean energy, deep geothermal energy and renewable heating and cooling) (LCE3)
- Accompanying **market uptake measures** removing non-technological market barriers for existing and emerging renewable electricity, heating and cooling technologies (LCE4)



Competitive Low-Carbon Energy

Sustainable biofuels and alternative fuels for the European transport fuel mix

Support for

- **Research activities** on next generation technologies for biofuels and sustainable alternative fuels (LCE11)
- **Demonstration activities** for advanced biofuel technologies (LCE12, LCE13 cooperation with Brazil)
- Accompanying **market uptake measures** for removing non-technological market barriers for existing and emerging sustainable bioenergy (LCE14)



RES / biofuels - Budget

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.



Competitive Low-Carbon Energy

Modernising the European Electricity Grid

Support for

- Demonstration of innovative components for **meshed off-shore grids** linking off-shore energy generation resources with on-shore grids in different countries (LCE5)
- Demonstration of integration of the **transmission system** and the **wholesale market** (LCE6)
- Integration and validation of solutions for the main challenges of the **distribution grid** and **retail market** (LCE7)



Competitive Low-Carbon Energy

Providing the energy system with flexibility through enhanced energy storage technologies

Support for

- Advancing **local/small-scale energy storage** and their integration into the distribution grid and at building/house level (LCE8)
- Further develop **large scale energy storage** and reduce the barriers for new storage concepts (LCE9)
- Developing the **next generation** of energy storage technologies (LCE10)



Competitive Low-Carbon Energy

Enabling the decarbonisation of the use of fossil fuels during the transition to a low-carbon economy

Support for

- Enabling decarbonisation of the fossil fuel-based power sector and energy intensive industry through **CCS**, including geological CO₂ storage (LCE15)
- Understanding, preventing and mitigating the potential environmental impacts and risks of **shale gas** exploration and exploitation (LCE16)
- Improving **operational flexibility** of efficient fossil fuel power plants to facilitate integration renewables with variable output (LCE17)



Competitive Low-Carbon Energy

Social, environmental and economic aspects of the energy system

Support for

- Understanding the role of the **human factor** in the energy transition, including support for education and training networks (LCE20)
- **Modelling** and analysing the energy system, its transformation and impacts (LCE21)



Competitive Low-Carbon Energy

Cross-cutting issues

Support for

- Developing early stage **transformative energy technologies** or enabling technologies (LCE1)
- **Joint Actions** between Member States on demonstration and validation of innovative energy solutions (open for all technology areas included in this and the Smart Cities and Communities call) (LCE18)
- **Coordination** of national R&D activities (open for all technology areas included in this call) (LCE19)
- Fostering trans-national co-operation between **National Contact Points (NCPs)** for the Energy Challenge (LCE22)



Call Competitive low-carbon energy : Deadlines

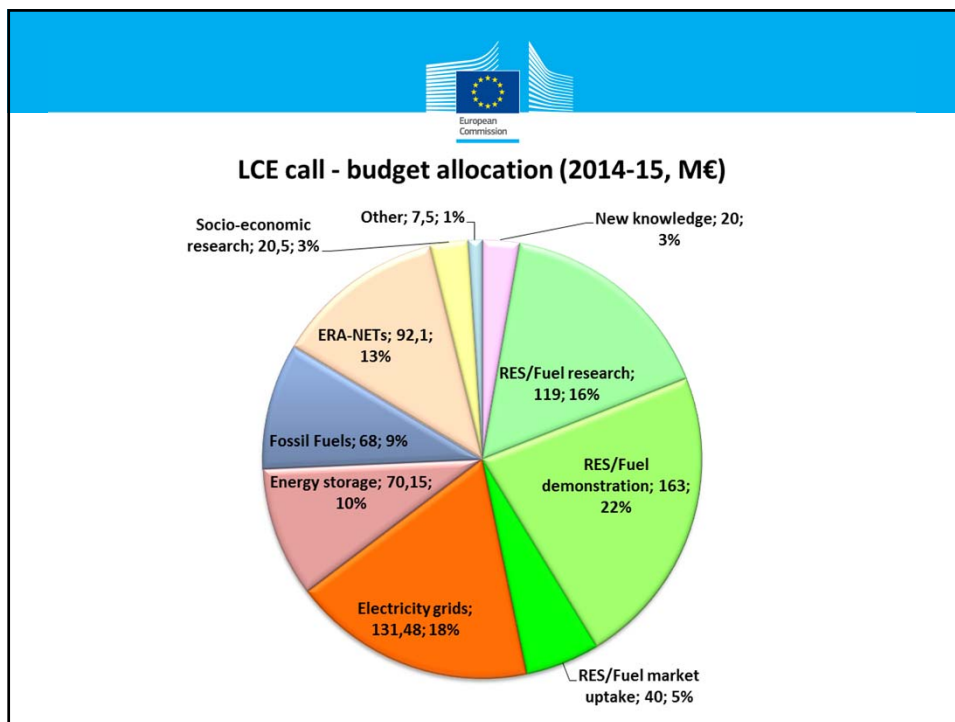
Topics*	2014		2015
LCE1, LCE2, LCE11, LCE15, LCE16	01/04/2014 (Stage 1)	23/09/2014 (Stage 2)	
LCE22	01/04/2014		
LCE4, LCE7, LCE8, LCE10, LCE14, LCE18	07/05/2014		
LCE1, LCE2, LCE11, LCE15, LCE17	03/09/2014 (Stage 1)		03/03/2015 (Stage 2)
LCE3, LCE12, LCE19, LCE20	10/09/2014		
LCE3, LCE12, LCE19, LCE21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

* Corresponds to the topic code in the work-programme



Call Competitive low-carbon energy: Budget (M€)

Topics*	Short-hand Description	2014	2015
LCE1	New knowledge & technologies	20	
LCE2, LCE11	RES/Fuels – Research	60	59
LCE3, LCE12, LCE13	RES/Fuels – Demonstration	73	90
LCE4, LCE14	RES/Fuels – Market uptake	20	20
LCE5, LCE6, LCE7	Smart grids	60	71,48
LCE8, LCE9, LCE10	Energy Storage	44,15	26
LCE15, LCE16, LCE17	Fossil Fuels (CCS & other)	33	35
LCE18	ERANET	34,25	57,85
LCE19	Coordination of national programmes	3	3
LCE20, LCE21	Socio-economic research	10,5	10
LCE22	NCP Network	1,5	



1 Moderniser les réseaux électriques européens				
Titres	Objectifs	Action	Taille Budgetaire (millions €)	Date(s) Limite(s)
LCE 1 – 2014 : Nouvelles connaissances et nouvelles technologies	Démonstrations de l'efficacité des nouvelles techniques de conversion de l'énergie, connaissances de nouvelles technologies, approches multidisciplinaires (hors grilles, stockage, PAC et H2) 20 M	Recherche & Innovation 1-stage TRL 2-4	2-4	01/04/2014 Puis 23/09/2014
LCE 2 – 2014/2015 : Développement de technologies de nouvelle génération pour l'électricité renouvelable et chauffage/refroidissement	Photovoltaïque, Rayonnement solaire Concentré, Éolien, Énergie marine énergie hydraulique, Géothermie. Chauffage et clim renouvelable refroidissement solaire 60 M puis 59,27 M avec LCE 11	Recherche & Innovation 2-stage TRL 3-5	3-6	01/04/2014 23/09/2014 Puis 03/09/2014 03/03/2105
LCE 3 – 2014/2015 : Démonstration de technologies de nouvelle génération pour l'électricité renouvelable et chauffage/refroidissement	Photovoltaïque, Rayonnement solaire Concentré, Éolien, Énergie marine énergie hydraulique, Géothermie. Chauffage et clim renouvelable refroidissement solaire 75,15 M puis 80 M avec LCE 12	Recherche & Innovation 1-stage TRL 5-7	5-20	10/09/2014 Puis 03/03/2015
LCE 4 – 2014 : Commercialisation des technologies de nouvelle génération pour l'électricité renouvelable et chauffage/refroidissement	Niveau de croissance pour les cibles d'énergies renouvelables, environnement économique pour les énergies bas carbone 20 M puis 20 M avec LCE 14	Support & Coordination 1-stage TRL 7-9	1-2	05/05/2014 Puis 03/03/2105

HORIZON 2020

la Commission européenne

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Ministère de l'Enseignement Supérieur et de la Recherche

HOR

HORIZON 2020

LIBERTÉ • ÉGALITÉ • FRATERNITÉ

MINISTÈRE
DE L'ENSEIGNEMENT SUPÉRIEUR
ET DE LA RECHERCHE

 Soutenir le développement de la recherche européenne dans le champ de l'énergie				
Titres	Objectifs	Action	Taille budgétaire (millions €)	Date(s) Limite(s)
LCE 18- 2014/2015: Soutien aux actions conjointes de démonstration de validation des solutions énergétiques innovantes	Coordination des efforts de recherche des Etats Membres, des Etats Associés et des Régions et préparation d' un appel d'offres transnational jouissant d'un co-financement par l'EU des initiatives multinationales de recherche innovante 36M€	ERA-NET 1-stage TLR 6-7	10-20	29/04/2014 28/04/2015
LCE 19- 2014/2015: Soutien à la coordination des activités nationales R&D	Renforcer la dimension européenne des projets grâce à un financement synchronisé provenant d'au moins trois des Etats-Membres, qui permette d'assurer une masse critique de moyens aux projets de recherche à long terme. Renforcer les partenariats avec l'industrie européenne. Soutenir la coordination des projets de recherche réunissant au moins trois Etats-Membres 3M€	CSA 1-stage TLR 5	0.1-0.5	10/09/2014

1 C — Low Carbon Energy				
Titres	Objectifs	Action	Taille budgétaire (millions €)	Date(s) Limite(s)
LCE 20-2014: Le facteur humain dans le système énergétique	Prise de conscience, perceptions, attitudes à l'égard des technologies en rapport avec l'énergie. L'engagement public dans le processus de passage à un système énergétique « low carbon ». Le développement et le soutien de réseaux d'universités liées au monde des affaires et à celui de la recherche et étudiant les besoins et les lacunes au niveau de la connaissance, des qualifications et des compétences de formation. 10.5M€	R&I action et CSA 1-stage	2-4	10/09/2014
LCE 21-2015: Modélisation et analyse du système énergétique, sa transformation et son impact	Evaluation comparative des impacts et de la durabilité des technologies énergétiques Analyse et modélisation des impacts du développement technologique et de l'innovation sur le système énergétique. Quels sont les impacts de la transition vers un système énergétique durable sur la société, l'environnement et l'économie ? 10M€	R&I action 1-stage	2-4	3/03/2015
LCE 22-2014: Héberger le réseau des PCN (Points de Contacts Nationaux)	Faciliter la coopération transnationale entre les PCN avec pour objectif d'identifier et de partager les bonnes pratiques afin d'augmenter la qualité de service aux candidats, tout en tenant compte de leur diversité. Soutien d'activités dans le cadre d'un réseau formalisé des PCN : brokerage event transfrontaliers , workshops communs, formations spécifiques liées au défi, etc. 1.5M€	CSA 1-stage		1/04/2014

3

Energies Bas Carbone

□ LCE 1 Nouvelles connaissances et nouvelles technologies,

2-4 M€ par projet, 5 à 10 par an, **RI, 2014**

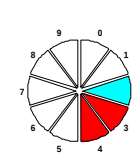
➤ Périmètre

- Démonstrations de l'efficacité des nouvelles techniques de conversion de l'énergie (passage échelle labo →)
- Accroître les connaissances de nouvelles technologies, incluant les chaînes des fournisseurs etc.
- Approches multidisciplinaires
 - (hors grilles, stockage, PAC & H²)

➤ Impacts attendus

- Augmenter le niveau de TRL
- Meilleures connaissances pour guider les acteurs à prendre les bonnes décisions
- Innovations

Niveaux de TRL
(coteur bleu, cote rouge)



ENTREPRENEUR
ICM

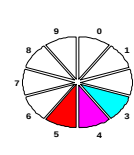
LCE 2 Développement de technologies de nouvelle génération pour l'électricité renouvelable et chauffage/refroidissement

3 – 6 M€ par projet, 5-10 /an (LCE11) **RI 2014**

Périmètre :

- **Photovoltaïque**: nouvelles générations → limites théoriques
- **Rayonnement solaire concentré**: réduire coûts de construction, opération et maintenance
- **Éolien**: réduction des coûts, grandes hélices, intégrations des systèmes off-shore, plates formes flottantes, installations grandes profondeurs (> 50m)
- **Énergie marine** : développements de composants durée de vie > 20 ans
- **Énergie hydraulique** : renouvellement des stations hydrauliques, amélioration des turbines
- **Géothermie**: nouveaux modes de forage, faible impact environnemental, fertilisation croisée hydrothermie liquides et gaz.
- **Chauffage et clim**
- **renouvelables**:
 - **refroidissement** solaire (coûts acceptabilité. Solutions innovantes , performances, ...)
 - Efficacité de la biomasse, micro/mini CHP (chaleur et énergie; 0,1 – 50 , 50 – 250 kWel) applications décentralisées, solides, liquides, gaz

Niveaux de TRL
(coteur bleu, cote rouge)



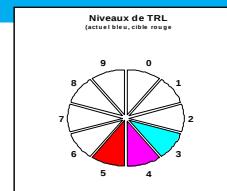
OPÉRATEUR

└ LCE 2 Développement de technologies de nouvelle génération
pour l'électricité renouvelable et chauffage/refroidissement **2015**
Périmètre :



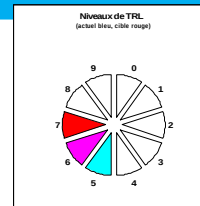
- └ **Photovoltaïque**: très-bas cout. Applications innovatrices
- └ **Rayonnement solaire concentré**: impacts environnementaux (eau pour élaboration des surfaces, matériaux, fabrication)
- └ **Éolien**: réduction substantielle des couts, stratégies de contrôle des grandes éoliennes, réduction des masses (off shore)
- └ **Énergie marine** : durée de vie réduction des couts
- └ **Énergie hydraulique** : améliorer la flexibilité, disponibilité de centrales > 300 MW. Start-stop techniques (30/jour)
- └ **Géothermie**: tester différents environnements géologiques (huiles/eau)
- └ **Chauffage et clim renouvelables**:
 - └ **refroidissement** solaire énergie solaire > 250°C Intégration dans centrales actuelles
 - └ Utilisation de biomasse chargées en cendres (5%) résidus agricoles pyrolyse d'huiles, biomasse torréfiée)

└ LCE 2 Développement de technologies de nouvelle
génération pour l'électricité renouvelable et chauffage
/refroidissement



- **Impacts attendus:**
 - Augmentation du TRL
 - Synergies entre technologies
 - Approches régionales, socio-économiques
 - Prise en compte des impacts environnement, santé et sécurité
 - Evaluation des risques technologique, financiers)
 - Prise en compte des couts et performances (MRL)
 - Réduction des impacts environnementaux des cycles de vie
 - Contrôle de la génération d'électricité renouvelable, intégrable dans les grilles
 - Coherence st stratégies de développement
 - Entretenir le développement des capacités industrielles
 - Renforcer les capacités européennes et l'emploi
 - Réduire les temps et couts d'installations
 - Augmenter la fiabilité et durées de vie en réduisant les couts d'opération et de maintenance

- **LCE 3 Démonstration de technologies de nouvelle génération pour l'électricité renouvelable et chauffage/refroidissement**
5 – 20 M€ par projet, 2 à 8 /an?
Avec LCE12 RI 2014

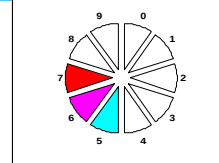


|| **Périmètre** : Fabrication/Marchés correspondant à TRL 4-5

- **Photovoltaïque**: accélération de la mise sur marché de technologies films minces inorganiques. Amélioration de 20% de l'efficacité.
- **Éolien**: réduire substantiellement les coûts. Prototypes de nacelles et rotors, fixations sur des superstructure en grande profondeur (30 – 60m), turbines flottantes innovantes
- **Énergie marine**: démonstrations à grande échelle, grands niveaux de fiabilité
- Chauffage et refroidissement renouvelables/
Géothermie: amélioration des forages verticaux pour sécurité et coûts

ENERTECH

LCE 3 Démonstration de technologies de nouvelle génération pour l'électricité renouvelable et chauffage/refroidissement 2015



|| **Périmètre** : Fabrication/Marchés correspondant à TRL 4-5

- **Photovoltaïque**: intégration dans le bâti. Intégration dans les grilles, durée de vie des composants
- **Energie Solaire Concentrée** : Améliorer la souplesse d'utilisation et la prévisibilité des CSP pour leur dissémination.
- **Éolien**: réduire substantiellement les coûts. Prototypes de nacelles et rotors, fixations sur des superstructure en grande profondeur (30 – 60m), turbines flottantes innovantes
- **Énergie marine**: démonstrations à grande échelle, grands niveaux de fiabilité

ENERTECH

LCE 3 Démonstration de technologies de nouvelle génération pour l'électricité renouvelable et chauffage/refroidissement 2014-2015

□ Impacts Attendus :

- Réduction des coûts en augmentant les performances, temps et coûts d'installations, coûts de maintenance, durées de vie etc.

Réduction des impacts environnementaux des cycles de vie

- Rendre l'énergie électrique renouvelable plus prédictible et intégrable dans les grilles

- Permettre le développement des capacités industrielles pour les composants et nouvelles opportunités industrielles

- Renforcer les capacités technologiques de l'industrie, créer des emplois

ENEL

– LCE 4 Commercialisation des technologies de Nouvelle génération pour l'électricité renouvelable et chauffage/refroidissement

1 – 2 M€ par projet, 10-20 /an avec LCE14 CSA 2014

□ **Périmètre** : assurer le niveau de croissance pour les cibles d'énergie renouvelables, créer l'environnement économique pour les énergies Bas Carbone (Marchés correspondant à TRL 7 - 9)

- Acceptabilité

- Rapidité et fonctionnalité de mise en œuvre

- Implémentation des politiques énergétiques (national, régional, local), législation..

- Modèles économiques pour le développement et le déploiement, mobilisation de fonds d'investissement pour l'énergie et les services.

□ Impacts Attendus:

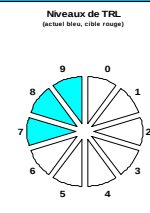
Augmentation du partage des énergies renouvelables électricité, chauffage/clim.

Réduction des temps de mise en œuvre

Réduction des coûts de transaction pour les développeurs et autorités

Développement de politiques, de réglementations, de supports financiers et marchés jusqu'aux plans régionaux ou locaux

ENEL





Smart Cities and Communities

Support for

- **Large scale demonstration of integrated solutions** between the energy, transport, and ICT sectors through partnerships between municipalities and industries
- Accompanying support measures focussing on:
 - Developing a framework for common data and performance measurements (SCC2)
 - Developing system standards for smart cities and communities solutions (SCC3)
 - Establishing networks of public procurers in local administrations on smart city solutions (SCC4)
 - Prize competition for smart solutions (SCC5)



Call Smart cities & communities: Deadlines

Topics*	2014	2015
SCC1	07/05/2014	
SCC2, SCC4	07/05/2014	
SCC1		03/03/2015
SCC3, SCC5		03/03/2015

* Corresponds to the topic code in the work-programme



Call Smart cities & communities: Budget

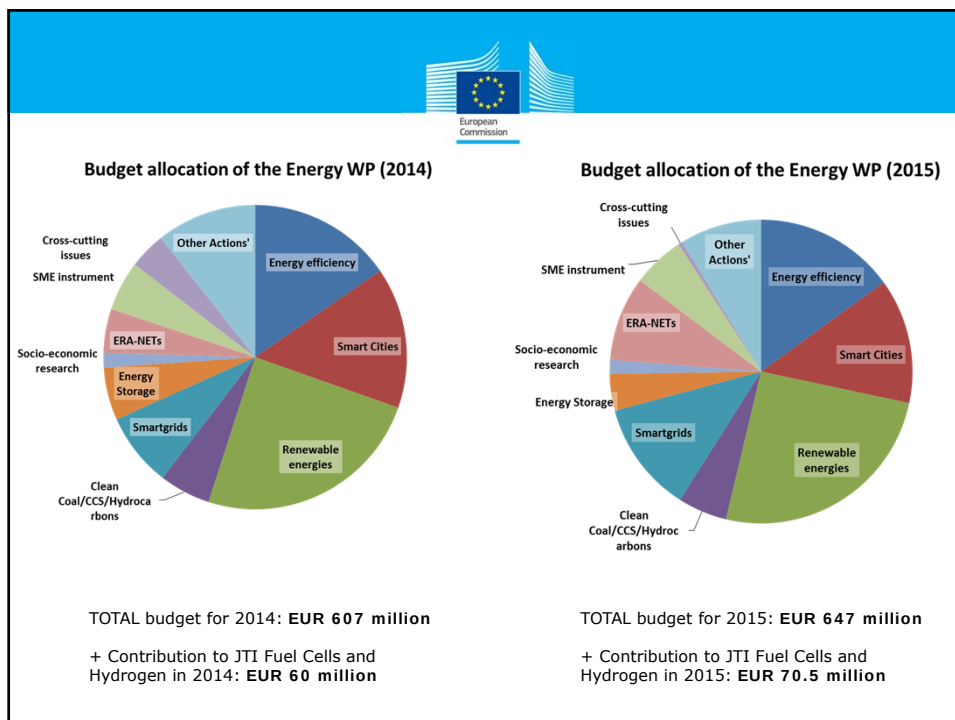
Topics*	Short-hand Description	2014 (M€)	2015 (M€)
SCC1	Large-scale demonstration	90,32	106,8
SCC2	Developping framework for monitoring	1	
SCC3	Developping system standard		1
SCC4	Public procurers networks	1	
SCC5	Prize		1



SMEs and fast track to innovation for Energy

Support for

- Stimulating the **innovation potential of SMEs** for a low carbon and efficient energy system (SME instrument) (SIE1)
 - Bottom-up approach
 - Continuously open call
 - Only SMEs eligible for participation
 - 3 Phases: feasibility study, innovation project, commercialisation phase
- Fast track to Innovation (SIE2)





Other parts of H2020 of direct relevance to Energy

- LEIT – KET materials, nano, electronics, manufacturing, processing, PPPs on Energy-efficient Buildings, SPIRE, Factories of the Future etc.
- FET-open and FET-pro-active
- Research Infrastructures
- ERC, EIT
- JRC direct actions (IET, IPTS)

Close links

- Transport (societal challenge)
- Agriculture, marine, bio-economy (societal challenge), including Blue growth (strategic focus area)
- Climate action, resource efficiency, raw materials (societal challenge)
- Secure societies (societal challenge)



Fuel Cells and Hydrogen

Commission's proposal

- Adopted on 10 July 2013
- Proposes continuation of the FCH JU until 2024
- Adoption by Council expected for 1st half 2014
- Start of operational activities and launch of first call for proposals by mid-2014



Research and Innovation actions

- Actions primarily designed to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service, or solution, including testing and validating on a small scale laboratory prototype.
- Projects may contain closely connected but limited demonstration or pilot activities to show technical feasibility in a near to operational environment.

Funding rate: maximum 100 %



Innovation actions

- Actions primarily aimed at producing plans and arrangements or designs for new, altered or improved products, processes or services. For this purpose they may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

Funding rate: maximum 70 %



Coordination and support actions

- Actions consisting primarily of accompanying measures such as standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies, including design studies for new infrastructure and may also include complementary activities of networking and coordination between programmes in different countries.

Funding rate: maximum 100 %

A single funding rate

FP7

Maximum reimbursement rates	Research and technological development activities (*)	Demonstration activities	Other activities
Network of excellence	50% 75% (**)		100%
Collaborative project(***)	50% 75% (**)	50%	100%
Coordination and support action			100% (***)

(*) Research and technological development includes scientific coordination.
 (**) For beneficiaries that are non-profit public bodies, secondary and higher education establishments, research organisations and SMEs.
 (***) The reimbursement of indirect eligible costs, in the case of coordination and support actions, may reach a maximum 7% of the direct eligible costs, excluding the direct eligible costs for subcontracting and the costs of resources made available by third parties which are not used on the premises of the beneficiary.
 (****) Including research for the benefit of specific groups (in particular SMEs)

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One project = One rate

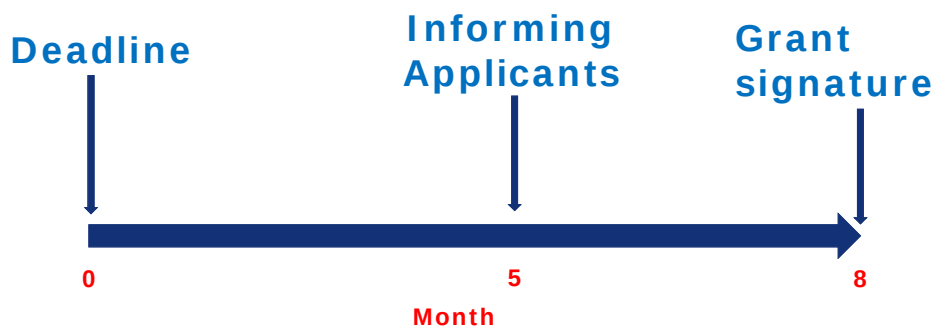
✓ For all beneficiaries and all activities in the grant.

✓ Defined in the Work Programme:

- Up to 100 % of the eligible costs;
- but limited to a maximum of 70 % for innovation projects (exception for non-profit organisations - maximum of 100%)
- Specific reimbursement rates for programme co-fund actions



Time to grant





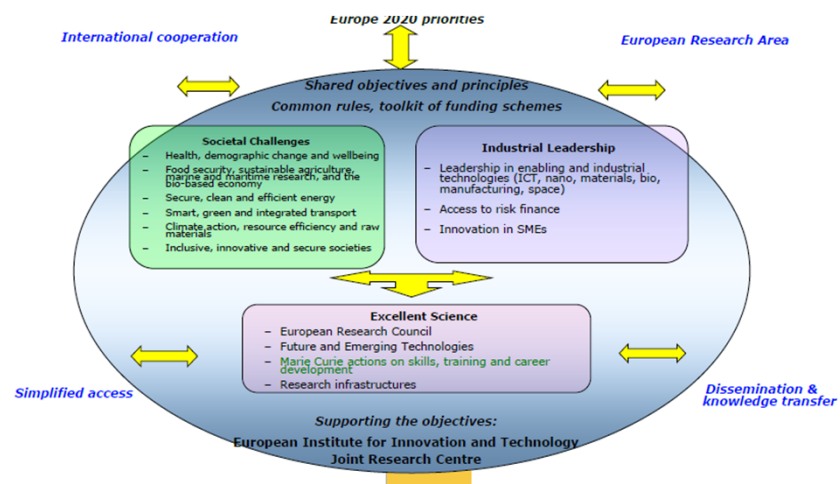
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Marie Skłodowska-Curie Actions

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Horizon 2020





Key features of the MSCA part

- Open to **all domains of research and innovation** from basic research up to market take-up and innovation services
- Entirely **bottom-up**
- Participation of **non-academic sector** strongly encouraged, especially industry and SMEs
- Mobility** as the key requirement - funding on condition participants move from one country to another
- Promotion of attractive **working and employment conditions**
- Particular attention to **gender** balance

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Previous MCA

- FP3 (1990-1994) : Human Capital and Mobility (HCM)
- FP4 (1994-1998) : Training and Mobility of Researchers (TMR)
- FP5 (1998-2002) : Improving Human Research Potential...
- FP6 (2002-2006) : Human Resources and Mobility (HRM)
- FP7 (2007-2013) : People



Budget 2014-2020: 6 162 million €

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FP7 MCA Achievements

- ~ 80 000 researchers financed since creation of MCA
- > 10 000 PhD supported in FP7
- ~ 9 200 projects funded so far in FP7 (€4.2 billion)
- ~ 17 800 participations of host organisations in 83 countries (46 TC)
- ~ 18 500 participations of MCA researchers coming from all over the world: 130 nationalities (90 TC)
- 66 000 researcher-months exchanged (~22 000 individuals) in IRSES
- SMEs play a major role (IAPP & ITN)
- 38% women participation in FP7 MCA (target: 40%)



Definitions



Participants

- **Academic sector**
 - o Public or private **higher education** establishments awarding academic degrees
 - o Public or private *non-profit* **research organisations** whose primary mission is to pursue research
 - o International European interest organisations .
- **Non-Academic sector**
 - o Any **socio-economic actor** not included in the academic sector

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Researchers

- **Early Stage Researchers**
 - o Shall at the time of recruitment (ITN, COFUND) or secondment (RISE), be in the **first four years** (full-time equivalent) of their research careers and have not yet been awarded a doctoral degree.
- **Experienced Researchers**
 - o Shall, at the time of the relevant deadline for submission of proposals (IF), recruitment (COFUND) or secondment (RISE), be in **possession of a doctoral degree** or have at least **four years of full-time equivalent research experience**.
- **Nationality, residence**
 - o Long-term residence means a period of full-time research activity of **at least 5 consecutive years**.

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Participants

- **Beneficiaries : signatory to the agreement**
 - o Full partners with complete **responsibility** for executing the programme
 - o Contribute directly to the implementation of the research training programme by **appointing**, supervising, hosting and training researchers.
 - o May also provide secondment opportunities.
- **Partner Organisations : non-signatory to the agreement**
 - o Provide **trainings** and **hosting** researchers during secondment
 - o **Do not employ the researchers** within the project
 - o Shall include a **letter of commitment** in the proposal to ensure their real and active participation

Mobility rules

- o At the time of the relevant deadline for submission of proposals (IF), or recruitment by the host organisation (ITN), researchers shall not have **resided or carried out their main activity in the country of their host organisation for more than 12 months in the 3 years immediately prior** to the reference date.
- o Compulsory national service and/or short stays such as holidays are not taken into account.



MSCA in H2020

<i>Innovative Training Networks</i>	ITN	<i>Doctoral and initial training</i>
<i>Individual Fellowships</i>	IF	<i>Support for experienced researchers undertaking international and inter-sector mobility</i>
<i>Research and Innovation Staff Exchange</i>	RISE	<i>International and inter-sector cooperation through the exchange of staff</i>
<i>Co-funding of programmes</i>	COFUND	<i>Co-funding of regional, national and international programmes:</i> - <i>doctoral programmes</i> - <i>fellowship programmes</i>
<i>Support and policy actions</i>		<i>European Researchers' Night (NIGHT)</i> <i>Non call-based activities</i>



ITN : Innovative Training Networks

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Innovative Training Networks (ITN)

Objective

- o to raise excellence and structure research and **doctoral training**
- o to train a new generation of creative, entrepreneurial and innovative **early-stage researcher**

Scope

- o European Training Networks (ETN), European Industrial Doctorates (EID) or European Joint Doctorates (EJD)
- o **Triple 'i'** (intersector, interdisciplinary, international) dimension of mobility and particular focus on innovation skills
- o Support to ESR for **3-36 months**

Expected Impact

- o to enhance researchers' **employability** and provide them with new career perspectives
- o Cooperation and **exchange of best practices**

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Innovative Training Networks

Call 2014

- o Publication date: **11 December 2013** (launch of Horizon 2020)
- o Deadline(s): **9 april 2014**
- o Indicative budget: **405 M€** from the 2014 budget. Of this amount, **25.5 M€** are allocated to EID and **30 M€** are allocated to EJD.
- o Duration: maximum **four years**

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IF : Individual Fellowships

Individual Fellowships (IF)

Objective

- o to enhance the creative and innovative potential of **experienced researchers**
- o to provide opportunities to **acquire new knowledge**, resume a career or return to Europe
- o participant established in EU (MS/AC) and **employing the researcher**

o Scope

- o Trans-national fellowships to the **best or most promising** researchers
- o European Fellowships (12-24 months) or Global Fellowships (12-24 months + mandatory return phase of 12 months)
- o Career Restart Panel and Reintegration Panel
- o **Secondments**, notably in the non-academic sector

Expected Impact

- o to release the full potential of researchers and development of their **careers** in both the academic and non-academic sectors



Individual Fellowships (IF)

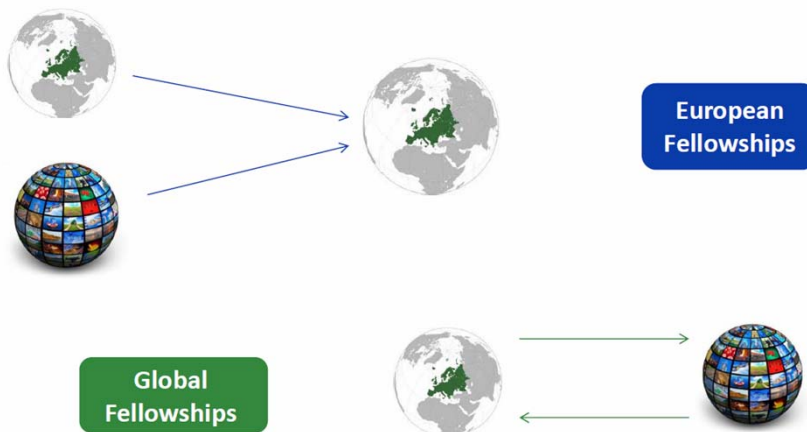
- **European Fellowships**
 - o Open to researchers currently **within and outside Europe** (rules of mobility)
 - o Separate panel 1 : resume research in Europe after a **career break**
Researchers must not have been active in research for at least 12 months
 - o Separate panel 2 : **Return and reintegration** (mobility *into* Europe) for researchers previously **long-term resident** in Europe.
 - o *Researchers shall not have resided or carried out their main activity in the country of their host organisation for more than **3 years in the 5 years** immediately prior to the relevant deadline*
- **Global Fellowships**
 - o **Secondment to a third country** and a mandatory 12 month **return period** to a European host.

Secondment phase in Europe, e.g non-academic sector : three to six months.

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Individual Fellowships (IF)



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Individual Fellowships

- **Call 2014**
 - o Publication date: **12 March 2014**
 - o Deadline(s): **11 september 2014**
 - o Indicative budget: **240.5 M€** from the 2014 budget. Of this amount, **29 M€** are allocated to Global Fellowships.

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RISE : Research and Innovation Staff Exchange

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Research and Innovation Staff Exchange

- **Objective**
 - o to promote **international and inter-sector** collaboration through research and innovation **staff exchanges**
 - o to foster a **shared culture** of research and innovation
- **Scope**
 - o International and inter-sector collaboration and transfer of knowledge
 - o **Joint research and innovation project**
 - o Secondments of staff members for **1-12 months**
 - o *Within Europe: only inter-sector secondments*
 - o No secondments between institutions located outside Europe or within the same MS/AC
- **Expected Impact**
 - o to strengthen the interaction between organisations in the **academic and non-academic sectors**, and **between Europe and third countries**

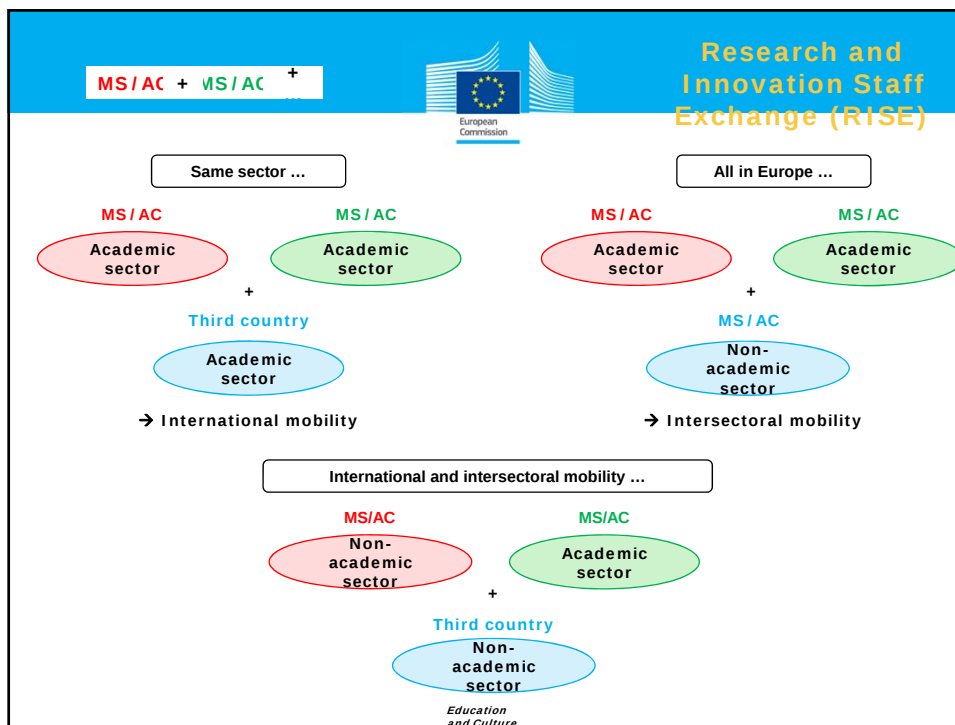
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Research and Innovation Staff Exchange

- **Eligibility conditions**
 - o Participants established in at least **three different countries** of which at least two must be EU MS/AC
 - o If all participants are from the same sector, at least one participant must be from a third country.
 - o Above this minimum, the participation of institutions **from any country** or organisation
 - o Limit : maximum **540 person-months**

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Research and Innovation Staff Exchange

- **Staff members**
 - o **Researchers** (ESR and ER), innovators, **administrative, managerial and technical** staff supporting the research and innovation activities of the project.
 - o They shall be actively engaged in or linked to research and/or innovation activities **for at least six months** at the sending institution prior to the first period of secondment.
 - o Secondments in RISE are not subject to the mobility rules.

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Research and Innovation Staff Exchange

- **Call 2014**
 - o Publication date: **11 December 2013** (launch of Horizon 2020)
 - o Deadline(s): **24 april 2014**
 - o Indicative budget: **70 M€** from the 2014 budget.

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Cofund

*Education
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COFUND

- **Objective**

- o to stimulate regional, national or international programmes to foster excellence in researchers' training, mobility and career development

- **Scope**

- o Co-funding **new or existing regional, national, and international programmes**
- o *Possibilities of synergies with structural funds*
- o Doctoral Programmes (for ESR) and Fellowship Programmes (for ER)
- o Researchers to comply with the **mobility rules** of the MSCA
- o Minimum support for researchers: **3 months**
- o Implemented by a sole beneficiary

- **Expected Impact**

- o to exploit **synergies** between European Union actions and those at regional, national, and international level, and **leverage funding**

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- **Doctoral Programmes**

- o Training follows the EU **Principles on Innovative Doctoral Training**.
- o Collaboration with a wider set of partners, including from the non-academic sector, which may provide hosting or secondment opportunities or training

- **Fellowships Programmes**

- o Regular **selection rounds** following **fixed deadlines** or regular cut-off dates allowing a **fair competition** between applying researchers.
- o The **selections** should be based on **open, widely advertised competition, with transparent international peer review** and selection of candidates on merits.
- o Mobility types may be similar to the ones under Marie Skłodowska-Curie
- o Avoid imitations regarding the researchers' **origin and destination**

Proposed programmes are encouraged to cover all research disciplines

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COFUND

- **Eligibility conditions**
 - o Legal entities established in an EU MS/AC that **fund or manage** doctoral programmes or fellowship programmes.
 - o *International European interest organisations* that fund or manage doctoral programmes or fellowship programmes

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COFUND

- **Call 2014**
 - o Publication date: **10 April 2014**
 - o Deadline(s): **2 october 2014**
 - o Indicative budget: **80 M€** from the 2014 budget. Of this amount, **30 M€** are allocated to Doctoral Programmes.
 - o Contribution has maximum overall of *10 M€ to a single applicant*
 - o Duration: **36 to 60 months**. This duration includes also the time that is needed to select or recruit the researchers.
 - o *Participants having benefited from COFUND under previous calls will explain how the latest proposal relates to and goes beyond the earlier grant and provide evidence for its quality*

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/other/cofund.html>

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Researchers' Night

European Researchers' Night

- **Objective**
 - o to bring researchers closer to the general public
 - o to increase **awareness** of research and innovation activities
- **Scope**
 - o Yearly event, typically on the **last Friday of the month of September**
 - o Focus on the general public, regardless of the level their scientific background
 - o Special focus on pupils and **students**
 - o Promotion of the **European dimension** and **gender** balance in research
 - o Involvement of **researchers funded by Horizon 2020**
- **Expected Impact**
 - o to **raise awareness** of the importance of research careers
 - o in the long term, to encourage young people to embark on scientific careers



European Researchers' Night

- **Call 2014**
 - o Publication date: 11 December 2013 (launch of Horizon 2020)
 - o Deadline(s): [4 march 2014](#)
 - o Indicative budget: **8 M€** from the 2014 budget

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Award criteria

- o **Excellence : 50 %**
- o **Impact : 30 %**
- o **Implementation : 20 %**

2. IF - Marie Skłodowska-Curie Action: Individual Fellowships		
Excellence	Impact	Implementation
Quality, innovative aspects and credibility of the research (including inter/multidisciplinary aspects)	Enhancing research- and innovation-related human resources, skills and working conditions to realise the potential of individuals and to provide new career perspectives	Overall coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources
Clarity and quality of transfer of knowledge/training for the development of researcher in light of the research objectives	Effectiveness of the proposed measures for communication and results dissemination	Appropriateness of the management structures and procedures, including quality management and risk management
Quality of the supervision and the hosting arrangements		Appropriateness of the institutional environment (infrastructure and operational capacity)
Capacity of the researcher to reach or re-enforce a position of professional maturity in research		Competences, experience and complementarity of the participating organisations and institutional commitment
50%	30%	20%
Weighting		
1	2	3
Priority in case of ex aequo		



Further Information

- **Information Day in Brussels** (presentations, videos):
http://ec.europa.eu/research/conferences/2013/energy_infoday/infoday_energy_en.htm
- **Horizon 2020 Helpdesk - Research Enquiry Service:**
<http://ec.europa.eu/research/index.cfm?pg=enquiries>
- **National Contact Points (NCPs):**
http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html
- **Enterprise Europe Network:**
<http://een.ec.europa.eu/about/branches>
- **Participant Portal:**
<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>



Further Information

- **Partner search:**
Use template available. Contact your NCP or
Jean.paul.bonnet@cnrs-dir.fr
- **Topic search:**
http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/search_topics.html



HORIZON 2020

**Thank you
for your attention!**

Find out more:
www.ec.europa/research/horizon2020

