EUROPEAN COMMISSION
Community Research

FP7(EC) Energy Theme

INTRODUCTION TO THE WORK PROGRAMME

Meeting of the FP7 PC-Energy

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European Commission

SEVENTH FRAMEWORK PROGRAMME

Cooperation – Collaborative Research

1. Health
2. Food, agriculture and biotechnology
3. Information and communication technologies
4. Nanosciences, nanotechnologies, materials and new production technologies
5. **Energy** (likely 2.350 M€ for 2007-2013)
6. Environment (including climate change)
7. Transport (including aeronautics)
8. Socio-economic sciences and the humanities
9. Security
10. Space

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The Energy Theme

- **The legal basis for the subjects to be covered is the Cooperation Specific Programme**
- **Nomenclature:**
  - ✓ **Theme (Energy)**
    - **Activity (correspond to the 9 bullet points of the SP)**
      - **Area (intended to be stable throughout FP7, but with flexibility)**
        - » **Topic (subjects open for proposals in the calls only in the year in question – change each year)**
- ☞ **Focus only on calls open in the coming year**

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Energy: 9 Activities

- Hydrogen and fuel cells
- Energy efficiency and savings
- Renewable electricity generation
- CO_2 capture and storage technologies for zero-emission power generation
- Renewable fuel production
- Clean coal technologies
- Renewables for heating and cooling
- Smart energy networks
- Knowledge for energy policy-making

Implementation of calls

- **Common call with two parts – aim to be better synchronised than in FP6:**
  - ✓ **RTD call: budget of 2007 and part of 2008 (R&D focus)**
  - ✓ **TREN call: budget of 2007 only (Demo + short-term R&D)**
- **Collaborative Projects and Coordination and Support Actions (no NoEs in 2007)**
- **Call closure dates will be determined with respect to the availability of the new Evaluation facility – not yet fixed**
- **Single stage submission procedure for both calls**

Future priorities

- **2008-RTD:**
  - ✓ **topics complementary to those in the first call;**
  - ✓ **areas not well covered by the outcome of the first call;**
  - ✓ **additional topics identified as being strategically important by technology platform SRAs;**
  - ✓ **opportunities for Future and Emerging Technologies (FET) and Specific International Cooperation Actions (SICA)**
- **2008-TREN, *inter alia*:**
  - ✓ **"Large-scale Integration of Renewable Energy Supply and Energy Efficiency in Buildings: Eco-Buildings" (Area ENERGY.8.3)**
  - ✓ **"Innovative Integration of Renewable Energy Supply and Energy Efficiency in large Communities: CONCERTO" (Area ENERGY.8.4)**
  - ✓ **Gas networks (in Activity ENERGY.7)**

Evaluation and costs

- **Evaluation criteria:**
  - ✓ **S&T quality (concept, objectives, methodology)**
  - ✓ **Implementation (consortium, management, resources)**
  - ✓ **Impact (in relation to 'expected impact' statements)**
- **Levels of reimbursement:**
  - ✓ **For R&D, EC contribution up to 50% of the total costs**
    - **BUT, may reach 75% for non-profit public bodies, universities, research organisations and SMEs**
  - ✓ **For Demo, EC contribution up to 50% of the total costs**
  - ✓ **For Coordination and Support Actions – up to 100%**
  - ✓ **Some details still under discussion (e.g. flat rates for indirect costs)**

ACTIVITY ENERGY.2

RENEWABLE ELECTRICITY GENERATION

Introduction

- **RTD&D needs to raise substantially the share of renewable electricity in Europe**
- **Research should:**
  - ✓ **Increase overall conversion efficiency**
  - ✓ **Significant cost reduction for RES electricity**
  - ✓ **Enhance process reliability**
  - ✓ **Reduce environmental impact**
- **Emphasis on PV, Wind and Biomass**
- **Realising the full potential for Geoth, Solar Th, Ocean, Hy**

Area and topics

Number of TOPICS	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
RES electricity	14	2	5	14	1
PV	4	1	1	4	1
Biomass	3			3	
Wind	2	1		3	
Geothermal	1				
Concentrated solar power	1		1	4	
Ocean	2		1		
Hydro	1		1		
Cross-cutting			1		

ACTIVITY ENERGY.4

RENEWABLES FOR HEATING AND COOLING

Introduction

- ✗ **RTD&D needed to develop and demonstrate a portfolio of technologies for increasing the potential of heating and cooling from renewable energy sources**
- ✓ **to contribute to sustainable energy**
- ✓ **to achieve substantial cost reductions, increase efficiencies, further reduce environmental impacts and optimise the use of technologies in different regional conditions**

- ✗ **Research should:**
- ✓ **include new systems and components for industrial applications, dedicated space heating and cooling, building integration and energy storage.**

Area and topics

Number of TOPICS	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
RES heating&cooling	0	0	0	7	0
Low/medium temperature solar thermal energy				4	
Biomass					
Geothermal energy				2	
Cross-cutting				1	

ACTIVITY ENERGY.7

SMART ENERGY NETWORKS

Introduction

- **RTD&D needed to increase the efficiency, flexibility, safety, reliability and quality of European energy networks within the context of an integrated European energy market**
  - ✓ **For electricity networks, to transform the current grids in interactive service network removing the obstacles to the large-scale integration of renewable and distributed generation**
  - ✓ **For gas networks, to demonstrate more intelligent and efficient process and systems for transport and distribution**

Introduction (cd.)

- ✗ **Research in electricity should:**
- ✓ **necessitate RTD&D of key enabling technologies on transport , storage, distribution,… including development of new controls and reliability tools for electricity systems.**

Area and topics

Number of TOPICS	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
Smart energy networks	2	2	2	2	0
Development of interactive distribution networks	1	1			
Pan-EU energy networks		1			
Cross-cutting issues and technologies	1		2	2	

ACTIVITY ENERGY.8

ENERGY EFFICIENCY AND SAVINGS

Introduction

- *There is a vast potential for energy savings and improvements in energy efficiency that needs to be harnessed through the optimisation, validation and demonstration of new concepts and technologies for buildings, services and industry*
- *RTD&D incorporates large scale combination of sustainable technologies and dynamic strategies for increased EE, use of RES, polygeneration and integration of demand management systems*
- *RTD&D should:*

  address specific components or technologies. A key aim is the optimisation of the local community energy system, balancing a significant reduction in energy demand with the most affordable and sustainable supply solution

Area and topics

Number of TOPICS	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
Energy efficiency and savings	0	0	0	4	3
Efficient energy use in manufacturing				2	
High efficiency polygeneration				1	
Eco-buildings					
Concerto					
Civitas Plus				1	
Socio-economic research and innovation					1
Promotion and dissemination					2