



Energy Theme

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Staying informed

Towards Seventh Framework Programme

http://ec.europa.eu/research/future/index_en.cfm

<http://ec.europa.eu/research/fp7>



Research Policy, Energy Research

http://ec.europa.eu/research/energy/index_en.htm

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Energy Policy, Energy Research

Green Paper "A European Strategy for Sustainable, Competitive and Secure Energy"

http://ec.europa.eu/energy/index_en.html

http://ec.europa.eu/energy/green-paper-energy/index_en.htm



Competitiveness and Innovation Framework Programme

Intelligent Energy-Europe

http://ec.europa.eu/enterprise/enterprise_policy/cip/index_en.htm

http://ec.europa.eu/energy/intelligent/index_en.html



Intelligent Energy





Cooperation

Themes

1. Health
2. Food, agriculture and biotechnology
3. Information and communication technologies
4. Nanosciences, nanotechnologies, materials and new production technologies
5. Energy (2.3 B€)
6. Environment (including climate change)
7. Transport (including aeronautics)
8. Socio-economic sciences and the humanities
9. Security and space



Energy Theme Objective

Adapting the current fossil-fuel based energy system into a more sustainable one, less dependent of imported fuels, based on a diverse mix of energy sources and carriers, with particular attention being paid to lower and non-CO₂ emitting energy technologies, combined with enhanced energy efficiency and conservation, to address the pressing challenges of security of supply and climate change, whilst increasing the competitiveness of Europe's industries.



Energy Theme

Implemented jointly
by DG Research and DG Energy and Transport

Hydrogen and fuel cells

**CO2 capture and storage
technologies for zero
emission power generation**

**Renewable
electricity
generation**

**Clean coal
technologies**

**Renewable
fuel production**

**Smart energy
networks**

**Renewables
for heating and cooling**

**Energy savings
and energy efficiency**

Knowledge for energy policy making



Energy theme

- × **One Work Programme for the entire Cooperation Programme:**
 - × **New for FP7: Annual Work Programmes**
 - × **The legal basis for the subjects to be covered is the Cooperation Specific Programme**
 - × **Nomenclature:**
 - ➔ **Theme (Energy)**
 - ➔ **Activity (correspond to the nine 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 to be published in the coming year**



Context

- × **Horizontal policy objectives**
- × **Cross-cutting and cross thematic approaches**
- × **SMEs – encouraging their participation**
- × **International cooperation – opening to third countries and specific actions (SICA)**
- × **Future and Emerging Technologies – now within the Energy theme**
- × **Coordination of non-Community research programmes (ERA-NET) – now within the Energy themes**
- × **Integration of socio-economic dimension and societal concerns, gender and ethical issues**
- × **Dissemination actions**
- × **Other Activities, notably Hydrogen / Fuel Cells Joint Technology Initiative**



Content of 2007 calls

- × **For each topic: content/scope; funding scheme; expected impact; any other pertinent information; call ID**
- × **Where appropriate, an indication of expected project size and the number of projects that might be funded**
- × **IMPORTANT: competition within and across all topics – not all topics might be funded, depending upon quality of proposals**
- × **Expected impact – will be used during the evaluation, as described at area/topic level**



Implementation of calls

- × **Common call with two parts:**
 - ➔ **RTD call: budget of 2007 and part of 2008 (RTD focus)**
 - ➔ **TREN call: budget of 2007 only (Demonstration and RTD focus)**
- × **Collaborative Projects (small-medium and large) and Coordination and Support Actions**
- × **Single stage submission procedure for both parts**



Future priorities

× **2008-RTD:**

- ✓ Important topics complementary to those in the first call;
- ✓ Areas not well covered by the outcome of the first call;
- ✓ Opportunities for Future and Emerging Technologies (FET), ERA-NETs 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 grants

× **Evaluation criteria:**

- ✓ S&T quality (concept, objectives, methodology)
- ✓ Implementation (consortium, management, resources)
- ✓ Impact (in relation to 'expected impact' statements)

× **Levels of reimbursement:**

- ✓ For RTD, EC contribution up to 50% of the total costs
 - ✓ BUT, may reach 75% for non-profit public bodies, universities, research organisations and SMEs
- ✓ For Demonstrations 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)



Hydrogen and Fuel Cells

- × **Drafted on the assumption that the Commission will propose to the Council a Joint Technology Initiative (JTI) on hydrogen and fuel cells (Note: a proposed SA grant agreement)**
- × **Industrial research, demonstration and cross-cutting activities will be implemented through the future JTI**

- ✓ **WP for 2007 covers fundamental research and pre-normative research**
- ✓ **Implementation Plan of the Hydrogen and Fuel Cells Technology Platform**
- ✓ **International cooperation with IPHE (International Partnership for Hydrogen Economy) countries is encouraged**



Hydrogen and Fuel Cells

Areas

- × Fuels cells
- × Hydrogen supply
- × Cross-cutting issues and horizontal activities

Call	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
First call topics	8	0	0	0	0



Renewable Electricity Generation

- × **Raising the share of renewable electricity in Europe**
- × **Objectives:**
 - ✓ Significantly reduce costs
 - ✓ Increase overall conversion efficiency
 - ✓ Enhance process reliability
 - ✓ Reduce environmental impact
- × **Emphasis on PV, Wind and Biomass**
- ✓ **Links with PV, Wind and SmartGrids Technology Platforms**



Renewable Electricity Production

Areas

- × **Photovoltaics**
- × **Biomass**
- × **Wind**
- × **Geothermal**
- × **Concentrated solar thermal**
- × **Ocean**
- × **Hydro**
- × **Cross-cutting issues**

Call	RTD			TREN	
Funding scheme	S-M CP	Large CP	CSA	CP	CSA
First call topics	14	2	5	14	1



Renewable Fuel Production

- × **Raising the share of renewable fuels**
- × **Objectives:**
 - ✓ To deliver ‘source to user’ carbon benefits
 - ✓ To improve conversion and energy efficiency, enhance technology integration and use of feedstock
- × **Emphasis on new types of biofuels, integration of production paths and biorefineries**

- ✓ **Links with Biofuels, Forest-based Sector, Sustainable Chemistry and Hydrogen Technology Platforms**



Renewable Fuel Production

Areas

- × **First generation biofuels**
- × **Second generation biofuels**
- × **Biorefinery**
- × **Biofuels from energy crops**
- × **Alternative routes to renewable fuel production**
- × **Biofuels use in transport**
- × **Cross-cutting issues**

Call	RTD			TREN	
Funding scheme	S-M CP	Large CP	CSA	CP	CSA
First call topics	6	1	4	5	2



Renewables for Heating and Cooling

- × **To expand the potential for renewable heating and cooling in different regional conditions**
- × **Industrial applications, dedicated and district heating and cooling, building integration, heat storage**
- × **New markets, novel equipment**
- ✓ **Advice from Solar Thermal Technology Platform**



Renewables for Heating and Cooling

Areas

- × **Low/medium temperature solar thermal energy**
- × **Biomass**
- × **Geothermal energy**
- × **Cross-cutting issues**

Call	RTD			TREN	
Funding scheme	S-M CP	Large CP	CSA	CP	CSA
First call topics	0	0	0	7	0



CO₂ Capture and Storage Clean Coal Technologies

- × **Technologies for Zero Emission Power Generation**
- × **Reduced environmental impact for fossil fuel-based power plants**
- × **Large-scale demonstrations of integrated, cost-efficient solutions in the near future**
- × **Sustainable coal concept**

- ✓ **Activites 5, 6 and 5&6 (Cross cutting actions)**
- ✓ **Input from the Technology Platform for Zero Emission (ZEP)**
- ✓ **Complementarity with the Research Fund for Coal and Steel**
- ✓ **Continuity with on-going FP6 projects (CO₂ activity)**
- ✓ **Continued involvement in the CSLF (Carbon Sequestration Leadership Forum)**



CO₂ Capture and Storage

Areas

- × CO₂ capture
- × CO₂ storage

Call	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
Funding scheme					
First call topics	3	2	0	0	0



Clean coal technologies

Areas

- × **Conversion technologies for zero emission power generation**
- × **Coal-based polygeneration**

Call	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
Funding scheme					
First call topics	0	0	0	2	0



Cross-cutting actions 5&6

Areas

- × **Power generation technologies for integrated zero emission solutions**
- × **Cross-cutting and regulatory issues**

Call	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
Funding scheme					
First call topics	0	0	3	3	1



Smart Energy Networks

- × **Increasing the efficiency, flexibility, safety, reliability and quality of European energy networks within the context of an integrated European energy market**
 - ✓ Electricity networks
 - ✓ interactive service network
 - ✓ large-scale integration of renewables and distributed generation
 - ✓ Gas networks - to be covered in the next call
- ✓ **Strategic research agenda of the SmartGrids technology platform**
- ✓ **Advice from Coordination Actions**



Smart Energy Networks

Areas

- × **Development of interactive distribution energy networks**
- × **Pan-european energy networks**
- × **Cross-cutting issues and technologies**

Call	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
Funding scheme					
First call topics	2	2	2	2	0



Energy Efficiency and Savings

- × **Optimisation, validation and demonstration of new concepts and technologies for transport, buildings, services and industry**
- × **Renewable energy Sources, polygeneration, demand management**
- × **Large scale demonstrations supported by research for development of technologies and component**

- ✓ **Aims to facilitate the implementation of buildings, cogeneration, eco-design and efficiency and energy savings directives.**



Energy Efficiency and Savings

Areas

- × **Efficient energy use in the manufacturing industry**
- × **High efficiency polygeneration**
- × **Eco-buildings**
- × **Concerto**
- × **Civitas Plus**
- × **Socio-economic research and innovation**
- × **Thematic promotion and dissemination**

Call	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
Funding scheme					
First call topics	0	0	0	4	3



Knowledge for Energy Policy Making

- × **Development of tools, methods and models to assess the main economic and social issues related to energy**
- × **Impact of energy and energy-related policies on:**
 - ✓ Security of supply
 - ✓ Environmental protection
 - ✓ Competitiveness of EU Industry
 - ✓ Internal market
- × **Impact of technological progress on EU policies**



Knowledge for Energy Policy Making

Areas

- × Knowledge tools for energy-related policy making
- × Scientific support to policy

Call	RTD			TREN	
	S-M CP	Large CP	CSA	CP	CSA
Funding scheme					
First call topics	3	0	1	0	3



The first calls are planned for 22 December 2006

Calls for proposals

<http://cordis.europa.eu/en/home.html>

Information days

http://ec.europa.eu/research/energy/gp/gp_events/article_1567_en.htm