



New terms in FP7

- 4 Specific Programmes in FP7- Only one in FP6
 - e.g. Cooperation, Ideas, People, Capacities
- Theme
 - e.g. Energy, Transport
- Activity
 - e.g. Renewable electricity generation or Hydrogen and Fuel Cells
- Area
 - e.g. PV, Wind, Biofuels
- Topic
 - project-level subjects in calls for proposals – change each call
- Funding Scheme
 - was Instrument in FP6
 - e.g. Collaborative Project, Network of Excellence

EUROPEAN COMMISSION – DG Research – 2006 **2**



FP7 Specific Programmes

Cooperation – Collaborative research

Ideas – Frontier Research

People – Marie Curie Actions

Capacities – Research Capacity

+

JRC (non-nuclear)

JRC (nuclear)

Euratom



Cooperation specific programme – Budget

I. Cooperation	Budget M€
1. Health	6100
2. Biotechnology, food and agriculture	1935
3. Information society	9050
4. Nanotechnologies, materials and production	3475
5. Energy	2350
6. Environment	1890
7. Transport	4160
8. Socio-economic research	623
9. Space	1430
10. Security	1400
Total	32413 M€



Cooperation specific programme – Energy theme - ten activities

Renewable electricity
generation **DG RTD & TREN**

Energy savings and energy
efficiency (incl CONCERTO &
CIVITAS-Plus) **DG TREN**

Renewable fuel production
DG RTD & TREN

CO₂ capture and storage for
zero emission power generation
DG RTD

Renewables for heating and
cooling **DG TREN**

Clean coal technologies
DG TREN

Smart energy networks
DG RTD & TREN

Hydrogen and fuel cells
DG RTD & TREN

Knowledge for energy policy making
DG RTD & TREN

Horizontal programme actions **DG RTD & TREN**



European Technology Platforms

- A Technology Platform unites all relevant stakeholders in addressing a particular technological challenge
- Bottom-Up Approach with Industry in Lead
- EU Role: Facilitating and Guiding but not Leading or Owning
- Platforms define a common vision which includes a strategic research agenda and deployment strategy
- Taken into Account in Thematic Priorities of FP7
- Some potential “Joint Technology Initiatives”



Technology Platforms: Key Success Factors

Industry-driven, competitiveness-focussed process

- Wide stakeholder involvement
- Bottom-up approach
- Private / public collaboration
- Operational focus from early stage
- Coherence in the RTD investments that are made at different levels across Europe
- Coherent approach from initial research through to downstream product and service development
- Education and training programme
- Communication / dissemination actions



Energy Technology Platforms

- **Hydrogen and fuel cells**
 - Possible JTI
- **Photovoltaics**
- **Biofuels**
- **SmartGrids**
- **Zero-emission fossil fuel plants**
- **Solar Thermal (TREN)**
- **Wind (TREN)**



Joint Technology Initiatives

- 'The Community may set up joint undertakings or any other structure necessary for the efficient execution of Community RTD programmes' (Art. 171)
- Six Fields Envisaged at this Stage
 - Including **hydrogen and fuel cells**
- Other Fields Possible Subsequently



EUROPEAN
COMMISSION

Community research

FP7

ENERGY
First Calls



Description of Topics in First Calls

- Detailed content and scope
- Funding scheme is specified
 - Collaborative projects
 - DG RTD: Small-medium or large
 - DG TREN: not specified
 - Coordination and Support Actions
 - DG RTD: CA or SA specified
 - DG TREN: always SA
 - No Networks of Excellence in First Calls
- Expected impact
 - will be part of evaluation criteria
- Indicative number of projects per topic



Indicative project funding in First Calls

- Collaborative projects
 - Small-medium in DG RTD Call: typically 1-3 M€
 - Large in DG RTD Call: typically 5-8 M€
 - In DG TREN Call: not specified
- Coordination and Support Action
 - CA type: typically 1-2 M€
 - SA type: Typically <1 M€
- NB: **Eligibility Criterion** in DG RTD Call only:
 - Large Collaborative Project > 4 M€
 - Small-Medium Collaborative Project < 4 M€



Hydrogen and Fuel Cells RTD Call

Topic code	Title	Funding scheme
1.1.1	Basic research for materials and processes for Polymer Electrolyte Membrane Fuel Cells (PEMFC) IHPE	Small collaborative
1.1.2	Basic research on materials and processes for High Temperature Fuel Cells (SOFC & MCFC) IHPE	Small collaborative
1.1.3	Innovative concepts for fuel cells (Future and Emerging Technologies topic) SMEs strongly encouraged	Small collaborative
1.2.1	New materials and processes for advanced electrolyzers IHPE	Small collaborative
1.2.2	New materials and processes for advanced multi-fuel processors IHPE	Small collaborative
1.2.3	Advanced Materials for High Temperature thermo-chemical processes (US, JPN strongly recommended)	Small collaborative
1.2.4	Novel nanostructured materials for hydrogen storage IHPE strongly encouraged	Small collaborative
1.3.1	Pre-normative research to support EU and international regulatory activities (IHPE should be included)	Small collaborative



Renewable Electricity Generation RTD Call

Topic code	Title	Funding scheme
2.1.1	Intermediate band (IB) materials and cells for PV	Small collaborative
2.1.2	Dye-sensitised PV solar cells (SMEs specially encouraged)	Small collaborative
2.1.3	Concentrating photovoltaics: cells, optics, modules (SMEs specially encouraged)	Large collaborative
2.1.4	Research for binary thin-film photovoltaics	Small collaborative
2.1.5	Environmental aspects of photovoltaics	Support action
2.2.1	Advanced gas cleaning technologies for biomass (SMEs important)	Small collaborative
2.2.2	Innovative technologies for efficient electricity production in biomass-fired IGCC (SMEs important)	Small collaborative
2.2.3	New and improved slagging and corrosion control technologies for large-scale biomass co-firing processes (SMEs in core group, EECA encouraged)	Small collaborative



Renewable Electricity Generation RTD Call

Topic code	Title	Funding scheme
2.3.1	Development of components and systems for turbines and wind farms (SMEs especially encouraged)	Large collaborative
2.3.2	External conditions, resource assessment and forecasting for wind energy (IN, CH encouraged)	Small collaborative
2.3.3	Testing, standards and certification for wind energy systems	Small collaborative
2.4.1	Understanding and Mitigation of Induced Seismicity Associated with Geothermal Field Development	Small collaborative
2.5.1	Key components for CSP (SMEs important)	Small collaborative
2.5.2	Using CSP for water desalination (Specific International Cooperation Action) Strong involvement Mediterranean necessary	Support action



Renewable Electricity Generation RTD Call

Topic code	Title	Funding scheme
2.6.1	New components and concepts for ocean energy converters (SMEs in core group)	Small collaborative
2.6.2	A strategy for ocean energy (SMEs in core group)	Coordination action
2.6.3	Pre-normative research for ocean energy (SMEs important)	Small collaborative
2.7.1	New or improved hydro components and concepts (SMEs especially encouraged)	Small collaborative
2.7.2	A strategy for hydropower (SMEs especially encouraged)	Coordination action
2.8.1	Solar irradiation resource assessment and forecasting (Mediterranean encouraged)	Support action



Renewable Fuel Production RTD Call

Topic code	Title	Funding scheme
3.2.1	Pre-treatment of lignocellulosic biomass for ethanol production (SMEs core group)	Small collaborative
3.2.2	New and advanced technologies for hydrolysis and/or fermentation of lignocellulosic biomass (SMEs core group)	Small collaborative
3.2.3	High purity syngas cleaning technologies for biofuels (SMEs important)	Small collaborative
3.2.4	Biological conversion of syngas into liquid biofuels (SMEs core group)	Small collaborative
3.2.7	Identifying research needs and technological opportunities for biofuels production in Latin America (Specific International Cooperation Action) (S&T agreements preferred, LA stakeholders leading role)	Support action



Renewable Fuel Production RTD Call

Topic code	Title	Funding scheme
3.3.1	Forest-based biorefinery (SMEs especially encouraged)	Large collaborative
3.3.2	New uses for glycerine in biorefineries	Small collaborative
3.3.3	Developing biorefinery concepts (SMEs important)	Support action
3.5.1	Fuel production using solar radiation (Future and Emerging Technologies topic)	Small collaborative
3.7.1	Harmonisation of biomass resource assessment (EEAC & Western Balkan especially encouraged)	Coordination action
3.7.2	Marine biomass	Support action



CO2 Capture and Storage RTD Call

Topic code	Title	Funding scheme
5.1.1	Advanced pre-combustion capture techniques	Large collaborative
5.1.2	Fluid bed based capture techniques	Small collaborative
5.1.3	Advanced separation techniques (SMEs especially encouraged)	Small collaborative
5.1.4	Separation techniques in gaseous fuel power generation	Small collaborative
5.2.1	Development of a suitable methodology for the qualification of deep saline aquifers for CO2 storage (deep saline aquifer required, CSLF encouraged)	Large collaborative



Cross-cutting actions CCS - Clean Coal RTD Call

Topic code	Title	Funding scheme
5+6.1.1	Feasibility study and development of an integrated solution for a large scale zero emission fossil fuel power plant (CN envisaged)	Large collaborative
5+6.2.1	Support to regulatory activities for CO2 capture and storage (SMEs particularly encouraged, CSLF especially recommended)	Support action
5+6.2.3	Socio-economic assessment of pathways for the deployment of CCS in Europe (SMEs particularly encouraged)	Support action
5+6.2.6	Support to international collaboration in zero emission power generation (Specific International Cooperation Action) (Balance between CN and EU partners)	Support action



Smart Energy Networks RTD Call

Topic code	Title	Funding scheme
7.1.1	Develop and validate innovative control strategies and network architectures for active networks with large-scale penetration of renewables sources and distributed generation	Large collaborative
7.1.2	Develop new tools to simulate smart distribution networks (CN, JPN, US encouraged)	Small collaborative
7.2.1	Simulation and state estimation of smart electricity transmission networks (TSOs essential, grid connected neighbouring countries particularly encouraged)	Large collaborative
7.3.1	Electricity network assets management	Coordination action
7.3.2	The value of innovative storage solutions for smart networks (INCO encouraged)	Small collaborative



Knowledge for Energy Policy Making RTD Call

Topic code	Title	Funding scheme
9.1.1	Energy security of supply	Small collaborative
9.1.2	Energy behavioural changes	Small collaborative
9.1.3	Energy technological foresight and scenario development	Small collaborative
9.1.4	Energy technology transfer (Specific International Cooperation Action) (Min. 4 entities, 2 from MS/AC, others from INCO countries)	Small collaborative (SICA)
9.2.1	Energy foresight network	Coordination action



Horizontal Programme Actions RTD Call

Topic code	Title	Funding scheme
10.0.2	Trans-national co-operation among NCPs (Only officially appointed NCPs, 3rd countries when mutual benefits)	Coordination action
10.0.4	Development of a methodology for monitoring the expected impacts of FP7 Energy projects	Support action



ERA NET Call

Topic code	Title	Funding scheme
7.3.3	Stepping up the cooperation of national and regional research activities on Smart Energy Networks	Support action
10.0.1	Optimise EU action through a better coordination of the international cooperation initiatives of the EU and Member States	Support action
10.0.3	Fostering coordination between national and European energy RTD strategies and programmes	Support action



Next Calls

- 2008-RTD:
 - Important topics complementary to those in the first call;
 - Areas not well covered by the outcome of the first call;
 - 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)



Other programmes where Energy proposals can be submitted

- **Transport, Nanotech, Biotech Themes**
- **CIP – Intelligent Energy for Europe**
- **RFCS Coal and Steel Programme**
 - Clean Coal, Carbon Capture and Storage
- **IDEAS Specific Programme**
 - European Research Council
 - Frontier research
- **PEOPLE Specific programme**
 - Marie Curie Fellowships and Networks
- **CAPACITIES Specific programme**
 - SMEs
 - Infrastructures
 - ERA NET



Staying Informed

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
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



Thank you
for your
attention!

Directorate-General for Research
ENERGY