



EUROPEAN  
COMMISSION

Community research

**FP7 –  
Energy**  
Priorities of  
DG-TREN

Auftaktkonferenz  
zum  
7. EU-Rahmenprogramm für FTD  
Landverkehr und Energie  
18. Jänner 2007, Wien

**Doris Schröcker**  
EC DG TREN G3  
« Logistics,  
Innovation, Intelligent  
Transport and Co-  
modality »



## Energy – key challenges

- Global energy demand predicted to increase by 60% over the next 30 years
- Finite nature of conventional oil and natural gas reserves
- EU energy dependency could rise from 50% to 70% by 2030; volatility of oil prices and geopolitical instability
- Over 90% of EU CO<sub>2</sub> emissions causing climate change are attributable to energy
- Global energy investments of €12 trillion required up to 2030 – huge market potential, but EU under severe threat from global competitors



# Energy policy

DOCUMENT	Energy policy
WHITE PAPER ON <b>RENEWABLE ENERGY SOURCES (RES)</b> (1997)	Double the share of renewable energy in <b>national gross energy consumption from 6% to 12%</b> by 2010
GREEN PAPER ON <b>SECURITY OF ENERGY SUPPLY</b> (2000)	Outlined EU <b>long-term energy strategy</b> to rebalance its supply and demand policy.
GREEN PAPER ON <b>ENERGY EFFICIENCY: "Doing more for less"</b> (2005)	Save <b>20% of energy consumption by 2020</b> (i.e. <b>€60 billion</b> of EU energy bill) in a cost effective way
GREEN PAPER ON <b>A EUROPEAN STRATEGY FOR SUSTAINABLE, COMPETITIVE AND SECURE ENERGY</b> (2006)  <a href="http://ec.europa.eu/energy/green-paper-energy/index_en.htm">http://ec.europa.eu/energy/green-paper-energy/index_en.htm</a>	<i>Priority areas for possible common action:</i> Coherent external energy policy Towards a fully competitive internal energy market Solidarity among Member States Diverse, efficient & sustainable energy mix Integrated approach to tackling climate change <b>Energy technology &amp; innovation :strategic approach</b>
<b>ENERGY FOR CHANGING THE WORLD</b> <a href="http://ec.europa.eu/energy/energy_policy/index_en.htm">http://ec.europa.eu/energy/energy_policy/index_en.htm</a>	On 10 January 2007, the European Commission adopted new proposals for an ambitious energy policy for Europe.  The package comprises 9 policy documents
<b>EUROPEAN STRATEGIC ENERGY TECHNOLOGY PLAN (SET-PLAN)</b> <i>To be expected by the end of 2007</i>	The strategic element of the SET-Plan will be to identify those technologies for which it is essential that the European Union as a whole finds a more powerful way of mobilising resources in ambitious result-oriented actions to accelerate their pathway to the market

DG TREN Website [http://ec.europa.eu/energy/index\\_en.html](http://ec.europa.eu/energy/index_en.html)



## Cooperation specific programme – Energy theme - ten activities

- Renewable electricity generation **DG RTD & TREN**
- Renewable fuel production **DG RTD & TREN**
- Renewables for heating and cooling **DG TREN**
- Smart energy networks **DG RTD & TREN**
- Energy savings and energy efficiency (incl. CONCERTO & CIVITAS-Plus) **DG TREN**
- CO<sub>2</sub> capture and storage for zero emission power generation **DG RTD**
- Clean coal technologies **DG TREN**
- Hydrogen and fuel cells **DG RTD & TREN**
- Knowledge for energy policy making **DG RTD & TREN**
- Horizontal programme actions **DG RTD & TREN**



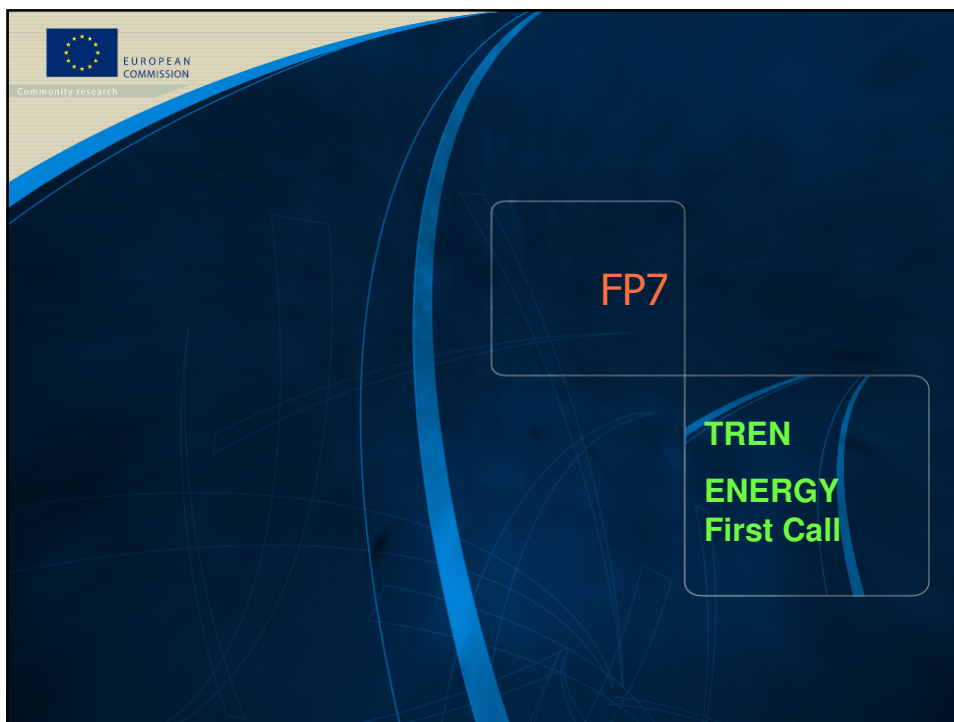
## Work programme

- Work Programmes updated annually
- Joint RTD/TREN-Energy work programme
- Provide detail of topics, expected impact and details of the funding scheme
- Contain the call 'fiche' – the official announcement of the call
- Contain information on potential future topics, as basis of further consultation
- One work programme/Specific Programme, with annexes on ICPC countries, eligibility and evaluation criteria, forms of the grant (and general activities)



## TREN specifics in FP7

- **Focus on demonstration activities in many cases**  
In FP7 it all depends on the topic description. If a “focus on demonstration” is indicated there, a high demonstration share is expected
- **No differentiation between small-medium and large CP**  
See details in topic descriptions
- **Differentiation between support and coordination actions**  
Different application forms, see topic description
- **No NoEs planned**
- **Strong competition amongst proposals (topics?) expected**
- **Further specific aspects defined in WP/topic descriptions**  
scope, concept, funding scheme, expected impact, international cooperation, etc.



EUROPEAN COMMISSION

SEVENTH FRAMEWORK PROGRAMME

## DG TREN Call

**Call identifier:**  
***FP7-ENERGY-2007-2-TREN***

**Info – documents – forms – link to helpdesk:**  
***[http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=UserSite.CooperationDetailsCallPage&call\\_id=5](http://cordis.europa.eu/fp7/dc/index.cfm?fuseaction=UserSite.CooperationDetailsCallPage&call_id=5)***

**Deadline: 3 May 2007**

**Indicative budget: 128 M€**

**Additional guidance document on CIVITAS plus!**








EUROPEAN COMMISSION – DG Research/TREN – 2007

8

The image is a slide with a white background and a dark blue border. In the top left corner, there is the European Union flag and the text 'EUROPEAN COMMISSION' and 'SEVENTH FRAMEWORK PROGRAMME'. The main content is centered and includes the title 'DG TREN Call' in bold black text. Below the title, there are four lines of text: 'Call identifier:' followed by 'FP7-ENERGY-2007-2-TREN' in orange italics; 'Info – documents – forms – link to helpdesk:' followed by a URL in orange italics; 'Deadline: 3 May 2007' in bold black text; and 'Indicative budget: 128 M€' in bold black text. At the bottom, there is 'Additional guidance document on CIVITAS plus!' in bold black text. In the bottom right corner, there is the number '8' in green. At the very bottom, there is the text 'EUROPEAN COMMISSION – DG Research/TREN – 2007' in small black text.



## Renewable energy sources supported in FP7

	<b>Biomass</b>
	<b>Hydro</b>
	<b>Geothermal</b>
	<b>Wind</b>
	<b>Photovoltaics</b>
	<b>Solar thermal</b>
	<b>Ocean</b>



## Renewable electricity generation

Technologies to increase overall conversion efficiency, cost efficiency and reliability, driving down the cost of electricity production from indigenous renewable energy sources, including biodegradable waste, and the development and the demonstration of technologies suited to different regional conditions.

Goal for 2010

21% of green electricity



## Renewable Electricity Generation TREN Call

Topic code	Title	Funding scheme
<b>Photovoltaics</b>		<i>Pietro.Menna@ec.europa.eu</i>
2.1.7	Secure, reliable and affordable supply of feedstock for the PV industry	Coordination and Support Action (support type)
2.1.8	Improved production equipment and cost reduction	Collaborative project
2.1.9	Innovative/improved PV manufacturing processes	Collaborative project
2.1.10	Development and demonstration of standardized building components	Collaborative project
2.1.11	Multiple benefits of PV systems	Collaborative project



## Renewable Electricity Generation TREN Call

Topic code	Title	Funding scheme
<b>Biomass</b>		<i>Andreas.Heinz@ec.europa.eu</i>
2.2.4	Large-scale co-firing	Collaborative project
2.2.5	Novel solid biofuels for electricity generation	Collaborative project
2.2.6	High-efficiency medium-to-large scale electricity generation from biomass	Collaborative project
<b>Wind</b>		<i>Roberto.Gambi@ec.europa.eu</i>
2.3.4	Demonstration of large scale systems for on- and off-shore wind farms	Collaborative project
2.3.5	Integration of wind power into the European power system	Collaborative project
2.3.6	Wind mapping for offshore applications	Collaborative project



## Renewable Electricity Generation TREN Call

Topic code	Title	Funding scheme
<b>Concentrated solar power</b>		<i>Pietro.Menna@ec.europa.eu</i>
2.5.3	Low cost, high efficiency daily storage systems	Collaborative project
2.5.4	Improve the environmental profile of the CSP installations	Collaborative project
2.5.5	CSP: Innovative heat transfer concepts	Collaborative project
2.5.6	Intermediate size, lower concentration ratio CSP systems	Collaborative project



## Renewable fuel production

Integrated fuel production systems and conversion technologies: to develop and drive down the unit cost of solid, liquid and gaseous (including hydrogen) fuels produced from renewable energy sources including biodegradable waste, aiming at the cost-effective production, storage and use of carbon-neutral fuels, in particular biofuels for transport and electricity generation.

Goal for 2010

5.75% of alternative transport fuel





## Renewable Fuel Production TREN Call

Topic code	Title	Funding scheme
<b>1<sup>st</sup> generation fuel from biomass</b>		<i>Kyriakos.Maniatis@ec.europa.eu</i>
3.1.1	Bioethanol from sugar and starch crops	Collaborative project
3.1.2	Biodiesel from oil crops, animal tallow and used cooking oils	Collaborative project
<b>2<sup>nd</sup> generation fuel from biomass</b>		<i>Kyriakos.Maniatis@ec.europa.eu</i>
3.2.5	Synthetic biofuels via gasification	Collaborative project
3.2.7	Hydrogenation of oils and fats	Collaborative project



## Renewable Fuel Production TREN Call

Topic code	Title	Funding scheme
<b>Biofuel use in transport</b>		<i>Antonio.Tricas-Aizpun@ec.europa.eu</i>
3.6.1	Demonstration of liquid and gaseous biofuels use in transport/ vehicles	Collaborative project
<b>Cross cutting issues</b>		<i>Kyriakos.Maniatis@ec.europa.eu</i> <i>Jose.Fluxa@ec.europa.eu</i>
3.7.3	Standardisation and sustainability issues	Coordination and Support Action (support type)
3.7.4	Promotion and dissemination	Coordination and Support Action (support type)





## Renewables for heating and cooling

Technologies to increase efficiencies and drive down the costs of active and passive heating and cooling from renewable energy sources, ensuring their use in different regional conditions (e.g. district/dedicated space heating and cooling, building integration, energy storage)

Overall goal for 2010  
12% of renewable energy sources in the energy mix



## Renewables for Heating and Cooling TREN Call

Topic code	Title	Funding scheme
<b>Low/medium temperature solar thermal energy</b>		<i>Jose.Riesgo@ec.europa.eu</i>
4.1.1	Collector design and components	Collaborative project
4.1.2	Small scale thermal cooling units	Collaborative project
4.1.3	Small distributed systems for seawater desalination	Collaborative project
4.1.4	Large scale systems for industrial heat processes	Collaborative project
<b>Geothermal energy</b>		<i>Elisa.Boelman@ec.europa.eu</i>
4.3.1	Improved ground source heat pumps	Collaborative project
4.3.2	Improved underground systems	Collaborative project



## Renewables for Heating and Cooling TREN Call

Topic code	Title	Funding scheme
<b>Cross cutting issues</b>		<i>Jose.Riesgo@ec.europa.eu</i>
4.4.1	Advanced compact storage systems	Collaborative project



## Clean coal technologies

Coal share of World Primary Energy  
~25% now, ~20-25% in 2030 (IEA scenarios)

Development and demonstration of clean coal & other solid fuel conversion technologies to:  
significantly increase plant efficiency and reliability  
minimise pollutant emissions  
reduce overall costs  
also produce secondary energy carriers (including H<sub>2</sub>) and liquid or gaseous fuels

Complementary to CO<sub>2</sub> capture and storage technologies.



## Clean Coal Technologies TREN Call

Topic code	Title	Funding scheme
<b>Conversion technologies for zero emission power generation</b>		<i>Thomas.Schneider@ec.europa.eu</i> <i>Kai.Tullius@ec.europa.eu</i>
6.1.1	Solid fuel gasification development – improvement of gasifier technologies	Collaborative project
<b>Coal based poly-generation</b>		<i>Thomas.Schneider@ec.europa.eu</i> <i>Kai.Tullius@ec.europa.eu</i>
6.2.1	Poly-generation concepts for coal fired power plants	Collaborative project



## Cross-cutting actions CCS – Clean Coal TREN Call

Topic code	Title	Funding scheme
<b>Cross cutting and regulatory issues</b>		<i>Thomas.Schneider@ec.europa.eu</i> <i>Kai.Tullius@ec.europa.eu</i>
5+6.2.2	Support to regulatory activities for zero emission power generation	Support Action (support type)
5+6.2.4	Initiating a CO2 value chain in the energy sector using early opportunities	Collaborative project
5+6.2.5	Extending the value chain for GHG emissions other than CO2 associated with coal production and use	Collaborative project



## Smart energy networks

To increase the efficiency, flexibility, safety and reliability of the more integrated European electricity and gas networks

### Electricity:

Interactive customers/operators network

Large scale integration of RES

Distributed generation: fuel cells, micro-turbines

Innovative ICT solutions, RES storage, power electronics & High Temperature Superconducting devices

### Gas:

Intelligent and efficient gas transport and distribution

Integration of RES technologies



## Smart Energy Networks TREN Call

Topic code	Title	Funding scheme
<b>Cross cutting issues</b>		<i>Wolfgang.Kerner@ec.europa.eu</i> <i>Mark.Vangampelaere@ec.europa.eu</i>
7.3.4	Analysis and scenarios of energy infrastructure evolution	Collaborative project
7.3.5	More efficient integration of renewable energy into future infrastructures	Collaborative project



## Energy efficiency and savings

Vast potential to reduce energy demand at low cost through energy savings & improved energy efficiency

New concepts and technologies for optimising community energy systems for buildings, transport, services and industry

Eco-buildings, minimum climate impact buildings

Renewable energy co-generation and poly-generation

Integrated demand management in cities & communities

Large-scale demonstration plus innovative R&D on specific technologies



## Energy Efficiency and Savings TREN Call

Topic code	Title	Funding scheme
<b>Efficient energy use in the manufacturing industry</b>		<i>Kyriakos.Maniatis@ec.europa.eu</i>
8.1.1	Manufacturing industry: wastes and waste heat recovery and transfer	Collaborative project
8.1.2	Manufacturing industry: SMEs energy innovation	Collaborative project
8.1.3	Manufacturing industry: Innovative energy efficient manufacturing processes	Collaborative project
<b>High-efficiency poly-generation</b>		<i>Kyriakos.Maniatis@ec.europa.eu</i>
8.2.1	High efficiency poly-generation - applications with renewable energies	Collaborative project



## Energy Efficiency and Savings

Topic code	Title	Funding scheme
<b>CIVITAS Plus</b>		<i>Maria.Alfayate@ec.europa.eu</i>
8.5.1	Testing innovative strategies for clean urban transport – CIVITAS plus Specific Guidance document!	Collaborative project
<b>Socio-economic research &amp; innovation</b>		<i>Maria.Alfayate@ec.europa.eu</i>
8.6.1	Support action for evaluation and monitoring CIVITAS-Plus	Coordination and Support Action (support type)
<b>Thematic promotion and dissemination</b>		<i>Jose.Fluxa@ec.europa.eu</i> <i>Maria.Alfayate@ec.europa.eu</i>
8.7.1	Promotion and dissemination	Coordination and Support Action (support type)
8.7.2	Support action for coordination and dissemination CIVITAS-Plus	Coordination and Support Action (support type)

EUROPEAN COMMISSION – DG Research/TREN – 2007



## Knowledge for energy policy making

Development of tools, methods and models to assess the main economic and social issues related to energy technologies

Databases and scenarios

Impact of technological progress on EU energy policies  
Impact of energy policies and technologies on security of supply, environment, society and competitiveness

EUROPEAN COMMISSION – DG Research/TREN – 2007



## Knowledge for Energy Policy Making TREN Call

Topic code	Title	Funding scheme
<b>Scientific support to policy</b>		<i>Inigo.Sabater@ec.europa.eu</i>
9.2.2	Energy technology watch	Coordination and support action (support type)



## Energy technology platforms

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





## 2008 TREN Call

- Similar order/higher than 2007 call
- Indicative topics/areas  
(indicative list only, depends also on outcome of 2007 call)
  - Energy 1: JTI on H2 and fuel cells to start in 2008?
  - Energy 2: RES-electricity incl. waste, ocean, hydro
  - Energy 3: RES-fuels possibly focussing on 2<sup>nd</sup> gen.
  - Energy 4: RES-heating/cooling incl. biomass
  - Energy 6: Clean coal incl. CTG, CTL
  - Energy 7: Smart Grids will be open
  - Energy 8: Energy efficiency incl. eco-buildings, poly-generation (fossil fuels), CONCERTO (?)
  - Energy 9/10: Studies



## New financing possibilities

- **Loans for research, technological development and demonstration through the RSFF (Risk Sharing Finance Facility) in FP7**
- **New instrument of the EIB and partner banks**
  - Eligibility criteria: FP7 proposals/projects, RTD projects, "small" or "big", "national" and "European"
  - Bankability criteria (technically realistic, financially viable, within EIB priorities etc.)



## New financing possibilities

### Contact points at DG RTD

- > Directorate B – « European Research Area: Research programmes and capacities »  
Unit B-04 – « Regions of knowledge and research potential » / RSFF Team
  
- > « RSFF Team »
  - Jean-David MALO – [jean-david.malo@ec.europa.eu](mailto:jean-david.malo@ec.europa.eu)
  - Anna KRZYZANOWSKA – [anna.krzyzanowska@ec.europa.eu](mailto:anna.krzyzanowska@ec.europa.eu)
  - Martin KOCH – [martin.koch@ec.europa.eu](mailto:martin.koch@ec.europa.eu)
  - Eric-Olivier PALLU – [eric-olivier.pallu@ec.europa.eu](mailto:eric-olivier.pallu@ec.europa.eu)
  - phone: + 32 2 298 45 99

### Contact points at the EIB:

- Mr. Kim Kreilgaard ([KREILGAA@eib.org](mailto:KREILGAA@eib.org))
- Mr. Dietmar Dumlich ([DUMLICH@eib.org](mailto:DUMLICH@eib.org)).



EUROPEAN  
COMMISSION

Community research

CIP  
SF/CF

Further  
energy RTD  
funding  
opportunities



## FP7 & CIP

### Competitiveness & Innovation Programme

- Comprises 3 Specific Programmes
- About 0.4 billion € foreseen for “eco-innovation” and 0.7 billion € for “Intelligent Energy-Europe (IEE) II”
- IEE II to combine non-investitive supporting of market preparation activities AND “replication” projects (new!)

**FP7: Demonstrations, dissemination of knowledge and innovation-related activities (within projects)**



**CIP: Innovation support networks and take-up of proven technologies**



## Cohesion Policy

### Structural and Cohesion Funds (2007-2013)

- Structural Funds (Cohesion, Competitiveness & Employment...) comprise 308 billion €, out of that about 1,3 billion € for Austria
- Innovation is an important priority in all NSRFs
- Operational programmes are decisive for fund spending (one per fund and per region)
  - Regional innovation strategies and clusters
  - Knowledge infrastructures
  - Education
  - Business support
- Management through regional/ national administration, not through the European Commission



EUROPEAN COMMISSION

SEVENTH FRAMEWORK PROGRAMME

## Upcoming FP7 information events by DG-RTD/DG-TREN

- **NCP and Multiplier Event**  
7 and 8 February 2007 - Brussels (Belgium)
- **FP7 INFORMATION DAYS for Energy and Transport**  
13 and 14 February 2007 - Brussels - (Belgium)

<http://ec.europa.eu/research/fp7/events/index.html>

EUROPEAN COMMISSION – DG Research/TREN – 2007

38

The image is a white slide with a dark blue header and footer. The header contains the European Union flag and the text 'EUROPEAN COMMISSION' and 'SEVENTH FRAMEWORK PROGRAMME'. The main content is centered and includes the title 'Upcoming FP7 information events by DG-RTD/DG-TREN' in bold black text. Below the title are two bullet points, each with a blue header and a grey sub-header. At the bottom, there is a blue URL. The footer contains the text 'EUROPEAN COMMISSION – DG Research/TREN – 2007' and the page number '38' in green.



## Upcoming FP7 Energy information events by DG-RTD/DG-TREN

- **Hydrogen and Fuel Cells**  
1 February 2007 - Prague (Czech Republic)
- **CCS and Clean Coal Technologies**  
9 February 2007 - Krakow - (Poland)
- **Wind and Ocean Energies**  
27 and 28 February 2007 - Galway or Cork (tbc) (Ireland)
- **Photovoltaics**  
27 and 28 February 2007 - Tallinn (Estonia)
- **Smart Energy Networks**  
28 February 2007 - Vienna (Austria)
- **FP7 Knowledge for Energy Policy Making**  
7 March 2007 - Ljubljana (Slovenia)

[http://cordis.europa.eu/fp7/cooperation/energy-events\\_en.html](http://cordis.europa.eu/fp7/cooperation/energy-events_en.html)



## Staying Informed

Research Policy, Energy Research  
[http://ec.europa.eu/research/energy/index\\_en.htm](http://ec.europa.eu/research/energy/index_en.htm)  
[rtd-energy@ec.europa.eu](mailto:rtd-energy@ec.europa.eu)

Energy Policy, Energy Research  
[http://ec.europa.eu/energy/index\\_en.html](http://ec.europa.eu/energy/index_en.html)

Green Paper “A European Strategy for Sustainable,  
Competitive and Secure Energy”  
[http://ec.europa.eu/energy/green-paper-energy/index\\_en.htm](http://ec.europa.eu/energy/green-paper-energy/index_en.htm)

Energy Package of 10 January 2007  
[http://ec.europa.eu/energy/energy\\_policy/index\\_en.htm](http://ec.europa.eu/energy/energy_policy/index_en.htm)

CONCERTO (FP6)  
<http://www.concertoplus.eu/>

Competitiveness and Innovation Framework Programme  
Intelligent Energy-Europe

[http://ec.europa.eu/enterprise/enterprise\\_policy/cip/index\\_en.html](http://ec.europa.eu/enterprise/enterprise_policy/cip/index_en.html)  
[http://ec.europa.eu/energy/intelligent/index\\_en.html](http://ec.europa.eu/energy/intelligent/index_en.html)



**Intelligent Energy**





**Vielen Dank für  
Ihre  
Aufmerksamkeit!**

Directorate-General  
for Transport and Energy

**Doris Schröcker**

[doris.schroecker@ec.europa.eu](mailto:doris.schroecker@ec.europa.eu)

+32 2 295 58 69