# ICT Call 4 InfoDay,

## Minsk 09.12.2008

## *ICT for Sustainable Growth*

☞**Objective ICT-2009.6.3**

**ICT for Energy Efficiency**

☞Objective ICT-2009.6.4

ICT for environmental services and climate change adaptation

☞Objective ICT-2009.6.5

Novel ICT solutions for Smart Electricity Distribution Networks

European Commission
Information Society and Media

SEVENTH FRAMEWORK PROGRAMME

# ICT for Energy Efficiency

## Objective ICT-2009.6.3

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# ICT for Energy Efficiency

## Target Outcomes

a) ICT tools for the future electricity market

b) ICT support to energy-positive buildings and neighbourhoods

c) ICT services and software tools enhanced with energy features

d) Coordination Actions

# ICT for Energy Efficiency

## Target Outcomes

### a) ICT tools for the future electricity market

- Architectures and tools enabling the emergence of an open electricity market
- Specific service delivery platform, uniform energy and information interfaces
  - different business models
  - self-configuration and adaptation
- Projects must validate the use and the benefits of the resulting tools in concrete applications

Funding scheme: STREP

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# ICT for Energy Efficiency

## Target Outcomes

### b) ICT support to energy-positive buildings and neighbourhoods

- Monitoring and control systems able to optimise the local generation-consumption
- Information platforms built on customizable, adaptive and open service-oriented architectures
  - providing connectivity to the energy grids and information to decision makers
  - to facilitate the emergence of new local business models.
- Intuitive user interfaces that help end-users save energy
- Projects shall include tests with concrete targets under real conditions.

Funding scheme: STREP

European Commission
Information Society and Media

# ICT for Energy Efficiency

## Target Outcomes

### c) ICT services and software tools enhanced with energy features

- ICT services and software tools that incorporate parameters for controlling emissions and energy consumption
  - CAD and simulation tools
  - Enterprise Management Systems
  - Definition of patterns, profiles, methods, energy consumption models
- The use and the benefits of the building blocks must be validated against concrete targets once integrated into concrete services and/or tools.

Funding scheme: STREP

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# ICT for Energy Efficiency

## Target Outcomes

## d) Coordination Actions

- Coordination of national/regional programmes on ICT for Energy Efficiency
  - facilitating the exchange of best practices
  - identifying common R&D priorities
  - creating a common understanding of the implications of regulation and energy market liberalisation
- Co-ordinated co-operation and communication within the multidisciplinary ICT for energy efficiency research community delivering concrete outputs
  - R&D roadmap(s) based on international workshops on selected topics and wide public consultations
  - Interoperability frameworks and standards based on the exchange of best practices
  - Awareness raising based on the organisation of interdisciplinary workshops / conferences and press campaigns
  - Analysis of the implications on education and training systems

Funding scheme: CA

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# ICT for Energy Efficiency

## Expected Impact

- **Reinforced European industrial and technological position** in ICT-enabled energy efficiency technologies
- **Strengthened and consolidated European excellence**
- The **emergence of an open electricity market**
- **Progress through standardised control algorithms and communication protocols**
- **Energy savings in residential and commercial buildings of around 30 %**
- **Reduced energy intensity of the economy**

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# ICT for Energy Efficiency

- **Funding schemes**
  a), b) and c): STREPs (Collaborative Projects);
  d): CA (Coordination Actions)

- **Indicative budget distribution**
  - STREP: EUR 27 million
  - CA: EUR 3 million

- **Call**
  FP7-ICT-2009-4

SEVENTH FRAMEWORK PROGRAMME

# ICT for environmental services and climate change adaptation

## Objective ICT-2009.6.4

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# ICT for environmental services and climate change adaptation

## Target Outcomes

a) **ICT for a better adaptation to climate change**

b) **Flexible discovery and chaining of distributed environmental services**

c) **Analysis of ICT for sustainable urban environment**

d) **Stimulation of an ICT-enabled environmental information service economy in Europe**

# ICT for environmental services and climate change adaptation

## Target Outcomes

### a) ICT for a better adaptation to climate change

- Easy-to-use, web-based systems for better preparedness, decision support and mitigation of climate change impact on
  - population
  - utilities
  - Infrastructures

- Scenario-based prediction, damage assessment, 3D/4D modelling, simulation and visualisation
- Integrated solutions shall be validated in the urban context including for natural disasters
- Take advantage of recent advances in miniaturisation of sensors, wireless communications and increased computation power

Funding scheme: STREP

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# ICT for environmental services and climate change adaptation

## Target Outcomes

## b) Flexible discovery and chaining of distributed environmental services

- Tools for an easy discovery of environmental service nodes on the Web and their on-demand adaptive chaining
  - Generic semantics frameworks and dynamic ontology services
  - Access to distributed environmental resources in a multilingual multi-domain context
  - Methods and protocols for service chaining management of uncertainty propagation
- Projects should be driven by the possibility for users to plug-in their own use cases and get access to customised information and decision support. Solutions shall be validated over different scenarios.

Funding scheme: STREP

European Commission
Information Society and Media

# ICT for environmental services and climate change adaptation

## Target Outcomes

## c) Analysis of ICT for sustainable urban environment

- To deliver an analysis of ICT solutions supporting integrated urban management plans, including
  - systems for spatial planning of urban and peri-urban areas supporting sustainable development patterns
  - tools for managing higher complexity arising from interactions of, e.g.
    - Resources efficiency
    - Pollution mitigation
    - Quality of life

Funding scheme: SA

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# ICT for environmental services and climate change adaptation

## Target Outcomes

### d) Stimulation of an ICT-enabled environmental information service economy in Europe

- To deliver an analysis of new business-oriented approaches
    - Supporting more interoperable environmental services
    - Encouraging the re-use of existing open architecture specifications
    - Stimulating viable environmental monitoring networks
- Stability and security of services
- Multi-lingualism
- User access management

Funding scheme: SA

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# ICT for environmental services and climate change adaptation

## Expected Impact

- Contribution to the development of a *Single Information Space in Europe for the Environment*
  *http://cordis.europa.eu/fp7/ict/sustainable-growth/workshops_en.html*
- Reinforced European leadership in ICT solutions for interacting environmental service nodes on the Web
- Reinforced role of ICT in establishing sustainable cities
- To mitigate impacts of disasters in the urban context
- Stronger position of Europe with respect to the implementation of international environmental commitments.

# ICT for environmental services and climate change adaptation

- **Funding schemes**
  a), b): STREP (Collaborative Projects);
  c), d): SA (Support Actions)

- **Indicative budget distribution**
  - STREP: EUR 21 million
  - CSA: EUR 3 million

- **Call**
  FP7-ICT-2009-4

SEVENTH FRAMEWORK PROGRAMME

# Novel ICT solutions for Smart Electricity Distribution Networks

## (Joint call between the ICT and Energy Themes)

**Objective ICT-2009.6.5**

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# Novel ICT solutions for Smart Electricity Distribution Networks

## Target Outcomes

- **Development of a flexible ICT infrastructure** for:
  - customer integration
  - effective Demand Side Management
  - active networks

- **Further research** is needed to arrive at **ICT infrastructures for the management of electricity distribution networks** that are:
  - Scalable
  - low-cost
  - Secure
  - Reliable
  - Open and provide self-healing capabilities.

Funding scheme: STREP

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# Novel ICT solutions for Smart Electricity Distribution Networks

## Target Outcomes

- **Research could include issues such as**:
  - dynamically reconfigurable ICT architectures
  - technologies and tools for ICT systems survivability
  - platforms integrating (near) real-time information

**Projects should have**:

- a predominant research component
- include concrete targets and appropriate trial tests to validate and assess the proposed solutions
- involving partners from both the ICT and Electricity communities.

Funding scheme: STREP

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# Novel ICT solutions for Smart Electricity Distribution Networks

## Expected Impact

- **Improved performance** of the electricity distribution grid in terms of reliability and quality of service

- **Pre-standardisation knowledge** aiming at the adoption of universally accepted hardware and software solutions to monitor and control the electricity distribution grid.

- **Strengthened European excellence** in engineering by consolidating cross disciplinary research on energy technologies and ICT.

- **Reinforced European industrial and technological position** in the global market of ICT for power system applications.

# Novel ICT solutions for Smart Electricity Distribution Networks

- **Funding schemes**

STREP (Collaborative Projects)

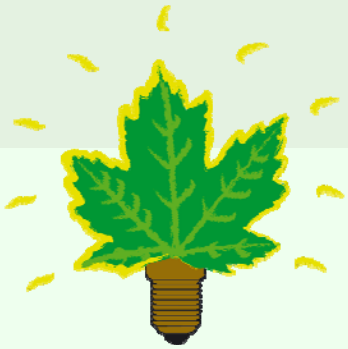
- **Indicative budget distribution**

EUR 20 million (provided by the ICT Theme (EUR 10 million) and the Energy Theme (EUR 10 million)

- **Call**

FP7-ICT-ENERGY-2009-1

# Contacts & Further Information



## ICT for Sustainable Growth

http://cordis.europa.eu/fp7/ict/sustainable-growth

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# Thank you for your attention!

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