



Consiglio Nazionale delle Ricerche

Istituto di Metodologie per l'Analisi Ambientale

## CNR activities in Basilicata for energy: future perspectives

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# Agenda

**The CNR-IMAA on-going projects on energy themes**

**The EU policy framework and opportunities**

**National and Local opportunities in the next 2014-2020 programming period**

## The CNR research activities on energy theme

The Oscar project that starts today is part of a series of activities and on-going projects related to “energy theme” at CNR in Basilicata.

Many international, national and local ongoing projects related to ENERGY THEMES are carried out at CNR-IMAA mainly by the Research Units:

- **Energy and Environmental Modeling and Planning (EPM)**
- **Integrated Methodologies for the Study of Soil and Subsoil (MIS3)**

EPM Unit research activities are aimed at developing of methodologies and tools for energy systems analysis and support to decision makers in policy definition and assessment.

MIS3 Unit research activities are aimed at developing methodologies and advanced technologies for the soil and subsoil investigation. In particular, geological and hydro-geological-geochemical studies are carried out in order to define the parameters necessary for the evaluation of the geothermal potential of the subsoil at a regional scale, for various depth and temperature ranges.

# Main ongoing projects



**COST Action TU0902 “Integrated assessment technologies to support the sustainable development of urban area”** (Action Chair: Dr. Richard DAWSON) (2009-2013)  
<http://iaforcities.com/>



**COST Action TU1104 “Smart Energy Regions”** (Action Chair: Prof. Philip John Jones) (2012-2016)  
<http://www.smart-er.eu/>



**Energy European Research alliance (EERA). Joint Programme “Smart Cities”, Sub-programme “Energy in cities”** (2011-2014) <http://www.eera-set.eu/index.php?index=30>



**INTERREG IVC “Regional Strategies for Energy Conscious Communities” RENERGY** (2012-2014) <http://www.renergyproject.eu/>



**South East Europe Transnational Cooperation Programme, RE-SEETies Project “Towards resource efficient urban communities in SEE”** (2012-2014) [www.re-seeties.eu](http://www.re-seeties.eu)



**South East Europe Transnational Cooperation Programme, ORIENTGATE Project “A structured network for integration of climate knowledge into policy and territorial planning”** (Sub-contract of the Basilicata Region) (2012-2014) <http://orientgate.rec.org/>

# Industrial Research Projects



**"SMART Basilicata" (OR5 Smart Participation)  
"Smart Cities and Communities and Social Innovation"  
(Ministry Call n.84/Ric 2012, PON 2007 – 2013 March 2, 2012)**



**"Trans-regional actions for the strategic repositioning of the industrial areas" Operative Programme ERDF 2007-2013 Veneto - Axis V OP ERDF Basilicata 2007 -2013 Axis VIII**

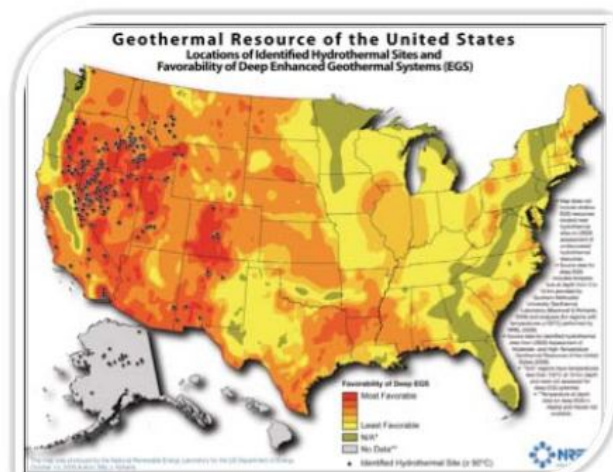
# Main ongoing projects



FP7-ENERGY-2013-1. “Integrated Methods for Advanced Geothermal Exploration” IMAGE project. Started at January 2013.



POI “Energie Rinnovabili e Risparmio Energetico 2007/2013”. VIGOR “Valutazione del potenziale Geotermico delle Regioni della convergenza” finalizzato alla individuazione e realizzazione di interventi per ampliare il potenziale sfruttabile di energia geotermica sul territorio delle Regioni Campania, Calabria, Puglia e Sicilia.  
<http://www.vigor-geotermia.it/>



CNR - Progetti per il SUD – Legge Finanziaria 2010. “Atlante geotermico Caratterizzazione, classificazione e mappatura di risorse geotermiche convenzionali e non-convenzionali per produzione di energia elettrica nelle regioni del Mezzogiorno d'Italia”.  
<http://www.cnr.it/sitocnr/IICNR/SeiProgettiPerIlSud>

**Energy Sustainability** systems is a key priority to address multiple objectives

- ➔ **Valorization of endogenous resources**
- ➔ **Mitigation of climate change**
- ➔ **Environmental issues (e.g. air quality, waste reduction, land use)**
- ➔ **Security of energy supply**
- ➔ **Fuel poverty**





## Strategic Objectives of energy EU policy:

- Security
- Competitiveness
- Energy sustainability

The **Europe 2020 strategy** sets knowledge, innovation, competitive economy, social and territorial cohesion as keystones to promote a **smart, sustainable and inclusive Europe**.

## 7 Flagship Initiatives

Smart Growth	Sustainable Growth	Inclusive Growth
Innovation « <u>Innovation Union</u> »	Climate, energy and mobility « Resource efficient Europe »	Employment and skills « An agenda for new skills and jobs »
Education « Youth on the move »	Competitiveness « An industrial policy for the globalisation era »	Fighting poverty « European platform against poverty »
Digital society « A digital agenda for Europe »		

Innovation Union and **Horizon 2020**: ways to excellence in science, competitive industries and a better society



## The EU policy (2)

The headline targets of this strategy are set in **the Climate and Energy Package and** represent the 20\_20\_20 goals:



- ➔ 20% reduction in EU greenhouse gas emissions from 1990 levels;
- ➔ Raising the share of EU energy consumption produced from renewable resources to 20%;
- ➔ 20% improvement in the EU's energy efficiency.



Moreover, these targets become more ambitious expanding the temporal horizon:

The **Energy Roadmap 2050** with the commitment **to reduce EU GHG emissions to 80-95% below 1990 levels by 2050** explores the energy technology scenarios for the EU decarbonisation.

Stronger efforts are required to meet the targets with a deep transformation of energy systems focusing on energy efficiency and renewables:

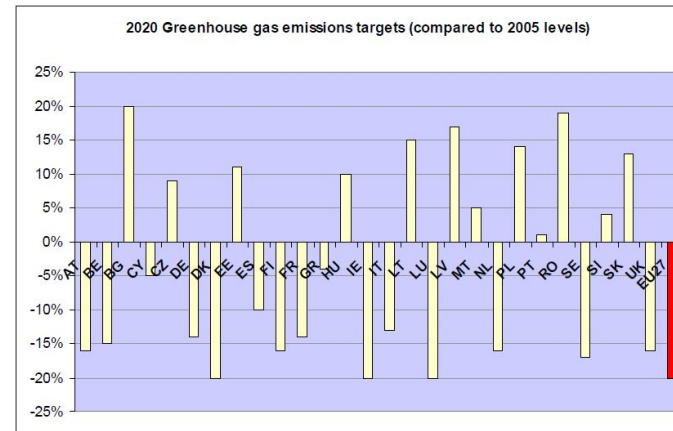
- Low carbon power generation and CCS
- Nearly zero energy buildings
- Renewable heating and cooling
- Smart grids
- New transport systems and technologies

The recent **Green paper “ A 2030 framework for climate and energy policies”** acknowledging the progress of the EU towards the EU 20\_20\_20 targets, drives the attention on **2030 as a new intermediate target year** to achieve the long term climate objectives (open consultation until July 2<sup>nd</sup>, 2013)



# The National policy (1)

Member States  
have set  
themselves specific  
targets



The **National Energy Strategy (SEN)** of Italy promulgated in October 2012 goes beyond the objectives of the National Action Plan. In particular it aims at reducing the energy costs, achieving and encompassing the EU 20/20/20 objectives, increasing security of supply and fostering the industrial development of the energy sector.

- **National Energy Strategy – SEN October 2012**
- **Thermal bill - Ministerial Decree of 28 December 2012**
- **"Development Decree" - Decree 83 of 22 June 2012**
- **Incentives to boost Energy efficiency interventions in buildings**
- **National Action Plan (in compliance of the EC Directive 2009/28/RC) June 2010**

The EU and national **challenges on climate and energy issues** have been acknowledged by local authorities, committing themselves to improve the quality of life of the people living in their towns through sustainable urban development.

### CITIES AND CLIMATE CHANGE

Many initiatives are being carried out in this directions at European level, among which:

- ➔ **Energy Cities** , the European Association of local authorities promoting energy efficiency, renewable energy and distributed generation;
- ➔ **CONCERTO**, the initiative launched by the EC to support local communities in developing and demonstrating concrete strategies and actions that are both sustainable and highly energy efficient,
- ➔ **Covenant of Mayors**, a commitment by signatory towns and cities to go beyond the objectives of EU energy policy in terms of reduction in CO2 emissions through enhanced energy efficiency and cleaner energy production and use,
- ➔ **Smart Cities initiatives** aimed to demonstrate that the citizens' quality of life and local economies can be improved through investments in energy efficiency and reduction of carbon emissions.

## The National policy (3)

More than two thirds of the European population lives in urban areas, accounting for over 70% of global carbon dioxide emissions from energy consumptions.

The municipal government plays a leading role in the transition pathway towards a sustainable future due to:

- ➔ the relevance of urban carbon emissions,
- ➔ the local implications on climate change in terms of vulnerability
- ➔ the awareness about the impact of the local community's behavior in tackling carbon emissions.

Are the ideal platform to implement effective plans and strategies concerning climate change mitigation and adaptation



Can contribute considerably to the achievement of the national and international objectives

## CITIES AND CLIMATE CHANGE

# The national and local policy: EU Cohesion Policy

For the next financial planning period from 2014 to 2020 in Member States and their regions, the "Common Strategic Framework" (CSF) is presented to help in setting strategic direction **National and regional authorities for drafting their 'Partnership Contracts'** with the Commission, committing themselves to meeting Europe's growth and jobs targets for 2020.

It will be enable a better synergy of different funds to maximise the impact of EU investments.



# The local policy: EU Cohesion Policy

## More coherent use of available EU funds



- **Comprehensive investment strategy: aligned with Europe 2020 objectives**
- Coherence with National Reform Programmes
- Coordination: cohesion policy, rural development, maritime & fisheries funds
- Objectives and indicators to measure progress towards Europe 2020 targets
- Effectiveness: introduction of a performance framework
- Efficiency: reinforcement of administrative capacity, cutting red tape

# The national and local policy: EU Cohesion Policy

The Partnership contract is the tool to set the strategy – expected results, priorities and method of intervention – to use EU fund for the next programming period 2014-2020. The partnership contract sets a menu of **thematic objectives**:

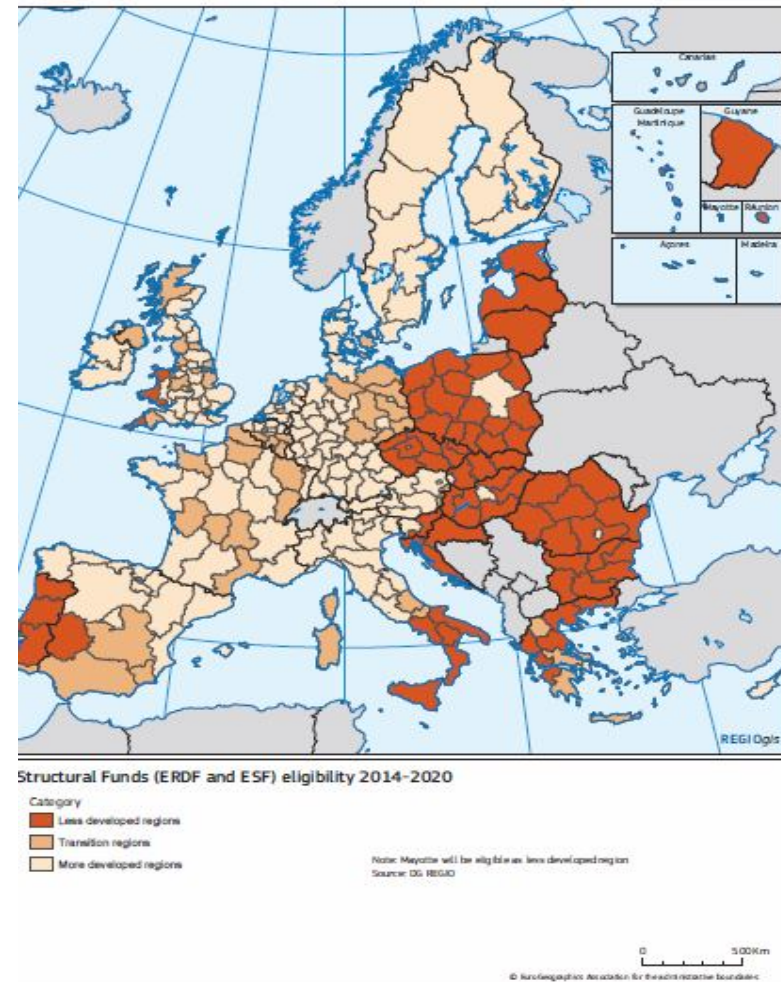
- **Research & innovation**
- Information and communication technologies (ICT)
- Competitiveness of Small and Medium-sized Enterprises (SMEs)
- **Shift towards a low-carbon economy**
- **Climate change adaptation & risk prevention and management**
- **Environmental protection & resource efficiency**
- Sustainable transport & removing bottlenecks in key network infrastructures
- Employment & supporting labour mobility
- Social inclusion & combating poverty
- Education, skills & lifelong learning
- Institutional capacity building & efficient public administrations



# The national and local policy: EU Cohesion Policy

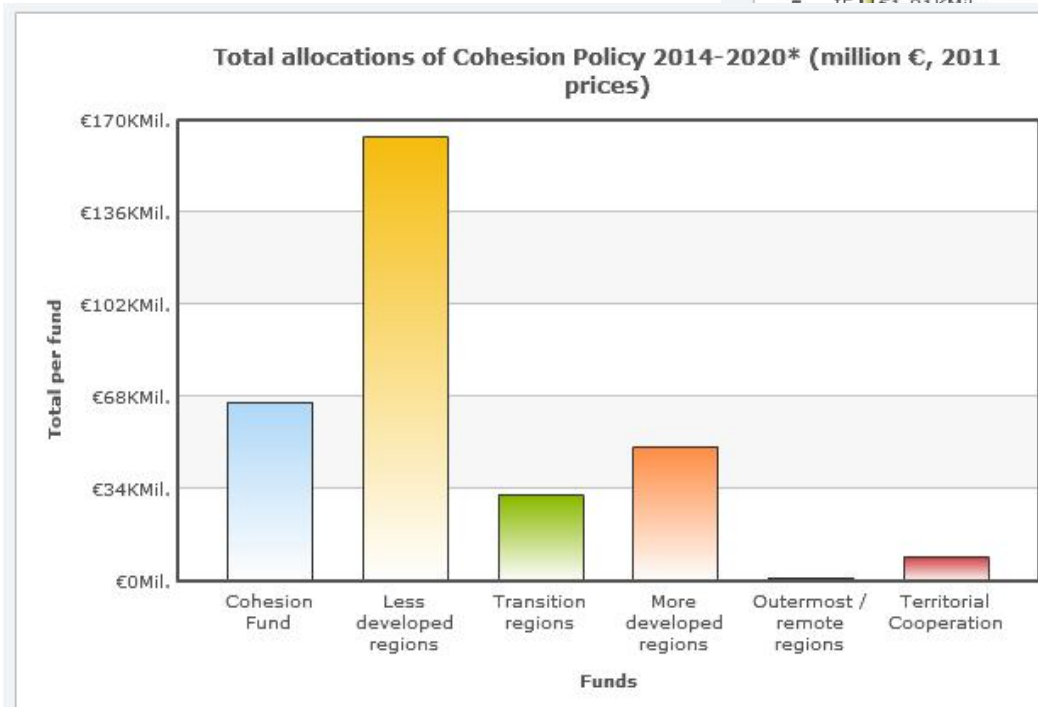
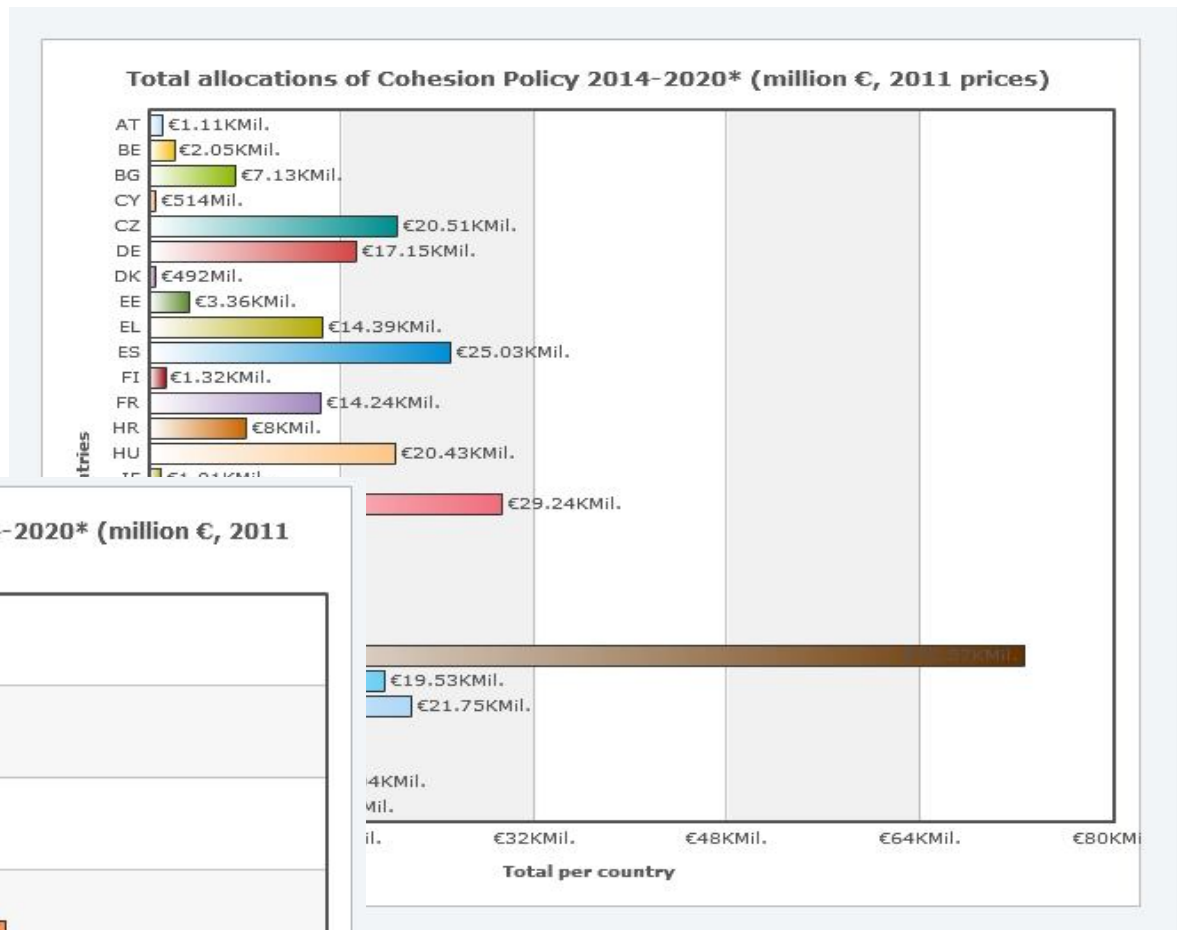
## Cohesion Policy 2014-2020: Investment budgets for Member States

The cohesion policy financial breakdown per Member State for 2014-2020 reflects the state of play of negotiations as of July 2013. The figures are subject to change in the final agreement between the Council and the European Parliament. Cohesion policy 2014-2020 represents approximately 1/3 of the EU budget, reinforcing its role as the Union's main investment policy for growth and jobs and implementing EU policies. The Commission is working with national and local authorities to define priorities for investment for each country for the next financial period, ensuring the investment's maximum impact on competitiveness and employment creation, and reinforcing the thematic concentration and focus on results of the reformed policy.






# The national and local policy: EU Cohesion Policy

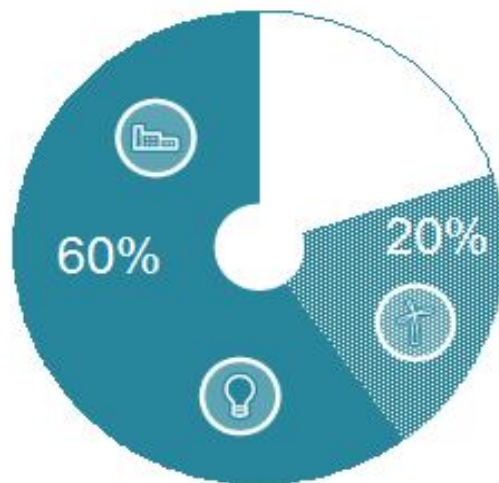
**Financial allocations 2014-2020**  
[at July 2013]



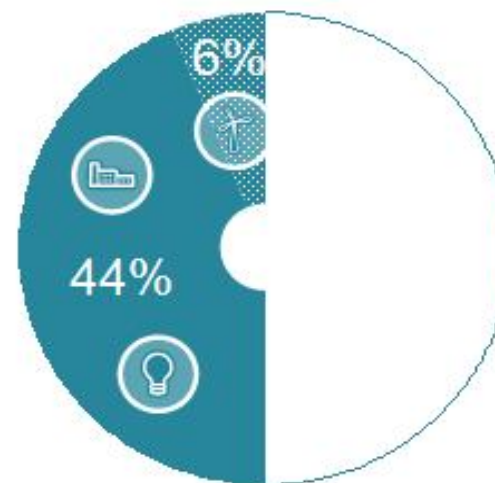
# Concentrating resources to maximise impact

## Concentration of ERDF investments

 Energy efficiency & renewable energy    Research & innovation    Competitiveness of SMEs



More developed & transitional regions



Less developed regions

Flexibility – different regions have different needs  
Special arrangements for ex-convergence regions

- **EU directives and national policies** are designed to increase energy sustainability through an increased share of RES and a more efficient use of energy resources and **should be transferred at the local level with a comprehensive territorial planning strategy.**
- **ERDF, ESF and cohesion funds are fundamental to foster the implementation of the Europe 2020 strategy**
- **Policy and measures should be appropriately addressed to achieve the objectives**
- **Resource and technology availability, as well as infrastructures are key factors to promote a transition towards “Smart Communities”**
- **Stakeholders motivation and active involvement is essential** for a successful implementation of policy and measures for the achievement of severe targets on energy and climate.
- **A novel political vision, interregional cooperation and an integrated methodological approach have a strategic role in the innovation process and the fulfilment of EU policy objectives.**

**All the CNR Basilicata activities on energy and climate topics have unique opportunity in the next programming period because they are:**

- ➔ **coherent with the Europe 2020 strategy:**
- ➔ **Horizon 2020 pillars**
- ➔ **Fit with a lot of thematic objectives of Partnership contract**

# Thanks for your attention

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