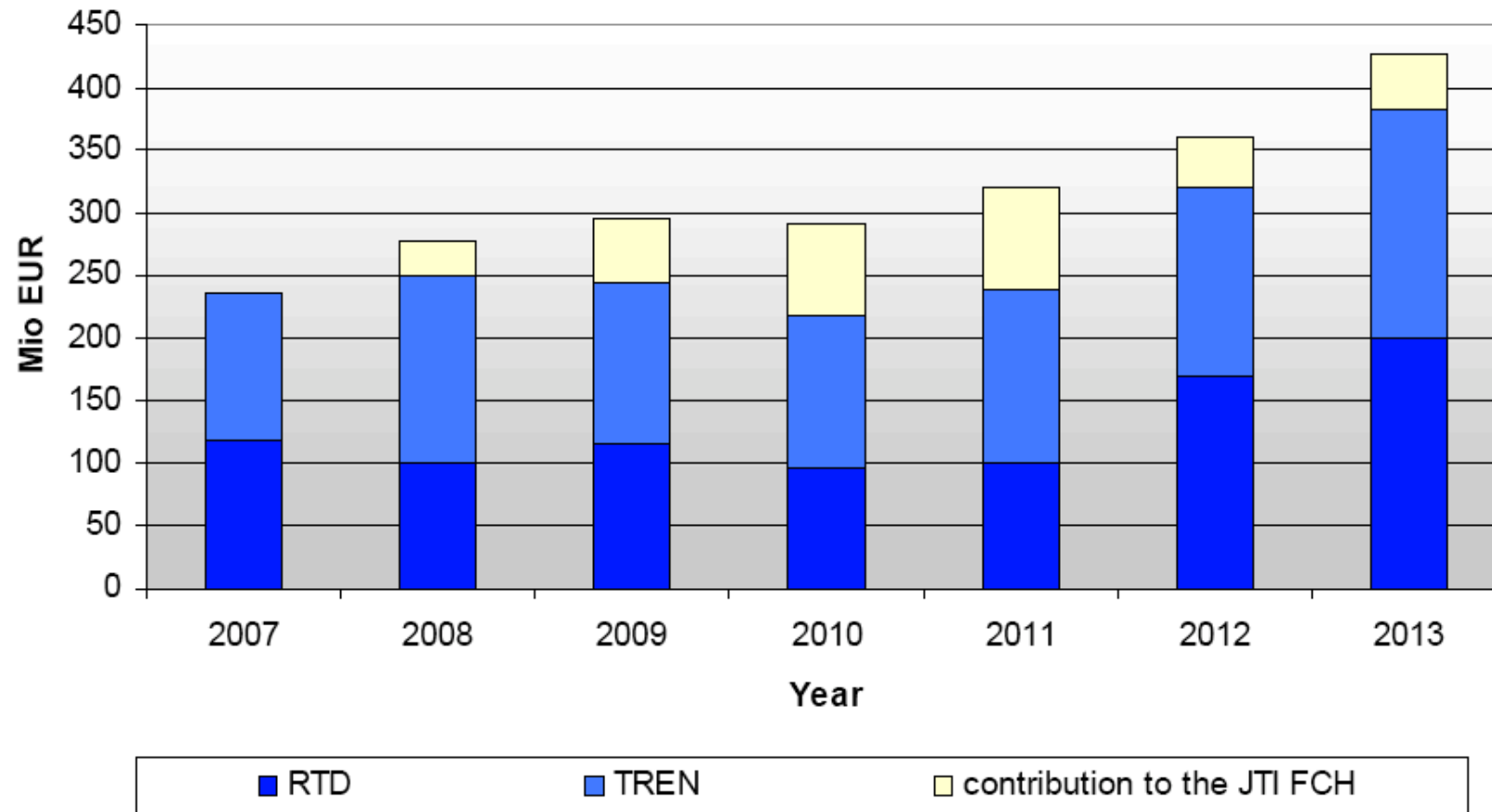
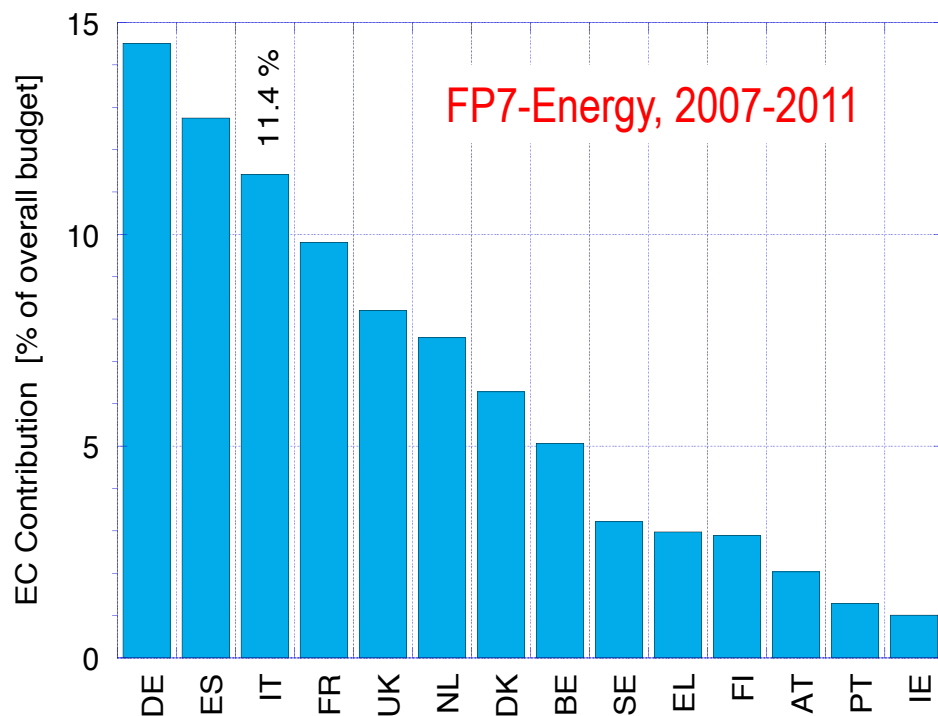


Budget annuale per il tema Energia del FP7

Annual budget of the FP7 Energy Theme

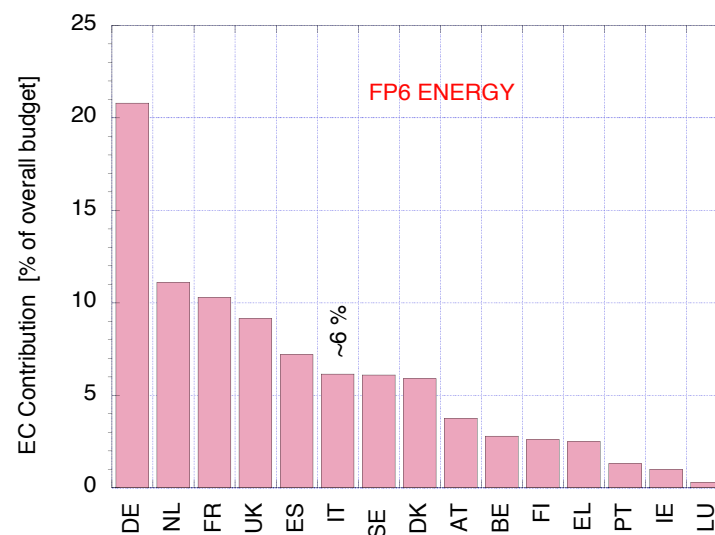


La partecipazione italiana al tema Energia del FP7



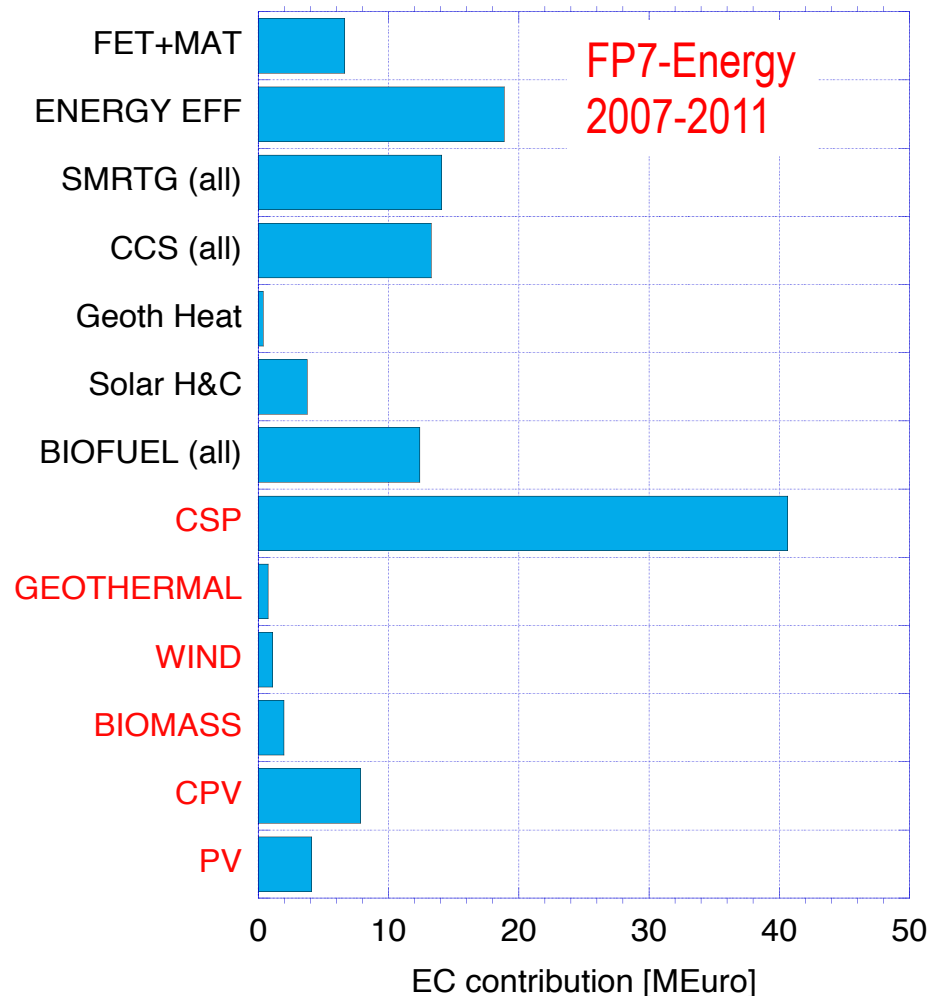
Per i topic Energia del 6° PQ, quota assegnata a partecipanti italiana ~6% del budget disponibile.

- Nel quinquennio 2007-2011, ai 27 PM assegnati in tutto ~1100 M€;
- a partecipanti italiani ~127 M€ (11.4%); 1/3 per attività di ricerca (DG-RTD), 2/3 per dimostrazione (DG-ENER);
- Italia al 3° posto tra i PM;
- Per tutto il 7° PQ, la quota ai partecipanti italiani è in media ~8%; il tema Energia è quindi un'eccezione positiva;



Finanziamento comunitario per area tematica

Contributo comunitario (in M€) a partecipanti Italiani, coordinatori o partner di progetti di RST o dimostrativi (Grandi imprese, PMI, Enti di Ricerca, Università), suddivisi per area tematica



| | |
|------------|--|
| PV | Elettricità da fotovoltaico piano |
| CPV | “ fotovoltaico a concentrazione |
| BIOMASS | “ biomasse |
| WIND | “ fonte eolica |
| GEOHERMAL | “ sistemi geotermici avanzati |
| CSP | “ solare termodinamico |
| BIOFUEL | Bio-combustibili |
| Solar H&C | Riscaldamento e/o raffrescamento da fonte solare |
| Geoth Heat | Riscaldamento da fonte geotermica |
| CCS | Tecnologie per il carbone pulito e per la cattura ed il sequestro geologico di CO2 |
| SMGR | Reti elettriche intelligenti (Smart Grids) |
| ENERGY EFF | Misure di efficienza energetica (inclusi programmi CIVITAS e CONCERTO) |
| FET+MAT | Tecnologie Emergenti per il Futuro e Materiali per l'Energia |

Bando Smart Cities 2012

- ◆ Saranno finanziate proposte che vedono tra i partner:
 - **Genova** e **Firenze**, per il topic *Strategic sustainable planning and screening of city plans*;
 - **Genova**, per il topic *Large scale systems for urban area heating and/or cooling supply*;
 - **Milano** e **Genova**, per il topic *Demonstration of nearly Zero Energy Building Renovation for cities and districts*.

- ◆ La lista di riserva include 8 proposte, nelle quali sono partner, in ordine di classifica, **Cesena**, **Bari**, **Venezia** e **Torino**.

- ◆ Hanno partecipato in proposte che però non hanno superato la soglia anche le città di **Modena**, **La Spezia**, **L'Aquila** e **Sorrento**.

- ◆ **Genova** è in assoluto la città che è andata meglio in Europa (finanziata in tutti e 3 i topic).

- ◆ In tutto ai partner italiani è andato il **12.3% del budget disponibile**.

Le *European Industrial Initiatives* (EII) del SET plan

Fabbisogno stimato (UE + Paesi Membri + Industria)
per il periodo 2010-2020

| EII and Joint Undertakings | Fabbisogno totale (pubblico&privato) mld Euro |
|-----------------------------------|--|
| Solar (fotovoltaico+termico) | 16 |
| Wind | 6 |
| Grid | 2 |
| CCS | 11-16 |
| Bioenergy | 9 |
| Sustainable Nuclear (fission) | 5-10 |
| Smart Cities and Communities | 10-12 |
| Hydrogen and Fuel Cells | 5-6 |
| Fusion for Energy | 10-11 |
| Totale | 74-88 |

CHALLENGE-ORIENTED APPROACH OF 2013 WORK PROGRAMME 1/5

| <i>SMART CITIES AND COMMUNITIES</i> | |
|--|---|
| Topic ENERGY.2013.7.1.1 | Development and validation of methods and tools for network integration of distributed renewable resources |
| Topic ENERGY.2013.7.3.1 | Planning rules for linking electric vehicles (EV) to distributed energy resources |
| Topic ENERGY.2013.7.3.2 | Enhanced interoperability and conformance testing methods and tools for interaction between grid infrastructure and electric vehicles |
| Topic ENERGY.2013.8.8.1 | Demonstration of optimised energy systems for high performance-energy districts |

CHALLENGE-ORIENTED APPROACH OF 2013 WORK PROGRAMME 2/5

| <i>RENEWABLE ENERGIES 1/2</i> | |
|--------------------------------------|---|
| Topic ENERGY.2013.2.1.1 | High efficiency c-Si photovoltaics modules |
| Topic ENERGY.2013.2.1.2 | Support to key activities of the European Photovoltaics Technology Platform (TP PV) |
| Topic ENERGY.2013.2.3.1 | Advanced aerodynamic modelling, design and testing for large rotor blades |
| Topic ENERGY.2013.2.3.2 | Small to medium size wind turbines |
| Topic ENERGY.2013.2.4.1 | Exploration and assessment of geothermal reservoirs |
| Topic ENERGY.2013.2.6.1 | Design tools, enabling technologies and underpinning research to facilitate ocean energy converter arrays |
| Topic ENERGY.2013.2.9.1 | Research cooperation and knowledge creation in the area of renewable energy with Mediterranean partner countries |
| Topic ENERGY.2013.2.9.2 | Methods for the estimation of the Direct Normal Irradiation (DNI) |
| Topic ENERGY.2013.3.2.1 | Pre-commercial industrial scale demonstration plant on paraffinic biofuels for use in aviation |
| Topic ENERGY.2013.3.7.1 | Developing regional and pan-European schemes for the sustainable delivery of non-food biomass feedstock in a pan-European integrated market |

CHALLENGE-ORIENTED APPROACH OF 2013 WORK PROGRAMME 3/5

| RENEWABLE ENERGIES 2/2 | |
|-------------------------------|---|
| Topic ENERGY.2013.3.7.2 | Support to key activities of the European Biofuels Technology Platform (EBTP) |
| Topic ENERGY.2013.4.1.1 | Innovative solar thermal façade systems |
| Topic ENERGY.2013.10.1.1 | ERA-NET Plus – Bioenergy: Demonstrations of the European Industrial Bioenergy Initiative |
| Topic ENERGY.2013.10.1.2 | ERA-NET Plus – European wind resources assessment |
| Topic ENERGY.2013.10.1.3 | Supporting the coordination of national research activities of Member States and Associated States in the field of OCEAN energy (ERA-NET) |
| Topic ENERGY.2013.10.1.5 | Integrated research programme in the field of photovoltaics |
| Topic ENERGY.2013.10.1.6 | Integrated research programme in the field of wind energy |
| Topic ENERGY.2013.10.1.7 | Integrated research programme in the field of bioenergy |
| Topic ENERGY.2013.10.1.10 | Integrated Research Programme in the field of Concentrated Solar Power (CSP) |
| OCEAN 2013.4 | Innovative transport and deployment systems for the offshore wind energy sector |

CHALLENGE-ORIENTED APPROACH OF 2013 WORK PROGRAMME 4/5

| SMART GRIDS AND ENERGY STORAGE | |
|---------------------------------------|--|
| Topic ENERGY.2013.2.7.1 | Optimisation of Water Turbines |
| Topic ENERGY.2013.7.2.1 | Advanced concepts for reliability assessment of the pan-European transmission network |
| Topic ENERGY.2013.7.2.2 | Advanced tools and mechanisms for capacity calculation and congestion management |
| Topic ENERGY.2013.7.2.3 | Large-scale demonstration of innovative transmission system integration and operation solutions for (inter)connecting renewable electricity production |
| Topic ENERGY.2013.7.2.4 | Ensuring stakeholder support for future grid infrastructures |
| Topic ENERGY.2013.7.3.3 | Understanding interfaces in rechargeable batteries and super-capacitors through in situ methods |
| Topic ENERGY.2013.10.1.8 | Integrated research programme on smart grids |
| Topic ENERGY.2013.10.1.9 | Integrated research programme on electrochemical storage |

CHALLENGE-ORIENTED APPROACH OF 2013 WORK PROGRAMME 5/5

| <i>CARBON CAPTURE AND STORAGE / CLEAN COAL TECHNOLOGIES</i> | |
|--|---|
| Topic ENERGY.2013.5.1.1 | Scale-up of advanced high-efficiency capture processes |
| Topic ENERGY.2013.5.1.2 | New generation high-efficiency capture processes |
| Topic ENERGY.2013.5.2.1 | Mitigation and remediation of leakage from geological storage |
| Topic ENERGY.2013.6.1.1 | Combined Underground Coal Gasification and CO2 Capture and Storage |
| <i>HORIZONTAL ISSUES</i> | |
| Topic ENERGY.2013.9.2.1 | European scientific multidisciplinary "think-tank" to support energy policy and to assess the potential impacts of its measures |
| Topic ENERGY.2013.10.1.4 | Mobilising the research, innovation and educational capacities of Europe's universities |

Call FP7-ENERGY-2013-1: Energy call part 1

Publicazione: 10 luglio 2012

Scadenza: 28 Novembre 2012

Budget indicativo: 107.5 MEuro

| Challenge | Activities / Areas / Topics in this work programme | Budget [MEuro] |
|-------------------------------------|---|----------------|
| Renewable energies | 2.1.1: High efficiency c-Si photovoltaics modules 2.3.1: Advanced aerodynamic modelling, design and testing for large rotor blades 2.3.2: Small to medium size wind turbines 2.4.1: Exploration and assessment of geothermal reservoirs 2.6.1: Design tools, enabling technologies and underpinning research to facilitate ocean energy converter arrays 2.9.1: Research cooperation and knowledge creation in the area of renewable energy with Mediterranean partner countries 2.9.2: Methods for the estimation of the Direct Normal Irradiation (DNI) 4.1.1: Innovative solar thermal façade systems | 51 |
| Renewable energies | 3.7.1: Support to the sustainable delivery of non-food biomass feedstock at local, regional and pan-European level | 4 |
| Smart grids / energy storage | 2.7.1: Optimisation of Water Turbines 7.2.1: Advanced concepts for reliability assessment of the pan-European transmission network 7.2.2: Advanced tools and mechanisms for capacity calculation and congestion management 7.2.4: Ensuring stakeholder support for future grid infrastructures 7.3.3: Understanding interfaces in rechargeable batteries and super-capacitors through in situ methods | 24 |
| Carbon Capture and Storage | 5.1.1: Scale-up of advanced high-efficiency capture processes 5.1.2: New generation high-efficiency capture processes 5.2.1: Mitigation and remediation of leakage from geological storage 6.1.1: Combined Underground Coal Gasification and CO ₂ Capture and Storage | 28.5 |

Call FP7-ENERGY-2013-2: Energy call part 2

Publicazione: 10 luglio 2012

Scadenza: 24 Gennaio 2013

Budget indicativo: 83 MEuro

| Activity | Topic | Budget (MEuro) |
|--|--|-----------------------|
| Activity Energy.3: Renewable Fuel Production | 3.2.1: Pre-commercial industrial scale demonstration plant on paraffinic biofuels for use in aviation | 36 |
| Activity Energy.7: Smart Energy Networks | 7.2.3: Large-scale demonstration of innovative transmission system integration and operation solutions for (inter)connecting renewable electricity production. | 45 |
| Activity Energy.9: Knowledge for Energy Policy Making | 9.2.1: European scientific multidisciplinary "think-tank" to support energy policy and to assess the potential impacts of its measures | 2 |

Call FP7-Smart Cities-2013

Publicazione: 10 luglio 2012

Scadenza: 4 Dicembre 2012

Budget indicativo: 209 MEuro (114 da Energy + 95 da ICT)

| Activity/ Area | Topics called | Budget (MEur) |
|---|--|---------------|
| ICT – Information and Communication Technologies | | |
| FP7-ICT-2013.1.4 | A reliable and secure Internet of Things for Smart Cities | 20 |
| FP7-ICT-2013.6.2 | Data Centres in an energy-efficient and environmental friendly Internet | 20 |
| FP7-ICT-2013.6.4 | Optimising Energy Systems in Smart Cities | 40 |
| FP7-ICT-2013.6.6 | Integrated personal mobility for smart cities | 15 |
| Energy | | |
| Activity Energy.7 | 7.1.1: Development and validation of methods and tools for network integration of distributed renewable resources | 24 |
| | 7.3.1: Planning rules for linking electric vehicles (EV) to distributed energy resources | |
| | 7.3.2: Enhanced interoperability and conformance testing methods and tools for interaction between grid infrastructure and electric vehicles | |
| FP7.ENERGY.2013.8.8.1 | Demonstration of optimised energy systems for high performance-energy districts | 90 |

Call FP7-ENERGY-2013-IRP

Publicazione: 10 luglio 2012

Scadenza: 8 Gennaio 2013

Budget indicativo: 37.5 MEuro

| Challenge | Activities/ Topics in this work programme | Budget (MEur) |
|------------------------------------|--|----------------------|
| Integration of Research Programmes | ENERGY.2013.10.1.5: Integrated research programme in the field of photovoltaics ENERGY.2013.10.1.6: Integrated research programme in the field of wind energy ENERGY.2013.10.1.7: Integrated research programme in the field of bioenergy ENERGY.2013.10.1.8: Integrated research programme on smart grids ENERGY.2013.10.1.9: Integrated research programme on electrochemical storage ENERGY.2013.10.1.10: Integrated Research Programme in the field of Concentrated Solar Power (CSP) | 35 |
| Support to Platforms | ENERGY.2013.2.1.2: Support to key activities of the European Photovoltaics Technology Platform (TP PV) ENERGY.2013.3.7.2: Support to key activities of the European Biofuels Technology Platform (EBTP) ENERGY.2013.10.1.4: Mobilising the research, innovation and educational capacities of Europe's universities | 2.5 |