

The European Union (EU) Seventh Framework Programme (FP7)

Thembakazi Mali NCP Energy



WHAT IS THE FP?

- EU's main instrument for funding R&D
- Promote research collaborations and open to non-European countries
- South Africa started participating in FP4
- FP4-FP6: R150 Million investment in SA projects
 - close to 250 participations
- FP7: 7 years
 - ↳ (50,5 billion EURO from 2007-2013)
 - 233 participations in 189 proposals

Top 10 partners

UK, France, Germany, Italy, Belgium, Netherlands, Spain, Sweden, Switzerland and India

SA-EU S&T partnership

EU is historically SA's most important partner for international S&T collaboration

EU one of the leading knowledge generation and innovation economies in the world

Internationalisation of SA S&T

Connection to global research

Increase of research funding

Department of Science and Technology (DST) established the European-South African Science and Technology advancement Programme (ESASTAP) as a platform to support the collaboration

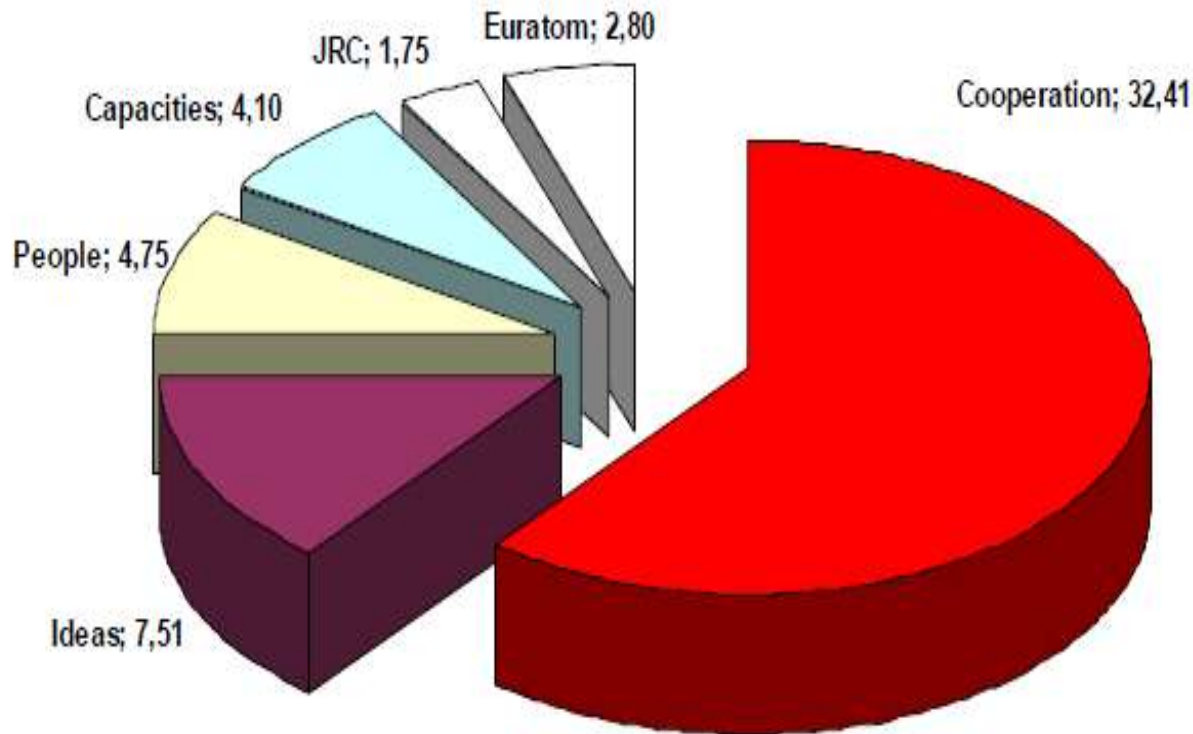
www.esastap.org.za/index.php



FP7 participation

- Implementation through defined calls for proposals (5 July 2012, published 10 July 2012)
- European partners are needed for participation
- Legal personality – natural or legal person
- Full electronic submission
- Most projects coordinated by European partners
- Register as an independent experts for evaluation and monitoring of FP7 projects
(<https://cordis.europa.eu/emmfp7/index.cfm?fuseaction=wel.welcome>)
- Guidance for IP in consortium agreements
(<http://cordis.europa.eu/ipr-helpdesk/en/>)

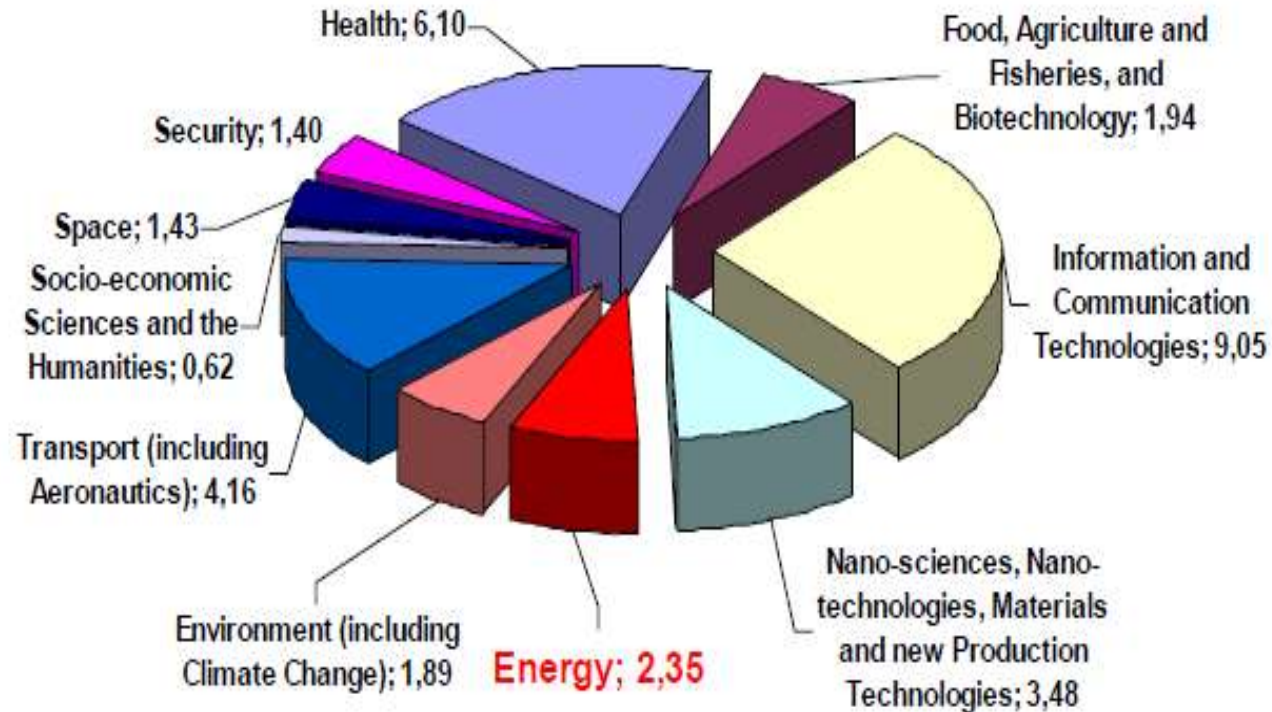
Structure of FP7



ESASTAP

european - south african science and technology
advancement programme

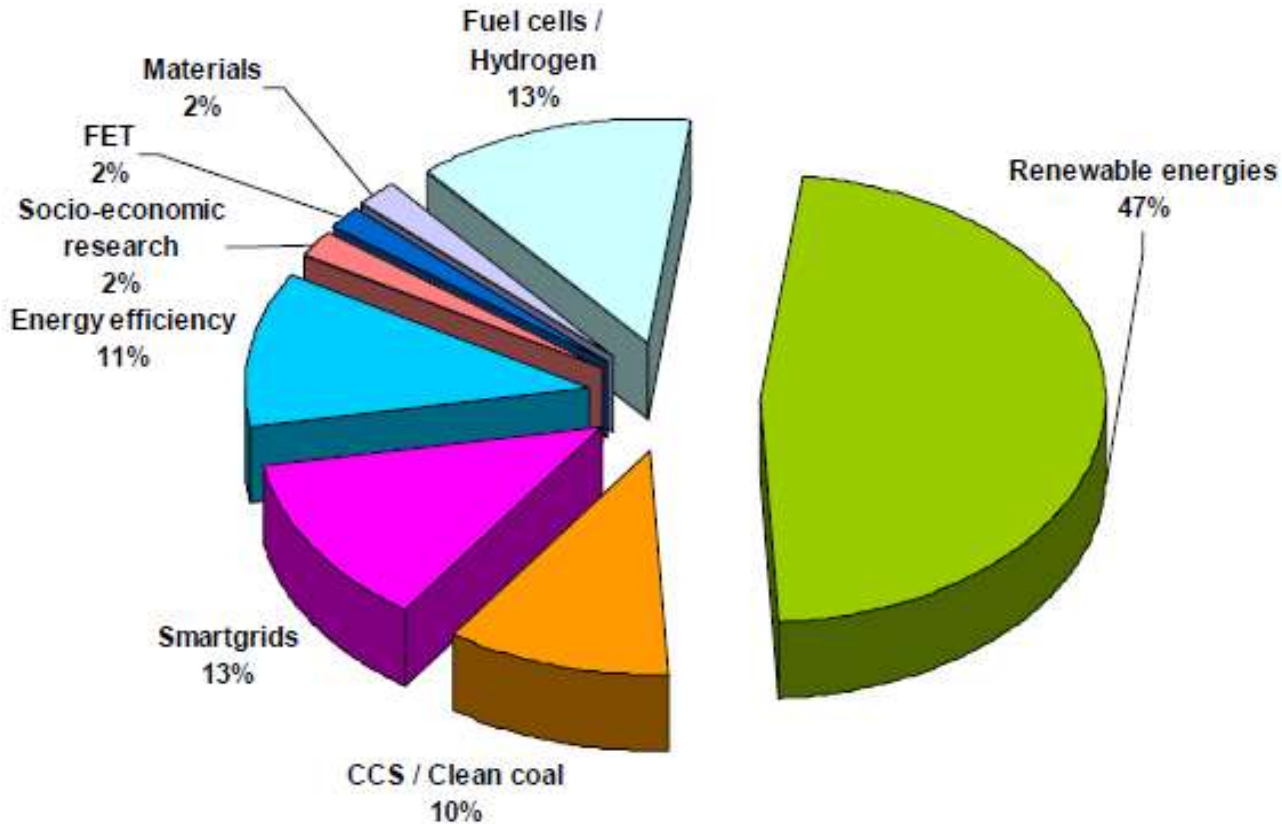
Thematic Areas



ESASTAP

European - South African Science and Technology Advancement Programme

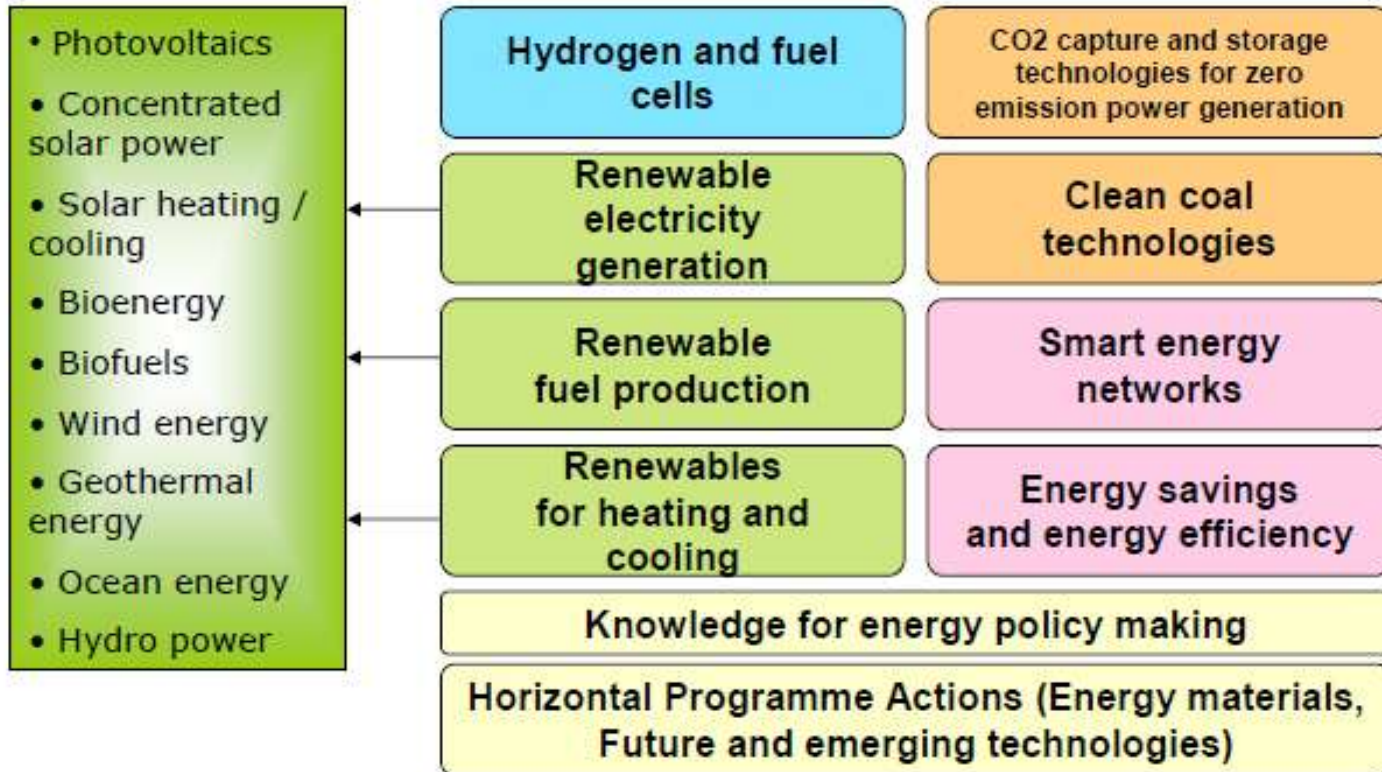
Energy theme in FP7



ESASTAP

European - South African Science and Technology Advancement Programme

Energy theme.....



Energy in other thematic areas

| Area | FP7 Theme | Further info |
|---|--|--|
| Energy efficiency, biofuels, fuel cells | Transport | <ul style="list-style-type: none"> http://cordis.europa.eu/fp7/cooperation/transport_en.html http://ec.europa.eu/research/transport/index_en.cfm |
| Energy materials, energy storage, buildings | NMP | <ul style="list-style-type: none"> http://cordis.europa.eu/fp7/cooperation/nanotechnology_en.html http://ec.europa.eu/research/industrial_technologies/index_en.html |
| Bioenergy, energy plants | Food, agriculture and fisheries, biotechnology | <ul style="list-style-type: none"> http://cordis.europa.eu/fp7/kbbe/home_en.html http://ec.europa.eu/research/agriculture/index_en.html |
| Energy efficiency, smartgrids | Information & communication technologies | <ul style="list-style-type: none"> http://cordis.europa.eu/fp7/ict/home_en.html http://ec.europa.eu/information_society/tl/research/index_en.htm |
| Bioenergy, socio-economic research, buildings | Environment | <ul style="list-style-type: none"> http://cordis.europa.eu/fp7/environment/home_en.html http://ec.europa.eu/research/environment/index_en.htm |
| Socio-economic research | Socio-economic sciences and the humanities | <ul style="list-style-type: none"> http://cordis.europa.eu/fp7/ssh/home_en.html http://ec.europa.eu/research/social-sciences/index_en.html |

Analysis of SA participation

- Most successful areas
 - Health; environment; bio-economy (FAFB)
- Important progress:
 - ICT, aeronautics, transport, space, social sciences / humanities, nuclear, researcher mobility
- Challenge:
 - Energy, materials and production technologies
 - Relatively low industry / SME participation

Benefits from South Africa's Framework Programme participation

- Not only funding – long-term strategic relations
- Meaningful involvement knowledge generation builds capacity
- Enrich and complement bilateral cooperation
- R&D cooperation addressing global challenges
- Creates other cooperation opportunities



DST SUPPORT...

Marketing and promoting SA participation in FP7

- ESASTAP helpdesk for any FP7 related questions
- NCPs for technical thematic queries
- Thematic brochures reflecting SA activities and excellence per theme
- International theme specific events to market SA excellence and facilitate partner matching between SA and European researchers
- Local information and training sessions to raise awareness of FP7 and prepare the SA research communities

DST SUPPORT...

Financial support

- Seed funding – for SA researchers preparing for participation in FP7, up to 80% of expenses
- Co-investment funding – for SA researchers participating in approved FP7 project needing matching funding (50% of the shortfall)
- Mobility matching fund – for SA researchers participating in approved IRSES project, R 30 000/month/person
- Support for COST participants, up to R50 000/visit/institution

Energy-related calls for proposals under the FP7 to be published on 10 July 2012

- **FP7-ENERGY-2013-1:** general call focusing on research with a long-term horizon;
- **FP7-ENERGY-2013-2:** general call focusing on research with a short-term horizon and on demonstration;
- **FP7-SMARTCITIES-2013:** a call in the framework of the SET-Plan Smart Cities and Communities Initiative;
- **FP7-ENERGY-2013-IRP:** a call to support integrated research programmes in the energy field;
- **FP7-FISSION-2013:** a call focusing on nuclear fission research;
- **FP7-2013-NMP-ENV-ICT-EeB:** a cross-thematic call on energy efficiency in buildings in the context of the European Economic Recovery Plan;
- **FP7-2013-OCEAN:** a cross-thematic call on marine and maritime research including an energy relevant topic;
- **FP7-ERANET-2013-RTD:** a joint call on ERA-NETs together with other FP7 themes.



ESASTAP

european - south african science and technology
advancement programme

ORIENTATION PAPER

The main focus of the calls is the integration of research with innovation to tackle societal challenges and create sustainable jobs and growth by giving Europe a lead in the key technology markets of the future. All activities are open to researchers and research institutions from third countries and strong efforts are made to encourage them to seize this opportunity. Particular attention is paid to supporting strategic bilateral agreements and dialogues.

http://ec.europa.eu/research/participants/portal/ShowDoc/Extensions+Repository/General+Documentation/Orientation+papers+2013/Cooperation/fp7-energy-orientation-paper_en.pdf



ORIENTATION PAPER

Cooperation with Third countries or international initiatives is particularly encouraged in the following topics:

- 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;
- Topic ENERGY.2013.6.1.1: Combined Underground Coal Gasification and CO₂ Capture and Storage;
- Topic ENERGY.2013.7.3.2: Enhanced interoperability and conformance testing methods and tools for interaction between grid infrastructure and electric vehicles;
- Topic ENERGY.2013.7.3.3: Understanding interfaces in rechargeable batteries and super-capacitors through in situ methods;
- Topic ENERGY.2013.10.1.2: ERA-NET Plus – European wind resources assessment;
- Support to joint programmes between research performers on innovative research in support of the SET Plan Research and Innovation Agenda.

ORIENTATION PAPER

SMART CITIES AND COMMUNITIES

- Topic ENERGY.2011.2.3.2: Small to medium size wind turbines 17
- Topic ENERGY.2013.4.1.1: Innovative solar thermal façade systems 28
- Topic ENERGY.2013.7.1.1: Development and validation of methods and tools for network integration of distributed renewable resources 36
- Topic ENERGY.2013.7.3.1: Planning rules for linking electric vehicles (EV) to distributed energy resources 40
- Topic ENERGY.2013.7.3.2: Enhanced interoperability and conformance testing methods and tools for interaction between grid infrastructure and electric vehicles 41
- Topic ENERGY.2013.8.8.1: Demonstration of optimised energy systems for high performance-energy districts 44

ORIENTATION PAPER

RENEWABLE ENERGIES

- Topic ENERGY.2013.2.1.1: High efficiency c-Si photovoltaics modules 14
- Topic ENERGY.2013.2.1.2: Support to key activities of the European Photovoltaics Technology Platform (TP PV) 15
- Topic ENERGY.2011.2.3.1: Advanced aerodynamic modelling, design and testing for large rotor blades 16
- Topic ENERGY.2013.2.4.1: Exploration and assessment of geothermal reservoirs 18
- Topic ENERGY.2013.2.6.1: Design tools, enabling technologies and underpinning research to facilitate ocean energy converter arrays 19
- Topic ENERGY.2013.2.9.1: Research cooperation and knowledge creation in the area of renewable energy with Mediterranean partner countries 21
- Topic ENERGY.2013.2.9.2: Methods for the estimation of the Direct Normal Irradiation (DNI) 21

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- Topic ENERGY.2013.3.2.1: Pre-commercial industrial scale demonstration plant on paraffinic biofuels for use in aviation 23
- 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 25
- Topic ENERGY.2013.3.7.2: Support to key activities of the European Biofuels Technology Platform (EBTP) 26
- Topic ENERGY.2013.10.1.1: ERA-NET Plus – Bioenergy: Demonstrations of the European Industrial Bioenergy Initiative 49
- Topic ENERGY.2013.10.1.2: ERA-NET Plus – European wind resources assessment 49
- 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) 52

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- Topic ENERGY.2013.10.1.5: Integrated research programme in the field of photovoltaics 54
- Topic ENERGY.2013.10.1.6: Integrated research programme in the field of wind energy 54
- Topic ENERGY.2013.10.1.7: Integrated research programme in the field of bioenergy 54
- Topic ENERGY.2013.10.1.10: Integrated Research Programme in the field of Concentrated Solar Power (CSP) 54
- OCEAN 2013.4 Innovative transport and deployment systems for the offshore wind energy sector 59

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SMART GRIDS AND ENERGY STORAGE

- Topic ENERGY.2013.2.7.1: Optimisation of Water Turbines 20
- Topic ENERGY.2013.7.2.1: Advanced concepts for reliability assessment of the pan-European transmission network 37
- Topic ENERGY.2013.7.2.2: Advanced tools and mechanisms for capacity calculation and congestion management 38
- Topic ENERGY.2013.7.2.3: Large-scale demonstration of innovative transmission system integration and operation solutions for (inter)connecting renewable electricity production 38
- Topic ENERGY.2013.7.2.4: Ensuring stakeholder support for future grid infrastructures 40
- Topic ENERGY.2013.7.3.3: Understanding interfaces in rechargeable batteries and super-capacitors through in situ methods 42
- Topic ENERGY.2013.10.1.8: Integrated research programme on smart grids 54
- Topic ENERGY.2013.10.1.9: Integrated research programme on electrochemical storage 54

ORIENTATION PAPER

CARBON CAPTURE AND STORAGE / CLEAN COAL TECHNOLOGIES

- Topic ENERGY.2013.5.1.1: Scale-up of advanced high-efficiency capture processes 30
- Topic ENERGY.2013.5.1.2: New generation high-efficiency capture processes 31
- Topic ENERGY.2013.5.2.1: Mitigation and remediation of leakage from geological storage 31
- Topic ENERGY.2013.6.1.1: Combined Underground Coal Gasification and CO2 Capture and Storage 33

HORIZONTAL ISSUES

- Topic ENERGY.2013.9.2.1: European scientific multidisciplinary "think-tank" to support energy policy and to assess the potential impacts of its measures 47
- Topic ENERGY.2013.10.1.4: Mobilising the research, innovation and educational capacities of Europe's universities 53

FP7 participation

1. Identify relevant call for proposals (10 July 2012)

- Check website of CORDIS
- Check also other FP7 Themes and Programs

2. Receive call-specific documentation and forms

- Consult the CORDIS website

3. Establish a research consortium

- Use the Partner search facility on CORDIS, contact NCPs

4. Prepare and submit a proposal

- Consult your National Contact Point or the Commission in case of questions
- Respect the call requirements and deadlines! (12 noon in Brussels means just that!)

Thank you!

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