FP7 FINAL CALL FACT SHEETS ON STRATEGIC PRIORITIES – SECURE CLEAN AND EFFICIENT ENERGY

Facts & figures

80 % of the European energy system still relies on fossil fuels, and the sector produces 80 % of all the Union's greenhouse gas emissions. Every year 2.5 % of the Union's Gross Domestic Product (GDP) is spent on energy imports and this is likely to increase. This trend would lead to total dependence on oil and gas imports by 2050. Faced with volatile energy prices on the world market, coupled with concerns over security of supply, European industries and consumers are spending an increasing share of their income on energy.

How much money do we plan to invest?

Approximate budget of €255 million

- €145 million to develop new generations of renewable technologies in the field of photovoltaics, wind turbines (and off-shore logistics), ocean energy, bioenergy and bio-fuels for use in the aviation sector.
- €28.5 million to develop highly-efficient carbon capture and storage (CCS) technologies, including safety and security aspects.
- €81 million to develop "smarter" electricity grids and storage options.

Activities of the Smart Cities priority will also contribute to this priority.

Why this priority?

Without a technological shift in our current energy system, the EU will fail on its 2050 ambitions to largely decarbonise the energy sector. Europe needs to develop and introduce into the market new generations of low carbon technologies whose performance and economics stand a chance of competing with conventional energy sources. This demanding challenge requires a strong emphasis on research and innovation.

The race for industrial leadership that is going on worldwide is calling for unprecedented resources and capacities in cutting-edge research and it has to last for decades. If the Union is to maintain and expand its competitiveness in the global clean energy technology market it will require integrating much further capacities and resources in high risk technology research.

What results do we expect in which area?

<u>Renewable energy</u>

- Cheaper and more efficient renewable technologies
- …..to improve the cost-competitiveness of renewable energy technologies compared to conventional energy.

<u>Carbon capture and storage</u>

- High-efficiency capture processes that improve the cost-competitiveness of CCS
- Safe, reliable and controllable storage processes that address concerns about leakage of CO2 - with human health and/or environmental impacts.

<u>Electricity grids and Storage</u>

- more flexible and "smarter" electricity grids and storage options increasing the efficiency, flexibility, safety, reliability and quality of the European electricity systems and networks
- …to support the integration of decentralised renewable energy sources and electric vehicles as well as to support the development of a pan-European internal market for energy.