



## CLEAN ENERGY AND TECHNOLOGY

*The development and diffusion of low-carbon technologies are essential elements of an effective response to climate change.*

### THE CHALLENGE

- In order to respond to climate change, caused by growing greenhouse gas emissions, and to accelerate the transition towards a **green growth**, it is essential to develop and deploy low-carbon technologies on a global scale.
- A number of technologies needed to combat climate change have already been developed, but insufficiently commercialized. It is necessary to improve policy and regulatory frameworks in order to **stimulate investments** in this area and enhance diffusion and deployment of such technologies, including in emerging economies and developing countries.

### G8 RESPONSE

- The G8 initiated a process to launch an **international low-carbon energy technology platform**, which will strengthen international cooperation and research on clean energy technologies.
- Leaders agreed to promote research and development of **smart grids**, which allow for renewable energy sources to be integrated into the electrical grid. This enables consumers who also have the ability to generate electricity (e.g. distributed generation from solar panels on the roofs of houses) to transmit energy to the grid when they have a surplus and to consume energy from the grid when it is needed.
- The G8 has given new impetus towards the launch of **20 large-scale Carbon Capture and Storage demonstration projects globally by 2010**, and welcomed the IEA's work on defining criteria to track global progress, select appropriate CCS sites worldwide, and build and operate the plants. CCS is a process whereby CO<sub>2</sub> is captured from gases produced by fossil fuel combustion, compressed, transported and injected in underground storages. This is expected to contribute significantly to reducing emissions.
- G8 Leaders committed to intensify their work in **increasing investment in clean technology research and development**, including through public-private partnerships. They also called for provisions on financing for research, development, deployment and diffusion of low-carbon technologies to be included in the post-2012 agreement on climate change.
- The G8 committed to **work with developing countries to build capacity** to support the development, deployment, diffusion and transfer of climate-friendly technologies.