

Full Mix Of Technologies Vital For Sustainable Energy Future

Technologies can make a difference, said Claude Mandil, Executive Director of the International Energy Agency (IEA) in Paris, presenting the key findings of a new IEA publication: Energy Technology Perspectives: Scenarios and Strategies to 2050.

“A sustainable energy future is possible, but only if we act urgently and decisively to promote, develop and deploy a full mix of energy technologies – including improved energy efficiency, CO2 capture and storage (CCS), renewables and, where acceptable, nuclear energy”, Mandil said. “We have the means, now we need the will.”

Energy Technology Perspectives is part of the agency’s response to the call from G8 leaders at their Summit in Gleneagles in July 2005 for the IEA to advise on alternative scenarios and strategies aimed at a “clean, clever and competitive energy future”.

Running up to the St. Petersburg G8 summit the study presents a series of scenarios to demonstrate the role energy technologies that

are already available or under development can play in future energy markets. “We find that clean and more efficient technologies can return soaring energy-related CO2 emissions to today’s levels by 2050 and halve the expected growth in both oil and electricity demand”, Mandil said. Released against a backdrop of historically high oil prices and global CO2 emissions from energy use almost 25% higher than a decade ago, the study takes a detailed look at status

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and prospects for key energy technologies in power generation, buildings, industry and transport. It puts forward strategies for attaining scenarios unimaginable under current trends.

Mandil said energy efficiency is essential to mitigate growth in energy demand and CO2 emissions. “Improved energy efficiency is an indispensable component of any policy mix and it is available immediately”. He said accelerating energy efficiency improvements alone can reduce the world’s energy demand in

2050 by an amount equivalent to almost half of today’s global energy consumption. “To achieve this, however, governments must be willing to implement measures that encourage the investment in energy-efficient technologies.”

Another key technology is the capture and storage of CO2 emitted from power generation or industrial processes. The study points out that the early demonstration of CCS in full-scale power plants should be a high priority. “If we do not succeed in making CCS viable, the cost of mitigating CO2 emissions will be much higher,” Mandil warned.

“Deploying CCS, along with more renewables, more nuclear and more efficient use of natural gas and coal, can significantly decarbonise global electricity generation by 2050. With the right policy incentives we think there is scope for renewables to quadruple by 2050 and for nuclear to gain a more important role in countries where it is acceptable.” ■