

**Nobuo Tanaka**

**Executive Director, International Energy Agency**

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**Intervention on Climate Change**

Much attention is being focused on negotiations to set a greenhouse gas emissions reductions target. But a target alone will not miraculously solve the problem. What is needed is practical action to transform the way we produce and use energy. With this in mind, I would like to briefly outline the key findings of recent IEA work in this area.

Our new publication, *Energy Technology Perspectives 2008*, demonstrates that to cut emissions by 50% by 2050 we would need a global energy revolution. The first step would be to drastically improve energy efficiency. We would then need to substantially decarbonise power generation. And finally, we would need to make an eightfold reduction in the carbon intensity of transport.

In terms of energy efficiency, we have developed a set of 25 recommendations across seven priority areas. If implemented globally, they could save around 8.2 Gt of CO<sub>2</sub> per year by 2030. This is greater than the current energy related CO<sub>2</sub> emissions from the USA and Japan combined. They would also reduce global energy

demand by an amount comparable to the total current energy consumption of the USA. The triple-win potential of energy efficiency -- higher economic performance, higher energy security and less climate change -- leads to three recommendations: implement, implement, implement.

The next step - decarbonising the power sector - can be achieved through renewables, nuclear power, and the capture and storage of CO<sub>2</sub> emissions from coal or gas plants. There is a degree of choice, for each country, as to the balance of these technologies that you chose. But action is needed urgently, and the costs are substantial. For instance, just as part of efforts to meet a 50% cut in emissions, we would need to build 14,000 large wind turbines and 32 nuclear power plants every year between now and 2050.

Some of the technologies that will be needed - especially in the transport sector - are not yet available, and others require further refinement and cost reductions. A huge effort of research, development, and demonstration will be needed. To guide this process, we have made a first attempt on 17 energy technology roadmaps which outline the steps needed to bring the technologies through to commercialisation. We welcome the opportunity to work with governments and with industry to further progress these roadmaps. Of the 17, Carbon Capture and Storage is clearly the

most crucial. IEA analysis suggests we need to construct at least 20 demonstration plants over the course of the next twelve years. Such a program should be seen as one 'litmus test' of our seriousness of combating global warming. Commitment to fund CCS, including through the clean development mechanism, could serve as a trigger for the deployment of this critical new technology.

I will not go beyond these brief comments at this time, so please let me close my intervention by thanking the Government of Japan for inviting the IEA to participate in these crucial talks.

Thank you.