

## Less Carbon Can Mean More Growth

*By Jeroen van der Veer*

*Royal Dutch Shell's Chief Executive says limiting greenhouse gas emissions should remain a priority for society during the global recession – and can also help fuel economic recovery. His commentary, first published during the World Economic Forum Annual Meeting in January 2009, has appeared in 11 languages in dozens of newspapers worldwide.*

Although the global recession is serious and its duration uncertain, the world must nevertheless continue to focus on the far-reaching threat of climate change. Indeed, if we are smart, public policy can serve the twin goals of stimulating growth and fighting global warming.

Governments hammering out a successor agreement to the Kyoto Protocol at the United Nations climate conference in Copenhagen later this year should adopt strong incentives to cut greenhouse-gas emissions. Doing so could kick-start private investment and help to fuel economic recovery.

The broad outlines of an effective and efficient response to global warming have been clear for years. A system to cap CO<sub>2</sub> emissions and trade emission allowances would channel resources toward the most cost-effective reduction measures. And widespread adoption of efficiency standards for appliances, vehicles, and buildings would help companies and individuals use less energy.

Moreover, several specific policy initiatives could help government and society better harness companies' agility and innovative power in the quest to control greenhouse-gas emissions:

- Agreements among groups of key countries to reduce emissions in specific industrial sectors;
- Incentives for companies to capture CO<sub>2</sub> and store it safely underground, accelerating the deployment of this promising technology;
- Technology funds to support the development and commercial demonstration of new technologies, such as advanced biofuels, with high potential for lowering CO<sub>2</sub> emissions.

Until now, negotiators have aimed for a global deal palatable to developed and developing countries alike. While that remains the ultimate goal, it has so far proven devilishly complex to formulate.

A possible stepping-stone would be agreements between smaller groups of pivotal countries to cap emissions from individual high-emitting sectors of their economies. Such

agreements could be important building blocks for a broader deal. Sectors to focus on include power generation, which accounts for about 35% of global CO<sub>2</sub> emissions, and production of cement, chemicals, and steel.

Involving a limited number of the most important countries would facilitate a compromise. Such deals would ease concern in competitive global industries that strict emission rules in one region would put companies at a disadvantage relative to rivals in countries with less strict policies.

As a hypothetical example, an agreement on emissions from coal-fired power stations might include large users such as China, the European Union, India, Japan, and the United States, which together account for about 80% of global coal-fired capacity. Such a deal could include mechanisms for transferring clean-coal technology from developed countries to developing ones. Cap-and-trade systems could provide a potential source of funds through the auctioning of emission allowances.

The need is urgent. Asia alone will build some 800 gigawatts of new coal-fired generating capacity over the next 10 years, equal to the EU's total electricity generating capacity today. Once built, the plants will emit more than four billion tons of CO<sub>2</sub> each year – about the same as the EU's total energy-related emissions – and operate for 30 years or more.

Climate negotiators should also give CO<sub>2</sub> capture and storage (CCS) high priority. While increased use of renewable and nuclear energy will help reduce emissions, by themselves they will not be able to keep up with fast-growing energy demand. Fossil fuels, like it or not, will remain the world's main source of energy for decades.

Indeed, “cleaning up” fossil fuels is a necessary and vital bridge to a low-carbon future. According to the UN Intergovernmental Panel on Climate Change, CCS may contribute up to 55% of the emission reductions that scientists believe are necessary during this century to address global warming. But companies are reluctant to invest in CCS because it adds substantial cost and generates no revenue. If CCS is to fulfill its potential, companies need incentives to invest and a way to make money.

Policymakers should promote CCS in several ways. First, they must put a price on CO<sub>2</sub> emissions. They could do so by capping emissions and creating a market where companies can buy and sell emission allowances, as in the European Emissions Trading Scheme. Second, CCS needs to be recognized within the Kyoto Protocol's Clean Development Mechanism, through which developed countries can invest in emission-reduction projects in developing countries.

Finally, governments should stimulate the development and commercial demonstration of technologies that hold promise for a low-carbon energy future. The dramatic drop in energy prices in recent months makes it less likely that private investors will gamble on unproven technologies.

Clearly, strapped treasuries will have difficulty providing funds. But emission-trading schemes can provide an alternative source of financing. For example, the EU recently set aside 300 million tradable emission allowances, to be awarded to innovative renewable energy projects or CO<sub>2</sub> storage projects. Depending on the market price for a ton of CO<sub>2</sub>, that could mean about €6-9 billion in assistance to get such new technologies up to scale.

No one knows if the economic crisis will last months or years. But a good outcome in Copenhagen will serve the world for decades to come by sparking growth and taking steps to control greenhouse-gas emissions.

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