## Why switching to clean energy is the smart way forward

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limate change is happening now and we see its devastations all around the world.

Think of the ongoing drought in the Horn of Africa, the worst to hit the area in 60 years. Think of the forest fires in Russia last summer or of the floods in Pakistan that affected more than 13 million people.

Climate change may not be the only explanation for these extreme weather events, but it is certainly aggravating them, in combination with a growing population and the increased demand for food and feed for livestock.

So far, global temperatures have risen by 0.8 degrees Celsius since pre-industrial times, but the world's leading scientists are forecasting temperature increases of 3 degrees Celsius, 4 degrees Celsius and even 6 degrees Celsius.

If we want to avoid the worst consequences of climate change, with its devastating effects on our societies and economies, scientists say global warming has to be kept below 2 degrees Celsius.

This makes climate change one of the biggest challenges the world is facing today. Given the increasing evidence that global warming is happening already, it would be foolish not to take action to reduce global greenhouse gas emissions.

Nations worldwide should join forces and assume their fair share in the global fight to reduce greenhouse gas emissions and make the transition to low-carbon economies, crucial to reversing the wheels of climate change.

Indeed, the transition to a lower-carbon global economy also offers a huge opportunity to modernize our economies, stimulate growth and create jobs by building dynamic new industries based on innovative climatefriendly technologies and clean energy.

It is an opportunity Europe and an increasing number of countries around the globe are seizing—not least China, which has already become the world's leading manufacturer of wind turbines and solar panels.

The global market for low-carbon energy and energy-efficient technologies is forecast by one study to double, and even triple to US\$2.2 trillion, between 2010 and the end of this decade. No major trading nation can afford to miss this opportunity.

Europe is on track to reduce emissions by 2020 to 20 per cent below 1990 levels, in addition to doubling the share of renewable energy to 20 per cent of energy consumption. The 27 member states have also committed to improving the EU's energy efficiency by 20 per cent. Our targets for cutting emissions and boosting renewables are enshrined in law, which requires all our 27 member states to shoulder their fair share, and are implemented through a mix of climate and energy measures.

The EU's overall greenhouse gas emissions, including those from sectors outside the emissions trading system (ETS), are now more than 17 per cent below the 1990 levels—even as our economy has grown by about 40 per cent. We have proved wrong those who claim emissions can't be cut without sacrificing the economy.

The backbone of our policies is the ETS, which puts a price on carbon and caps emissions from some 11,000 power stations and heavy industrial installations. Collectively, these are responsible for about 40 per cent of the EU's total greenhouse gas emissions.

This cap-and-trade system is showing results. Annual emissions per installation are now on average 8.3 per cent lower than when we launched the system in 2005. The recession has, of course, had some impact, but it is clear the EU ETS itself is delivering genuine reductions.

Pricing carbon is the most economically efficient way to address emissions because, unlike traditional command-andcontrol regulation, it allows them to be cut at the least cost.

Carbon pricing drives innovation and investment by creating a permanent incentive to reduce emissions. And the revenues raised can help boost the overall economy if returned to taxpayers' pockets.

In the European Union, we estimate that total employment could rise by up to 1.5 million jobs by 2020 if governments use their income from carbon taxes or the auctioning of emission allowances to lower income taxes and other labour costs.

Meanwhile, the advantages of carbon pricing are increasingly being recognized around the world. In addition to Europe, cap-and-trade systems are either in operation or planned in New Zealand, South Korea, as well as in a number of Canadian provinces and US states through the Western Climate Initiative (WCI), which is comprised of BC, Manitoba, Quebec, Ontario as well as Arizona, California, New Mexico, Oregon, Washington, Utah and Montana. China will follow suit with plans to launch pilot projects next year and a national cap-and-trade system beginning in 2015.

Taking a regulatory approach to curbing greenhouse gas emissions will remain centre stage, as the EU moves full steam ahead towards its long-term goal of cutting emissions to 80-95 per cent below 1990 levels by 2050.

The combination of investment in renewable energy, support for greater energy efficiency and the introduction of a carbon price is a sensible policy mix for tackling greenhouse gas emissions and putting our economies on track towards a competitive low-carbon future. *Mr. Brinkmann is the head of the* 

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