

The Australian

A carbon tax can't save the planet

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- From: The Australian
- July 11, 2011 12:00AM

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AUSTRALIAN politicians on both sides of parliament should be applauded for seeking to respond to global warming at a time when many leaders have put this on the back burner.

Unfortunately, much of the present-day focus is on cutting a tonne here or there from national carbon emissions. On Sunday, Julia Gillard announced the details of the carbon price package.

Introducing a carbon price may feel like a symbolic victory - particularly after years of fiery, distracting debate over the reality of global warming - but unfortunately, symbolism will not reduce temperature rises.

The main climate economic models show that to achieve the much discussed goal of keeping temperature increases under 2C, we would need a global tax on carbon emissions that would start at nearly \$100 per tonne and increase to more than \$3700 per tonne by the end of the century.

This would cost the world \$40 trillion a year by 2100, according to calculations by noted climate economist Richard Tol. But all in all, this spending would be 50 times more expensive than the climate damage it seeks to prevent, according to mainstream calculations of expected damage.

In other words, a carbon tax that is set high enough to meaningfully rein in temperatures would cause widespread economic damage. This is because non-carbon-based alternative energy sources are not ready to take over from fossil fuels.

What is required instead is a transformation in our energy infrastructure to make low-carbon energy sources cheaper than fossil fuels.

Global energy demand will double by 2050. Based on today's progress, alternative technologies will not be ready to play a significant role.

Consider the most hyped alternative technologies. Together, wind and solar energy supply less than 0.6 per cent of the world's entire energy needs. They are not only much more expensive than fossil fuels, but there are huge technological hurdles to overcome to make them efficient.

We are moving at a snail's pace. China has been lauded internationally as a "green giant" for its non-carbon-based energy production and aggressive promises to cut carbon emissions. Of course, the vast majority of the energy produced in China comes from coal.

Despite rapid growth, wind power generates just 0.05 per cent of China's energy and solar is responsible for one-half of one-thousandth of 1 per cent.

The avoided carbon emissions from all of China's solar and wind generation - even maintained across the entire century - would lower temperatures in 2100 by 0.00001C. That is the equivalent, based on mainstream climate models, of delaying temperature rises at the end of the century by about five hours.

Taken as a whole, the nations of the world now spend a paltry \$2 billion a year on green energy research and development. We can and should do a lot better.

A significant increase in R & D investment is needed. Spending 0.2 per cent of global gross domestic product - roughly \$100bn a year - on green energy R & D would produce the kind of game-changing breakthroughs needed to fuel a carbon-free future.

Economists Chris Green and Isabel Galiana of McGill University in Canada calculated the benefits - from reduced warming and greater prosperity - of this investment. They concluded that with this policy, avoiding a dollar of climate damage would cost just 9c. This compares starkly with other analyses showing that with strong carbon cuts we'd spend as much as \$50 to avoid the same amount of damage.

Public funds are needed because the innovation for the long-term future is hard for private capital to capture. As with medical research, early innovations will not reap significant financial rewards, so there is no strong incentive for private investment today. Carbon taxes could play a supplementary role in funding R & D but they are not the primary fix.

Indeed, putting a high price on carbon first (and making the required pay-offs to big industry), and then hoping that alternative technology will

catch up is not a sound policy.

The Australian government's plan to pump \$13bn into Australia's clean and renewable energy sector is a nod in the right direction. Unfortunately, the details released on Sunday suggest that this investment will subsidise the deployment of existing, inefficient technology.

We have seen this occur elsewhere. Germany, for example, led the world in putting up solar panels, funded by about \$70bn in subsidies. Inefficient, uncompetitive solar technology sits on rooftops across a fairly cloudy country. Despite the considerable investment, this delivers just 0.1 per cent of Germany's total energy supply and has a trivial influence on global warming.

Until alternative energy technology is ready to compete on its merits, carbon taxes will simply bleed the economy while providing no real benefit to the climate.

In 2009, the Copenhagen Consensus Centre convened a panel of Nobel laureate economists who examined the research by Green and Galiana, along with a body of new research by top climate economists about different responses to global warming.

This expert panel concluded that an R & D-focused response was the most effective policy choice. Adaptation and carbon-storage policies were given a medium ranking, while a response based entirely on a carbon tax was found to be the least effective choice.

Australia could lead the world on climate change by pursuing a policy based on the creation of a research and development fund. This would unleash entrepreneurship and creativity.

For 20 years, global leaders have pursued a global carbon deal. It is clear those attempts have failed.

Developing nations have no intention of letting the developed world force them to cut their use of carbon-emitting fuels and curtail the domestic economic growth that is allowing their populations to clamber out of poverty. Trying to rein in temperatures through carbon cuts does not make economic sense even for developed nations.

Despite 20 years of earnest rhetoric by politicians, carbon emissions have continued to climb virtually unabated.

With a global deal off the table, politicians must now decide whether they will show leadership and real commitment to bringing about the needed breakthroughs in alternative energy, or whether they will settle for making short-term, symbolic victories that will end up doing very little for the planet.

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