THE AUSTRALIAN

Printed September 04, 2009 01:51am AEST

Cut the carbon later on

August 20, 2009

Article from: The Australian

Cutting future emissions is much cheaper than slashing present ones, argues Bjorn Lomborg

AT its heart, much of the debate over climate change deals with just one divisive and vexing question: How big should cuts in carbon emissions be? This narrow focus makes the debate unconstructive. Everybody wants to prevent global warming and the real question is: How can we do that best?

We should be open to other ways to stop warming, such as cutting carbon emissions in the future instead of now or focusing on reducing emissions of other greenhouse gases. Global warming will create significant problems, so carbon reductions offer significant benefits.

Cutting carbon emissions, however, requires a reduction in the basic energy use that underpins modern society, so it also will mean significant costs.

Prominent climate economist Richard Tol, of Hamburg University in Germany, has analysed the benefits and costs of cutting carbon now v cutting it in the future. Cutting early will cost $US17.8 trillion ($21.6 trillion), whereas cutting later will cost just $US2trillion. Nonetheless, the reduction in CO2 concentration -- and hence temperature -- in 2100 will be greater from the future reductions. Cutting emissions now is much more expensive, because there are few, expensive, alternatives to fossil fuels. Our money simply doesn't buy as much as it will when green energy sources are more cost-efficient.

Tol strikingly shows that grand promises of drastic, immediate carbon cuts -- reminiscent of the call for 80 per cent reductions by mid-century that some politicians and lobbyists make -- are an incredibly expensive way of doing very little good. All the academic models show that, even if possible, limiting the increase in global temperature to 2 degrees C, as promised by the European Union and the G8, would cost a phenomenal 12.9 per cent of gross domestic product by the end of the century. This would be the equivalent of imposing a cost of more than $US4000 on each inhabitant every year, by the end of the century. Yet the damage avoided would likely amount to only $US700 for each inhabitant.

The real cost of ambitious, early and large carbon-cutting programs would be a reduction in growth -- particularly damaging to the world's poor -- to the tune of about $US40 trillion a year. The costs also would come much sooner than the benefits and persist much longer. For every dollar the world spends on this grand plan, the avoided climate damage would be worth only US2c.

It would be smarter to act cautiously by implementing a low carbon tax of about US50c a ton -- about US0.5c a gallon of gas or E0.1c a litre of petrol -- and increase it gradually through the century. This would not cut carbon emissions spectacularly, but neither would it be a spectacular waste of public funds. Each dollar would avoid $US1.51 of global warming damages, a respectable outcome.

Taxing fossil fuels to reduce carbon emissions is a sensible part of the solution to climate change, but it is not the only or best way to prevent warming. There are other ways to cut carbon from the atmosphere. One of these is protecting forests, since deforestation accounts for 17per cent of emissions. If we are serious about grand promises to keep global temperature rises below 2 degrees C, we obviously need to find ways of making this cheaper. Brent Sohngen, of Ohio State University in the US, points out that forests could be important: including forestry in the control of greenhouse gases could somewhat reduce costs.

Moreover, although politicians focus nearly exclusively on cutting carbon emissions, CO2 is not the only gas causing warming. The second biggest culprit is methane. Cutting methane is cheaper than cutting carbon and, because methane is a much shorter-lived gas than CO2, we can prevent some of the worst short-term warming through its mitigation. Agricultural production accounts for half of anthropogenic methane, but waste-water systems, landfills and coalmining also create the gas.

Claudia Kemfert, of the German Institute for Economic Research, argues that spending $US14 billion to $US30bn to reduce methane would create benefits -- from the reduction in warming -- between 1.4 and three times higher.

We could also put a bigger focus on reducing black carbon, considered responsible for as much as 40 per cent of present net warming and one-third of Arctic melting. Black carbon is essentially the soot produced by diesel emissions and -- in developing countries -- by the burning of organic matter to cook food and stay warm. It can be eliminated with cleaner fuels and new cooking technologies.

Doing so would yield other benefits as well. Sooty pollution from indoor fires claims several million lives each year, so reducing black carbon would be a life-saver. A team of economists led by David Montgomery estimates that spending $US359million could realistically slash 19per cent of black carbon emissions. This would have a significant cooling effect on the planet and would save 200,000 lives from pollution.

The net annual benefits would run into several billion dollars, which equates to $US3.60 worth of avoided climate damage for each dollar spent.

Costs and benefits matter. The best solution to climate change achieves the most good for the lowest cost. With this as our starting point, it is clear that a narrow focus on short-term carbon emission cuts is flawed. The most pertinent question of all is: Why don't we choose a solution to global warming that will actually work?

Bjorn Lomborg is director of the Copenhagen Consensus Centre.