

Remarks by the Honourable Donald J. Johnston Secretary-General of the OECD¹

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When I look at the enormous number of challenges we must address in the first part of the 21st century, climate change must be high on the list. But it is also in stiff competition with development and poverty reduction, all areas where the OECD is much involved and where our Members are deeply committed to finding solutions.

Climate change must be addressed quickly, seriously and objectively by the developed and the developing world.

Last November a group of responsible NGOs published a report which alleged that global warming will hit the poor countries hardest. The report, drawing upon UN predictions of the effects of climate change for the next 50 years, concludes that poor countries will experience more flooding, declining food production, more disease and the deterioration or extinction of entire ecosystems upon which many of the world's poorest people depend.

However, while poor countries will be hit the hardest, none of us will be spared.

To what extent is this accelerated increase in global warming due to human activities, namely the release of greenhouse gases into the atmosphere, especially CO₂?

My reading of the literature, expert and non-expert, suggests to me there are certain things we know, certain things we do not know, and a broad area where we think we know, but are not certain.

Let me offer a few general observations drawn from this knowledge.

¹ My comments today are based on my own personal views rather than those of the OECD or its Member countries.

We know that greenhouse gas emissions, especially CO₂, are contributing to global warming. A fact once disputed by some, this argument now seems to be behind us.

We know, for example, that Kyoto, if ratified and applied by all countries including the United States, will not stop climate change.

We know that before the industrial age, the CO₂ level in the atmosphere was steady at around 280 parts per million (ppm). We know that at the time of Kyoto, in 1997, that level had reached 368 ppm. Seven years later, we know it is at 379 ppm. We know that Kyoto is not the answer because it requires only a very modest reduction of 5.2 per cent for industrialised countries and an even more modest response from the rest of the world.

From Antarctic Ice Core Data we know that there have been five spikes of global temperatures during the past 400,000 years. But during each of these spikes, CO₂ levels have only once, and then barely, exceeded 300 ppm. It is argued that the rapid fall from these high temperatures in the past was because of low levels of CO₂ concentrations. Now we are headed for another sharp rise in temperatures, but this time it may be more than a spike because of the increased levels of CO₂ in the atmosphere. The consequences of the continuing rising trend of CO₂ levels are likely to be dramatic, maybe catastrophic!

We know that many experts, such as David King, chief scientist adviser with the UK Government, believe that 550 ppm should not be exceeded. We know from the Intergovernmental Panel on Climate Change that if some agreement could be reached on emission quotas, stabilising at 550 ppm would require us to ensure that global emissions peak no later than 2025. We know that many, and probably most, would like to see CO₂ concentrations kept below 450 ppm; however, given current trends, this does not appear realistic.

Even if CO₂ emissions are stabilised at 550 ppm, we think that substantial climate changes will still take place, with the global temperature rising from between 2 to 5 degrees, depending upon the area; and the sea level rising by 0.3 to 0.8 metres by the end of the century, and by 7 to 13 metres over the next millennium. But even to stabilise at 550 ppm, we know that more must be done, and specifically the global energy industry must change. From transportation to electricity generation, we know that major changes must take place, not only to at least stabilise the greenhouse effect, but to adapt to the dwindling supplies of oil, gas and even coal in the longer term. Otherwise, we will be faced with the reality of the discouraging projections of the International Energy Agency (IEA) in its last world energy outlook, namely, that from 2003-2030 global energy supply will require an infrastructure investment of \$ 16 trillion, assuming no change in the energy mix!

What can be done? What are the realistic options?

Many, especially the Green movement, look to renewable energy sources such as wind and solar power. A wonderful option, but is it realistic? What do we know or, at least, what are we told?

The IEA's Outlook tells us that world renewable energy consumption represented 14% of total demand in 2002, and will still represent just 14% of total demand in 2030. On those projections we can hardly look to renewable energy as a means of effectively addressing greenhouse gas emissions.

Given that the IEA projects a 60% increase in world primary energy demand between 2002 and 2030, renewables, even remaining at 14% of total energy demand, represents still a very major investment. Is it conceivable that an even greater concentration of investment in renewables would raise that percentage substantially? Very doubtful.

If renewable energy is not a reasonable option through which to effect major changes in energy consumption, what other choices do we have?

There is of course the continuing prospect of fusion which has now been resurrected with the ITER proposal. Again, no matter how promising, it is many years away – too far to impact on the immediacy of the problem at hand.

Last, but far from least, there is the proven technology of nuclear energy (fission). Many, including the renowned scientist James Lovelock, originator of the Gaia hypothesis, deplore the fact that this technology has been abandoned by many countries. I understand that he will be addressing this conference by video link so there is no point in my quoting his views in detail.

Suffice it to say that he appears to see nuclear energy as critical to check runaway global warming, which would have potential catastrophic consequences.

I am inclined to accept Lovelock's opinion over those who seem to indulge in wishful thinking rather than facing the harsh reality of what is happening to our planet.

The climate will probably change no matter what we now do, but we should, at the very least, make every effort to slow it down so as to permit the world to adapt. Nuclear energy is a critical element of that process. We ignore its importance at our peril.

But there are other compelling reasons to proceed with nuclear energy besides climate change. With the world requiring 60% more energy by the year 2030, and with most demand coming from the developing world, how is it to be supplied? What could be the security of supply? At the moment some 1.5 billion people do not have access to electricity. Without the nuclear option, that figure is unlikely to change over the next 25 years.

To accelerate development in much of the non-OECD world, access to secure sources of energy will be essential and nuclear energy could be a critical element of success in achieving poverty reduction and the long term development goals of the deprived areas of the planet.