

Energy and Climate Opinion: September 2009



A message from our managing director Robert Pritchard

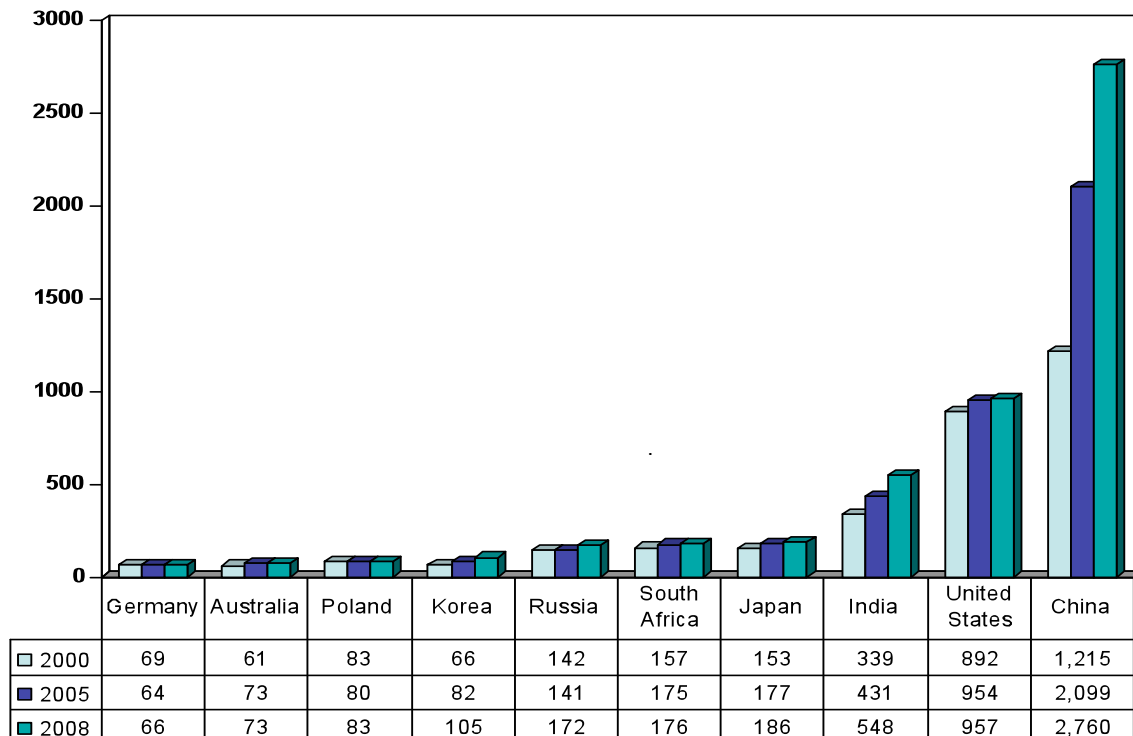
Why We Are Losing the Battle

Current energy and climate policies are inadequate to win the battle against climate change.

This is underscored by the escalation in greenhouse gas emissions by China, which has become the world's largest emitter.

China now accounts for almost one half of global coal consumption. The relative position of China in coal consumption is dramatically illustrated by the graph below.

**Increase in Coal Consumption of All Major Coal Consuming Countries Since 2000
(million tonnes)**



Source: International Energy Agency

The most recent projection is that world coal consumption will increase by 49% from 2006 to 2030, with coal's share of world energy consumption increasing from 27% to 28%.¹ Furthermore, according to the IEA, China's coal consumption could easily double over the next two decades.²

It is not unreasonable to conclude that the energy and climate policies of the developed countries, despite all their best intentions, have been overtaken by events in the developing countries. For developed countries that have already taken positive measures to reduce their emissions, this must be a major disillusion.

What, then, should the developed countries now be doing?

The Need for Coordinated Action and Global Policy Alignment

When the International Energy Agency released its World Energy Outlook in 2006, it said:

"Reconciling the goals of energy security and environmental protection requires strong and coordinated government action and public support."

Although there is not yet any effective coordinated action, the Energy Alliance of Australia has recently identified the need for policy integration as a first step in the direction of reconciling the two policy goals.³

There is now also an ever-more-pressing need for global policy alignment, as the World Energy Council identified two years ago.⁴

The Energy Security Problem

How does energy security relate to climate change?

The energy security problem mainly relates to oil. It is essentially a domestic problem, even though it affects every country that imports oil.

The energy security problem is not so much to do with the inadequacy of oil resources as it is to their uneven spread around the world, in particular the increasing concentration of production in the Middle East.

¹ US Energy Information Administration, "International Energy Outlook 2009", May 2009.

² IEA, "Cleaner Coal in China", Paris, France, 2009, p 89.

³ See the paper "Energy Policy and Climate Policy Must Be Integrated", downloadable from the website of the Energy Alliance of Australia www.energyalliance.com.au.

⁴ World Energy Council, "Energy and Climate Change", London, UK, June 2007, p 125.

In 2003, the Middle East's share of global oil production was 30%. By 2030, according to the IEA, global energy demand will have risen by another 52% and the Middle East's share of global oil production will have risen to 46%.

Assuming global oil consumption continues to rise, the global distribution of oil production will continue to shift to where the reserves are concentrated – that is, the share of the Middle East will rise. Decreasing market dependency on the Middle East is therefore the most important energy security priority for all oil importing countries.

This does not have a great deal to do directly with climate change but it highlights the importance for many oil-importing countries, including China, of continuing to develop their indigenous coal resources as an energy security measure.

Another important aspect of energy security is the reliability of domestic energy infrastructure. Again, this is essentially a domestic problem and does not have a great deal to do with climate change.

The Climate Change Problem

By contrast, the climate change problem is entirely a global problem.

Countries can adapt to climate change individually but cannot solve the problem in isolation from each other. However, many politicians have been too easily distracted by domestic arguments over who should bear the costs of domestic reductions and have tended to lose sight of the real problem, which requires greenhouse gas emissions to be reduced at a global level.

In deciding on its climate policies, each country has to take into account its domestic resource endowment and its national economic development priorities but nonetheless must remain focussed on the need for a global solution.

Resources and Technologies

All primary energy resources (renewables, oil, gas, coal and uranium) and all energy conversion technologies are needed to concurrently serve the two masters of energy security and climate change.

There is obviously an increasingly important role for nuclear power and natural gas to play, especially for natural gas which can be used as a key balancing fuel in conjunction with intermittent renewables.

The continuing combustion of coal for power generation without capturing and storing CO₂ no longer appears to be a sustainable global strategy. However, the feasibility of phasing out coal use in the foreseeable future is seriously problematic in all of the major coal consuming countries.

The trillion dollar question is whether the increased use of coal resources can be made environmentally acceptable. If the answer is yes, it will provide one of the main answers to the dual challenge of energy security and climate change.

Climate Cost-effectiveness

A dilemma flows from the fact that climate change is a completely unprecedented global problem. There can be no solution for any country, irrespective of how generous its contribution to solving the problem may be, unless there is a cost-effective solution for the entire world.

In other words, there can never be a sustainable domestic pathway in any country unless there is a sustainable global pathway.

But what is "cost-effective" in climate change terms? Even if one country's climate policies are cost-effective in domestic terms and otherwise meritorious, they will not be cost-effective in climate change terms unless they contribute to global cost-effectiveness.

If any country's climate policies fail the global cost-effective test, the hoped-for benefits will never materialise, the thesis of the Stern Report that 'it is cheaper to spend now than later' will be debunked and many communities will realise they have been misled by overoptimistic governments.

The Most Pressing Global Priority

The most pressing global priority is for the developed countries to work with China, India and other developing countries to substantially reduce emissions from conventional coal-fired generation. Without this, all of the climate measures adopted by the developed countries, including all of their cap-and-trade schemes and energy taxes, may amount to misdirected efforts and may count for nought.

What About Cap-and-Trade Schemes?

A claimed virtue of cap-and-trade schemes (equally applicable to carbon taxes) is that they are non-discriminatory (that is, every single tonne of GHG emissions is equally polluting and should carry the same 'carbon penalty') – with compensation being provided to severely affected communities and industries. In our opinion, this is not a virtue.

As policy measures, domestic cap-and-trade schemes are haphazard and their price signals are inadequate to influence the current trajectory of capital investments. Cap-and-trade schemes remain remote from the real problem of how to make energy use less carbon-intensive.

Some GHG-emitting activities in industrial society have greater public utility value than others and have justifiable claims for exemption from cap-and-trade schemes. One example is the use of natural gas (because it is an enabler for the increased use of intermittent renewables). Another example is the sustainable operation of electricity supply systems themselves (because they are the very backbone of industry and modern society).

Implementing a common global carbon price would be a major achievement, although it may be a very long time before we see this. In the meantime, integration of energy security and climate policies would in our opinion lead to more realistic global pathways and to their earlier implementation.

An integrated policy approach would suggest two sustainable global pathways:

A Best-Practice / Public Utility Pathway

This pathway would allow an exemption from carbon penalties for all emissions that occur from the use of best practice technologies and for all emitting activities that have high utility value.

Penalising a best practice technology, such as LNG, imposes a carbon cost on power generation from natural gas and leads to an increase in global net emissions.

It must be made more costly to pollute than not to pollute. However, carbon penalties should only apply to "less than best" practices.

Nor should carbon penalties apply where, in a particular country, the emitting activities have high utility value and are essential to enable the country to make the transition towards a sustainable economy.

We appreciate that there is very great scope for argument over the utility value of different emitting activities. However, the issues are too important to be left to haphazard and inadequate carbon price signals. There is a need for sector-specific agreements to establish international best practice standards and to determine criteria and mechanisms for evaluating the public utility of emitting activities in particular countries.

A Global Technology Pathway

A second sustainable global pathway would be the establishment of a technology market that is not significantly hindered by national boundaries and national sovereignty. Early technological engagement is a must if there is to be an effective response to the escalating level of global emissions.

A global technology market must include a market for cleaner coal technologies as recently proposed by the IEA.⁵

In the case of China, the IEA has suggested three priorities for technological engagement:

- *international accords that create national, regional and global markets for clean, low-carbon technologies;*
- *government-industry partnerships to develop and demonstrate low-carbon, cleaner coal technologies; and*
- *technology transfer and deployment of cleaner coal technologies through commercial arrangements that respond to market demand created in China and elsewhere.*⁶

On a more positive note, as the IEA has pointed out:

*"The opportunities for international partnerships, joint ventures, production-sharing agreements and other commercial relationships are enormous and provide a sustainable way forward that benefits China and the world at large."*⁷

China is fully committed to the Bali Roadmap and is anxious to pursue technological engagement with other countries. China is pursuing sustainable development strategies tailored to China's particular characteristics but is experiencing great strain in its efforts to eliminate poverty and reduce emissions concurrently.

Developing countries need urgent help with the commercial arrangements for acquisition and deployment of low-emissions energy technologies.

What Is ResourcesLaw Doing?

ResourcesLaw is helping its clients successfully pursue opportunities for international commercial relationships in low-emissions energy technologies.

ResourcesLaw is also taking every opportunity to remind policymakers of the very real limits on their domestic powers and to point out policy pathways that are not only effective but cost-effective and sustainable in global terms.

ResourcesLaw is an adviser to clients involved in both renewable and non-renewable energy development. ResourcesLaw is a foundation member of the Global Carbon Capture and Storage Institute and serves on the advisory committee of the CSIRO Energy Transformed Flagship.

Further Information

Our managing director Robert Pritchard can be contacted for further information on these issues at robert.pritchard@resourceslaw.net.

⁵ IEA, pp 268, 284, 294.

⁶ IEA, pp 295-6.

⁷ IEA, p123.