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You may be interested.

PIRINC has prepared the enclosed note entitled, *If Not Kyoto, What Next?* The note gives PIRINC's assessment of President Bush's statement of opposition to the Kyoto Protocol.

The President's statement has been incorrectly portrayed as a major setback to progress in combating the growth of atmospheric greenhouse gas concentrations that raise risks of unprecedented rates of global climate change. Such a view assumes Kyoto was on track to becoming an operationally viable process. But as the note discusses, this was not the case. . Its viability was severely compromised by: (1) unrealistic targets that would impose unrealistically high costs, (2) a poor choice of starting point, (3) the absence of developing country commitments, and (4) US domestic political constraints. In addition to these points it should be kept in mind that the Protocol is not a finished document ready for implementation.

None of the above provides an excuse for doing nothing. Indeed, while the Kyoto Protocol as it stands is highly unlikely to ever come into effect, the case for beginning to do something about the problem is getting stronger. But the emphasis now should be on developing and testing low-cost first steps that can set the stage for more dramatic progress later and not on negotiating high-profile, near-term targets that are potentially very high cost and ultimately unachievable.

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If Not Kyoto, What Next?

President Bush's clear statement of opposition to the Kyoto Protocol has been incorrectly portrayed as a major setback to progress in combating the growth of atmospheric greenhouse gas concentrations that raise risks of unprecedented rates of global climate change. Such a view assumes Kyoto was on track to becoming an operationally viable process. But this was not the case. Its viability was severely compromised by: (1) unrealistic targets that would impose unrealistically high costs on the US economy, (2) a poor choice of starting point, (3) the absence of developing country commitments, and (4) US domestic political constraints. In addition to these points it should be kept in mind that the Protocol is not a finished document ready for implementation. Key issues remain to be settled, including enforcement, the role of "sinks," and rules for emissions trading. Disputes over the latter two issues, especially between the US and the European Union, proved irresolvable at the COP 6 meeting in November while follow-up attempts to bridge differences ended in failure.

It has been clear for some time that greenhouse gas emissions in most industrial countries will be far above targets agreed to in the Kyoto Protocol. The targets for most industrial countries involved reductions in the 2008-2012 period of between 6% and 8% from 1990 levels. The latest International Energy Outlook released by the Department of Energy estimates that emissions of carbon dioxide, the most important greenhouse gas, by the industrialized countries that agreed to emissions targets in Kyoto were up 10% in 1999 versus 1990 and projects them to rise an additional 16% by 2010.[1] US emissions growth is above these averages in each of the periods considered. The table below summarizes the Department of Energy projections.

World Carbon Dioxide Emissions

Billion Metric Tons Carbon Equivalent				% change		
	1990	1999	2010	90-99	99-10	90-10
World	5.82	6.09	7.84	5%	29%	35%
Industrial Countries	2.84	3.12	3.62	10%	16%	27%
US	1.35	1.51	1.81	12%	20%	34%
Western Europe	0.93	0.94	1.04	1%	11%	12%
East Europe/ Former Soviet Union	1.34	0.81	0.94	-39%	16%	-30%
Developing Countries	1.64	2.16	3.28	32%	52%	100%
China	0.62	0.67	1.13	8%	69%	83%

[1] The Kyoto Protocol is not the first instrument to contain emission reduction targets for greenhouse gases. The original UN Framework Convention on Climate Change also contained a target, namely the return of emissions levels in the industrialized countries to 1990 levels by 2000. The target, which was an "aim" rather than a legally binding commitment, was not met. The negotiations leading to Kyoto took place with full knowledge that the Framework target would not be met and had as one of their objectives lengthening the time frame for making progress. Unfortunately, the targets chosen are still not reachable by 2008-2012 under any realistic scenario. Neither the technology, nor the politics, nor the practicalities are up to it.

The industrialized countries collectively accounted for about half of world emissions in 1990 with the US accounting in turn for about half of the industrial country total.

The choice of 1990 as a base year was particularly disadvantageous for the US. That was a recession year in the US, which temporarily held back energy use and greenhouse gas emissions, thereby leaving the US with a below normal base year for its emission-reduction target.

The Protocol contains no emissions reduction commitments on the part of developing countries, whose emissions in 2010 are projected to be double their 1990 level. Overall, their emissions already exceed US levels. Emissions from the largest emitting developing country, China, are projected in 2010 to exceed Western Europe's. Nor does the Protocol contain any "commitments to commit" on the part of developing countries to any actions to contain emissions subsequent to the 2008-2012 period. According to the EIA, carbon emissions are projected to grow 34% requiring a 40% reduction in equivalent energy consumption by 2010.[2] The original UN Framework Convention on Climate Change, which the US was among the first to ratify (preceded only by Mauritius, the Seychelles, and the Marshal Islands), did call for developed countries to take the lead but the absolute exemption for developing countries raised concerns that those accepting potentially very costly obligations would be giving undue competitive advantages to those accepting none.

The US Senate had already made clear in a unanimous (95 to zero) resolution that it would not ratify a Protocol that exempted major developing countries from any emissions-reduction obligations. Moreover, strong growth in the US economy since 1990---far stronger than in Western Europe or Japan---has pushed up greenhouse gas emissions despite ongoing declines in emissions-intensity. Greenhouse gas emissions grew at an average 1.1% annual rate versus a 3.1% rate for GDP. But emissions growth to date means that the 2008-2012 target could only be met by drastic, politically unacceptable measures. The issue of political acceptability is not confined to the US. In Europe, the fuel tax protests of last fall signal that the favored policy tool of governments for reducing emissions, ever-higher taxes, has reached its limit. The lack of settled procedures for enforcement of commitments also limits political acceptability. While the US legal system provides domestic means to enforce compliance with treaty obligations, without clear means of international enforcement, there is a risk other countries could avoid the costs of meeting their own commitments.

The only possibility for even approaching the Kyoto targets lay in the extremely liberal use of the "flexibility mechanisms" in the Protocol, the Clean Development Mechanism, Joint Implementation, and Emissions Trading. These mechanisms, designed to promote lowest-cost greenhouse gas reductions and sequestrations on a global basis, should all be part of eventual international strategy to address global warming but none are without controversy or ready for practical implementation on a broad scale. Apart from implementation considerations, one of the mechanisms, Emissions Trading, is caught up in the issue of so-called "hot air" from Eastern

[2] This has led many to conclude that the U.S. is an inefficient energy consumer. It is often pointed out that the U.S. with 3% of the world's population consumes almost 25% of global energy. However, it should also be pointed out that U.S. GDP represents 20-25% of global GDP bearing a closer relationship to its share of energy consumption. In addition, since oil price decontrol (1980) the U.S. has made the greatest strides in reducing the amount of energy per $ of GDP.

Europe and the Former Soviet Union. As a result of the collapse of their economies in the early 1990's and the process of rationalization, carbon dioxide emissions from these areas in 1999 were collectively 38% below their 1990 level. Even though emissions growth is resuming, the countries, especially Russia and Ukraine, are projected to have emissions levels in 2008-12, the Kyoto commitment period, well below their 1990 levels (their Kyoto target levels) and therefore, substantial volumes of emissions credits to sell to industrial countries in need of them. The choice of 1990 (and not some more recent period like 1995-1997) would require U.S. entities to transfer $Billions to the Russian economy. Yet, not one single dollar would have to be spend by the Russians on carbon reduction investments. Thus, in 1998 we suggested…"That while the Russians lost the cold war, Kyoto would inadvertently help them to win the warming one." There are three substantive, unresolved issues about these credits: (1) how much if any should be allowed to substitute for outright emissions reductions in the industrialized countries, (2) are international relationships such that the US and other countries are prepared to transfer tens of billions of dollars a year to Russian entities for these credits, and (3) given current business practices, who could buy with confidence a credit today for future emissions reductions from a Russian or Ukrainian entity.

Another reason for pause regarding Emissions Trading comes from recent developments in California. Many have pointed to the success of the US trading system for sulfur dioxide as proof that costs of emissions reduction would be much lower than opponents of the Protocol suggest. But while this has been true for sulfur, it has been dramatically untrue in Southern California where the RECLAIM trading system for nitrogen oxide has broken down in the face of large increases in desperately needed fossil-fuel power generation and extreme credit price escalation. The California experience indicates due regard must be given to the risks that costs could be higher as well as lower than anticipated and design a trading program accordingly.

None of the above provides an excuse for doing nothing. The Framework Convention imposes obligations to "take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects." Moreover, "lack of full scientific certainty should not be used as a reason for postponing such measures---." The recently released Third Assessment Report of the IPCC (Intergovernmental Panel on Climate Change) still acknowledges significant remaining uncertainties but states that advances in data collection and modeling have led it to raise its estimates of global warming over the past century and to indicate that, "There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities." The Report's range of projected temperature increases for this century is somewhat higher than the range presented in the last Report. Emissions of CO_2 from fossil fuels are "virtually certain to be the dominant influence on the trends in atmospheric CO_2 concentrations during the 21st century." Thus while the Kyoto Protocol as it stands is highly unlikely to ever come into effect, the case for beginning to do something about the problem is getting stronger.

The most sensible first steps involve making greenhouse gases economically visible and rewarding to reduce or sequester. Policy-makers can build on private experiments already underway. These include the establishment of internal company trading systems, and the development of audited credit-creation projects, typically involving the agricultural sector, where credits are made available for purchase by other companies. US and foreign government

supported AIJ projects, as well as projects undertaken by the World Bank Prototype Carbon Fund are providing valuable experience in solving problems of accounting and monitoring that are critical for implementing successful, larger-scale programs. A number of companies in the U.S. Canada, and elsewhere, including large energy companies are involved in such pilot programs and have made commitments to reduce their own levels of greenhouse gas emissions. Initial efforts could be national, bilateral, or international, depending upon the nature of the particular program and the capabilities of participants.

The objective of the Framework Convention, "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system," can only be achieved over several generations and will require emissions reductions that go far beyond anything contemplated in the Kyoto Protocol. The emphasis now should be on developing and testing low-cost first steps that can set the stage for more dramatic progress later and not on negotiating high-profile, near-term targets that are potentially very high cost and ultimately unachievable.

A key priority now should be research and development of advanced technology, including renewables that promote a long-term reduction in dependence on fossil fuels. Nonetheless, for the next two decades at least, the world is virtually certain to rely primarily on fossil fuels for its energy. Among the fossil fuels, coal is the most abundant and lowest cost, but the most environmentally problematic. Continued development of advanced, clean-coal technologies, and research and development of carbon sequestration technologies is essential to insure this fuel can meet long-term energy needs in a manner consistent with climate change and other environmental objectives.

The world does have a major, troubled source of zero carbon emission energy, nuclear. At a minimum, policy-makers should avoid premature losses of nuclear capacity by early action to extend the operating licenses of units that can demonstrate continued safe performance. The issue of adding new nuclear capacity is more complicated. New units are very expensive and highlight difficult political issues, including still unresolved concerns about nuclear waste disposal and adding to the number of units that will eventually have to undergo the exceptionally long-term, complex, decommissioning process. Even so, policy-makers should assess whether advances in operating, waste-disposal, and decommissioning technologies are sufficient to encourage growth in this energy source. What is needed now is not a whole new approach but certainly a scaled down cleaner one.