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**The Importance of Policies for  
Grid-Connected Renewables**

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Distinguished delegates:

Because conversations about renewable energy are often held in the context of conversations about oil, let me preface my remarks with some recollections from the 1970s, the first oil crises. At the time, I was a senior official in the Department of Energy, Mines, and Resources in Canada. Oil prices increased in 1973, from \$3 to \$7, and during the second oil crisis in 1979, up to the mid \$30s. It was expected then that oil prices would reach \$100 by the early 1990s.

We thought that these oil price economics alone would be enough to drive us along the path of sensible energy policy, towards a greater use of renewable energy.

However, it didn't happen that way. In fact, everyone forgot the basics of Economics 101, in which any decent student would have learned about substitution effects and technology development, for example, and why prices would be unlikely to reach \$100 a barrel. Nevertheless, the prospect of ever-escalating oil prices provided some impetus to the renewable energy discussion.

In parallel with this oil price saga, the world also began to focus on the globe's atmosphere and man's effect on it. The first global concern was stratospheric ozone depletion, caused by use of man-made chlorofluorocarbons for refrigeration. Ozone depletion served as an excellent introductory test-case for this type of debate because of several special characteristics. It was a global problem with clear and simple policy implications requiring cooperative action. It had a solid scientific basis. There were relatively few CFC manufacturers, making industry regulation feasible. Substitute chemicals were available at manageable cost. Overall, the process was manageable and led to a very successful outcome.

Another significant development ensued in the area of anthropogenic climate change: A growing awareness of the impacts of carbon dioxide on global warming (subsequently generalized to climate change) and the subsequent policy process that included the

signing of the Climate Change Convention in Rio in 1992, the Kyoto Protocol which followed in 1997, and its eventual entry into force last year.

Making progress on the climate change issue has not been easy. Compared with the ozone problem, the science has been more vigorously debated, the number of key players is much larger, the policy and program options more varied, and potential solutions more complex. It is not simply a phase-out problem; it's ultimately about sustainable development. In particular, the process of committing to hard targets in the context of the Kyoto Protocol was difficult or unacceptable for a number of participants, including developing countries, who are reluctant to accept obligations to address a problem not initially of their making. There have also been some start-up problems with the Clean Development Mechanism, and considerable uncertainty associated with the nature of the post-2012 regime.

Even the achievability of the 2008-2012 targets is in serious doubt. On a global level, the International Energy Agency is suggesting that carbon dioxide levels will increase by 52% between 2003 and 2030.

Consequently, the national and international governmental processes that will get us on track to deal with the threat of climate change are a bit problematic at the moment. However, one thing is increasingly clear: climate change is very real. The quotable examples are getting ever larger—most notably, the melting icecaps and the longer and more intense hurricane seasons. Last week, I had the opportunity to attend a lecture by Jared Diamond, promoting his new book *Collapse*, in which he makes the point that by 2035, Glacier National Park in the United States will no longer have any glaciers.

Climate change is so real that in the last couple of years the Conference of Parties of the Climate Change Convention and the Global Environment Facility, as its financial mechanism, have been paying significantly more attention to adaptation to climate change. Currently, we have four funds devoted to projects in support of climate change adaptation, three of which are operational. However, mitigation and the prevention of

damaging climate change impacts remains our primary focus, and whatever the post-2012 regime may look like, energy efficiency and renewable energy will remain the most important avenues for mitigating climate change.

Renewable energy is for several reasons an attractive option for adding safe and clean energy capacity: it is versatile in scale; it can provide heat and power; it can work on-grid or off-grid; and it is the least politically contentious energy option (after energy efficiency). It is a no-regret option. Despite these attributes, renewable energy currently contributes only a small share to overall energy capacity— about 2% of global primary energy use and 4.4% of global installed electricity generation capacity.

These numbers notwithstanding, renewable energy use is growing. In fact, it is the largest growing energy supply sector overall. Between 2000 and 2004, wind capacity grew 29%, grid-connected solar photovoltaics grew 61%, and off-grid solar photovoltaics grew 17%. And although renewable energy was initially driven by Northern countries, developing countries now account for 44% of the globally installed renewable power capacity.

So there is a significant momentum, and it is a good time to keep pushing. We need strong and reliable support for the renewable energy business from governments and international financial institutions. The GEF, along with its Implementing Agencies, the World Bank, UNDP, and UNEP, has been working in support of renewable energy for a long time. Since its inception, the GEF has provided over \$1 billion in grants for renewable energy, which has leveraged over \$6 billion in co-financing. This financing has supported more than 140 projects, fairly evenly distributed across Asia, Africa, and South America. In the context of the international policy process on renewables, the GEF is committing 100 million USD per year on new renewables projects.

Let me make a few comments on lessons learned, too. First, our experience has shown that it is not a winning strategy to transfer to the developing world technology that has not been fully developed in the North. It is not appropriate to add technology development risks to the commercial, financing and other risks that new markets and new

technologies in developing countries already face. Second, we don't want to be overly focused on any particular technology, a lesson we learned in the context of both on-grid and off-grid project experience. A multilateral fund is not the right actor to pick technology winners. Third and most important, the renewable energy issue is about far more than technology: it is also about human and institutional capacity, government regulatory and policy frameworks, and business models and financing.

Building on the above, the GEF is moving from a technology demonstration approach to a much greater focus on helping to create the kind of enabling environment in which renewable energy can flourish: capacity building, regulatory frameworks, incentives, good information, business and technical infrastructure, and so on. Whereas a decade ago we would have emphasized our work on wind farm capital investments in Costa Rica, China, Russia, and Eritrea, today we would emphasize projects on large-scale renewable energy deployment, and creating the right policy environments for them. With limited GEF resources, our focus is less on a sustained investment, and more on a sustainable process of investment. We concern ourselves more with policy than investment projects *per se*.

One project example is the Strategic Renewable Energy Partnership Program here in Mexico.. The Strategic Renewable Energy Partnership will create a financial mechanism that offers concessional tariff support — for energy, not capital investment — on a competitive and declining basis. The mechanism will be accompanied by policy and regulatory modifications that highlight diversification, environmental, local and industrial benefits. The program also envisages significant institutional and technical capacity strengthening. It will directly support about 800 MW of new wind capacity and a further 2200 MW stemming from the anticipated regulatory changes.

Another example is our Renewable Energy Scale-Up Program in China. As you may know, China's renewable energy law became effective this January. The GEF and the World Bank are currently involved in a major renewable energy scale-up program: Phase

I is a \$40 million grant to support a pilot project in four provinces; Phase II will add a further 10 provinces; and Phase III will add the remaining provinces. The project objective is to commercially supply renewable energy, primarily wind and biomass, to the electricity market efficiently, cost effectively, and on a large scale. The core of the GEF program is support for institutional and human capacity building.

Many of you here are pursuing the kinds of programs mentioned above. The GEF wants to be an active partner with you in an expanding renewable energy business that will play its part in getting the world onto a sensible and sustainable energy track. Our experience base is expanding significantly, and we have much to share with, and learn from, each other. I thank you for your attention, and wish you good luck over the course of this meeting. Let's continue to work together to get renewable energy to the levels that the planet's health demands.