



# **The Permanent Mission of Iceland to the United Nations**

Comments by  
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## **Low Carbon Growth? Perspectives for the UN Conference on Climate Change**

The Nordic-American Chambers of Commerce and  
The American-Scandinavian Foundation

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A binding treaty to cut global carbon emissions may no longer be in prospect this year, but Copenhagen could still mark a decisive step on the road to halting the impact of climate change.

The challenge now is to ensure, through a voluntary process, that we come as close as possible to the goal recommended by the Intergovernmental Panel on Climate Change (IPCC) of limiting global temperature increase to 2 degrees Celsius. Should some such understanding take shape, we may still be able to snatch a modest success from the jaws of defeat in Copenhagen.

For the United Nations, which has staked so much on the outcome of COP15, this may not be the result we had hoped for. In addition to the ongoing global financial and economic crisis, the impacts of climate change are already hurting developing countries and complicating efforts at poverty reduction, a key target of the Millennium Development Goals.

However, it would be wrong to view Copenhagen as the beginning or the end of all. Whatever happens in Copenhagen two weeks from now, we should recognize the progress that is being made across the globe as we transition, however slowly, towards a low carbon future.

To be sure, Iceland, like the other Nordic countries, fully supports the target set by the IPCC of cutting greenhouse gas emissions by 25% to 40%. Our government has, for example, pledged to reduce net emissions by 50-75% by 2050 and by 15% by 2020 compared to 1990 levels, an ambitious goal for a country where 80% of total energy consumption is already met through renewable energy.

But we also take the view that in order to be effective, any post-Kyoto regime must be linked to the gradual but fundamental reorientation of energy policy, through technological advancement and innovation. In effect, the world as a whole must make the switch from fossil fuels to more sustainable and climate friendly energy resources.

Here, the Nordic countries, within their own region as well as in their development assistance, are well placed to take the lead. For purposes of illustration, let me focus my remarks on Iceland's energy policy.

Today, Iceland produces close to 100% of its electricity from clean energy resources, hydro and geothermal. Almost 90% of homes and workplaces are heated through geothermal hot water. However, Iceland is still dependent on fossil fuel imports for about 20% of its total energy consumption.

A comprehensive energy strategy is now being formulated to have renewable energy sources replace imported energy in Iceland altogether. In the transport sector, there is a growing belief that the future technology in the car industry is the electrical drive-train; in the short-term through hybridization but then moving towards plug-in battery vehicles and fuel cell vehicles. Therefore, the city of Reykjavík, in cooperation with Mitsubishi Motors, is working on a project to replace a large part of the car fleet in the city of Reykjavík with **electric cars**. In fact, users of electric cars can now draw free electricity for their vehicles by plugging them into a designed post in the city's main shopping centers.

In parallel, a public-private company, Iceland New Energy, is initiating a project to have ten **hydrogen fuel cell vehicles**, manufactured by the Ford Motor Company, test driven for a period of time. This project comes on the heels of another project, where three buses using hydrogen only were successfully operated for a number of years. For the eco-tourist, a hydrogen-powered rental car is already available at Hertz.

Being a small country sometimes has advantages. In this instance, Iceland, with both a supportive environment and a sophisticated infrastructure, can offer itself as a platform for trial and demonstration of new "green driving" technologies where the transformation of an entire national energy system can be observed. The reason why is simple. In the past seventy years, Iceland has twice transformed its energy infrastructure – moving first from coal to oil and then, in the seventies, from oil to geothermal.

Two other Icelandic cooperation projects that could be of relevance to the longer term combat against climate change bear mentioning:

A so-called **Iceland Deep Drilling Project (IDDP)**, supported by, among others, the US National Science Foundation, explores the economic feasibility of extracting energy and chemicals out of hydrothermal systems at supercritical conditions, meaning extremely high pressure and temperatures below 3.5 km (2.2 miles) depth. If successful, deep drilling

could yield 5 to 10 times more power from each well. Considering that more than 60 countries could harness energy from geothermal resources, the research could have important applications in other parts of the world.

The other is the so-called **CarbFix project**, supported by the Earth Institute of Columbia University among others. The aim of this project is to show the viability of capturing and storing CO<sub>2</sub> from geothermal steam in basaltic bedrock at a depth of 400 to 800 meters (1300 - 2600 feet), thereby demonstrating that a near zero CO<sub>2</sub> emission geothermal power plant is possible. This technology, if proven, could then be exported and applied to storing captured carbon, whatever the source, in other countries rich in basaltic rock.

One should not underestimate the economic and technological obstacles confronting all four of these forward-looking projects. The consumer price of an electric car may still not be competitive. Decades may go by before hydrogen comes on line as a mainstream energy carrier. As to our deep drilling, this project recently suffered a temporary setback when the drilling of the first well hit magma at only 2.1 km (1.3 mile) depth. Notwithstanding such problems, we remain confident that we will, through experimentation and innovation of this kind, eventually find our way to a low carbon future.

In the United Nations one frequently hears the objection that such cutting-edge technologies rarely have applications in the developing world. This is not necessarily the case. Being at a less advanced stage economically, should give many developing countries an opportunity to leapfrog carbon-based industrial technologies. By hindsight we also know that the "high tech" of today may be mainstream of tomorrow.

With this in mind, our private sector and government have taken steps to work with developing countries in low-carbon growth development, directly and through the World Bank. Last week, for example, a joint venture of Icelandic and Chinese companies inaugurated a geothermal district heating system in the Shaanxi Province of China that will offset 33,000 tons of carbon emissions every year, equivalent to the emissions from 11,000 cars. Also, for close to thirty years, more than 500 specialists from the developing world have been trained through the geothermal program of the United Nations University based in Iceland.

To conclude, regardless of what happens in Copenhagen, we need to stay the course and recognize the changing mind-set on energy and climate that is taking shape around the globe. Whether this awakening is sufficient to stave off an environmental catastrophe in the coming years we are not in a position to tell. But let us at least take some encouragement from the fact that the Nordic countries are doing their part in promoting a low carbon future, be it through hydro, wind, biofuel, solar, geothermal or even nuclear power. In Copenhagen, we should not be shy to let that story be told.