



UPDATE

A GREEN ENERGY ERA: A PROGRESSIVE CENTURY FOR THE SOUTH

**A Keynote speech
by
the President of Iceland
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at the UNIDO General Conference
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Your Excellencies
Ladies and Gentlemen

As representatives of all nations gather in Copenhagen to marshal our forces in the battle against climate change, we here today can seek inspiration from the favourable position enjoyed at this crucial time by the developing world.

It is a fascinating paradox that the green energy achievements made in recent decades, principally in the Western World, could, within the right policy framework, be of great benefit to the developing countries, to Asia, Africa and Latin America.

The climate crisis is primarily a call for a fundamental energy revolution, a comprehensive transformation from fossil fuel to green energy sources such as solar, wind, geothermal, hydro and biomass.

In all of these categories, the nations of the South enjoy a richer potential than those of the North. Thus, a green energy era could be a time of renaissance, a progressive century for the developing world.

Bright sunlight and the strong prevailing winds characterise conditions in the South. What is less well-known is the abundance of geothermal resources which in many ways are the golden secret of the global energy debate.

Although we all learn in school that there is a huge fireball inside the Earth, we tend to forget or ignore its enormous energy potential. With modern drilling and engineering technologies, it is now possible to

harness this heat for the benefit of economic and social development, rural and urban electricity production, the creation of industrial regions and organic agriculture, for aluminium smelters and greenhouses, for spas and data storage centres.

The great advantage of geothermal, solar and wind energy sources is that the scale of investments can be tailored to the need. The excess capacity and huge initial investment costs inherent in big coal and nuclear power plants are absent from the equation, because the tapping of solar, wind and geothermal sources can be adjusted to the needs of a small village, a few households, a growing town or emerging industrial projects. It can then be scaled upwards with each stage of successful development.

A few decades ago this important energy dimension was entirely absent from the formulation of economic strategies, simply because the technological development of green energy was still in its early stages. Now, however, developing countries can base their prosperity on proven green energy technologies which can be tailored to every stage of development, to the needs of different regions, and these technologies will become more and more viable and available as time goes on.

With respect to their geothermal potential, most countries in Africa, Asia and Latin America are still in the early stages of this process. China has recently discovered how coal plants can be replaced by geothermal sources for urban space heating. Indonesia and the Philippines are planning increased electricity generation from geothermal sources. In East Africa, countries like Kenya and Djibouti are looking at this resource in a fresh way, as are many countries in Central and South America.

In fact there are about 100 countries that have a considerable geothermal potential, most of them in the developing world. For them, the example of my country can provide both an inspiration and concrete practical lessons.

In my youth, over 80% of Iceland's energy needs came from fossil fuel in the form of imported coal and oil. We were a poor nation, primarily of farmers and fishermen, and Iceland was classified by the UNDP as a developing country right down to the 1970s. Now, despite the effects of the present financial crisis, we are among the most prosperous nations in the world, largely due to the transformation which made our electricity production and space heating 100% based on clean energy.

Our geothermal development began more than fifty years ago by putting pipes into gravel streets in a few small towns, bringing hot water to homes; gradually major power projects have been developed that now

provide electricity for aluminium smelters, data storage centres and other high technology and IT-based industries.

The abundance of clean energy is the main reason why Iceland is now, notwithstanding the financial crisis, an attractive investment location for foreign companies. An ever-growing number of companies are willing to go anywhere if they can get permanent and secure access to clean energy, thus becoming well positioned when a global carbon tax, in one form or another, is introduced. This magnet nature of clean energy production is especially important for 21st century IT investments, for software and information-based companies. For this reason, an abundance of clean energy could give developing countries a strategic advantage in the 21st century global economy.

The United Nations' Geothermal Training Programme, a part of the UN University, is located in Iceland. In recent decades it has trained nearly 400 students from over 30 developing countries. They have benefited from cooperation with a core of the best scientists, engineers and technicians in the world and witnessed at first hand what can be done. Thus, the South already has a community of advanced geothermal experts, waiting to be given an even greater role in the energy transformation of their respective countries.

These strategic players will also be able to draw on the results of advanced technological projects that are now under way in Europe and America, including the Iceland Deep Drilling Project, which aims at drilling as far down as 5-6 km and exploring how to harness a heat of 400-600°C. By going this close to the magma, we can enhance our energy resources in a dramatic way.

The beauty of geothermal energy for economic and social development is that it is not just an energy resource. It can also be used for greenhouse agriculture and other types of productive farming, helping rural areas, as Kenya has discovered, to grow products for high-priced markets in developed countries. It can also provide warm water and clay chemicals for spas and other tourist locations, for urban and rural recreational and health centres, bringing lifestyle benefits to the local population. Recently, the geothermal water has also been found to be rich in chemicals needed in pharmaceutical production, and advanced experiments have indicated other potentials of rare minerals.

All of this provides the developing countries with new openings in the formulation of successful economic strategies. In addition, the recent financial crisis has shown how a green energy transformation can serve as a defence against serious economic damage in turbulent times.

The people of Iceland have been able to meet the setbacks caused by the collapse of our major banks and the global financial crisis partly because our energy economy was transformed some years ago to provide cheap clean electricity and space heating. Green energy is now also making my country an attractive location for foreign hi-tech and industrial investments, thereby helping us to recover from the economic crisis sooner than would otherwise be the case.

The utilization of clean energy resources, geothermal, solar and wind, offers not only a wealth of new opportunities for economic development and an enhanced competitiveness in the 21st century global economy; it also provides a powerful defence against the social hardships that would otherwise be likely to occur in the future as a result of the financial crisis.

It is therefore, if ever there was one, a win-win situation for the nations of the South, which the Almighty has blessed with an abundance of clean energy resources.