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A man takes a picture of Greenpeace activists, after they placed a banner advocating action on climate change on a building at the ongoing UN conference on climate change at Poznan, Poland. Representatives from nearly 190 countries are taking part.

New green energy gathering steam

Geothermal is 100 per cent indigenous, eco-friendly and is a technology that has been underutilised for long, Marianne de Nazareth reports from Poznan, Poland.

The United Nations Environment Programme (UNEP) and the Global Environment Facility (GEF) have announced the completion of testing advanced seismic and drilling techniques in Kenya that has exceeded all expectations, at the United Nations Climate Change Conference in Poznan, Poland. Centuries-old energy technology that taps steam from hot underground rocks is the new green energy expansion in East Africa's Rift Valley.

Wells of steam able to generate 4-5 MW of electricity and one yielding an amazing 8MW have been accessed using this new technology. This could mean a saving of as much as $75 million for the developer of a 70MW installation as well as reduced electricity costs for generators and consumers, experts estimate.

Achim Steiner, UN Under-Secretary General and the UNEP Executive Director said, "Combating climate change while simultaneously getting energy to the two billion people without access to it are among the main challenges of this generation. Geothermal is 100 per cent indigenous, environmentally friendly and a technology which has been underutilised for too long. There is at least 4,000 MW of electricity ready for harvesting along the Rift. It is time to take this technology off the backburner in order to power livelihoods, fuel development and reduce dependence on polluting and unpredictable fossil fuels."

Monique Barbut, Chief Executive Officer and Chairperson of the GEF said, "Overcoming the economic and technical hurdles to renewable energy generation is part of our shared responsibility. The work at Rift Valley is demonstrating that geothermal is not only technologically viable but cost effective for countries in Africa where there is an overall potential of at least 7,000 MW.

Geothermal worldwide is undergoing a renaissance with the numbers of countries starting to use this power source estimated to rise from 20 in 2000 to 50 by 2010.

Africa's Rift Valley will I hope become a beacon for further geothermal acceleration in terms of size and number of power plants alongside its geographical spread across the developed and developing world."

The main challenge to expansion in Kenya and elsewhere along the Rift has been the risk associated with drilling and the high costs of waste incase no steam is hit. Two years ago, the GEF council approved the Africa Rift Valley Geothermal Development Facility (ARGeo) backed with almost $18million of funding involving the UNEP and the World Bank. The ARGeo initiative has strong support from Iceland, one of the world's leading geothermal economies where almost 90 percent of its electricity comes from 'hot rock' and hydro as well as Germany which is also developing this energy technology.

More countries including the Comoro Islands, Democratic Republic of Congo and Rwanda have also shown interest in participating .

Over 12 new geothermal projects have been planned. These include two in El Salvador for 50 MW, Guatemala for 25 MW, four in Indonesia for 200 MW, Nicaragua for 66 MW, Papua New Guinea for 55MW and two in the Philippines totaling 60 MW.

The US leads in terms of capacity with around 3000MW followed by the Philippines with close to 2000 MW followed by Indonesia with 1000 MW. Iceland is the world leader in terms of per capita generation of geothermal energy.