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HIGH RISK, LOW RETURN HAMPERS WORLD CLEAN ENERGY INVESTMENT

Investment groups say lack of risk mitigation, low return on investments and other free market pressures may pose a significant barrier to using clean energy development as the principal strategy to reduce greenhouse gas emissions in emerging economies. These sources say such barriers potentially undermine the Bush administration plan to use technology transfer as a key to GHG mitigation.

Speaking at a March 7 World Bank forum on renewable energy financing, the investment community expressed concern over the lack of progress in private equity investment in clean energy projects for emerging economies. World Bank officials say that private equity funding for renewable energy has not been that successful. "These investment vehicles did not perform too well especially after the [Latin America] financial meltdown in 1997," which has led to "a lack of enthusiasm on foreign direct investment," in emerging economies, said one official from the International Finance Corporation, the private lending arm of the World Bank.

The World Energy Outlook projects a 60 percent increase in electricity demand by 2030, at a cost of about \$10 trillion, with China alone expected to invest more than \$160 billion in the energy sector by 2010. But the outlook assumes a "business as usual" approach for non-hydro and biomass renewables, including geothermal, solar, wind, growing from 1 percent to 2 percent of world energy demand. Analysts say this scenario allows for renewable energy and energy efficiency to continue to be considered niche-solutions that are project driven and incremental. This, they say, would significantly hamper any large scale deployment of technologies to curb GHG emissions.

The U.S is arguing that global greenhouse gas controls, such as those in the Kyoto Protocol, would impose a disproportionate burden on the U.S. economy without the participation of developing countries. Instead, the U.S. continues to press for technological initiatives to cut the growth in GHG emissions as a response to international efforts to address climate change. It highlights bilateral partnerships with countries, including Canada, China and Mexico among others, that address climate change in this way.

In keeping with the bilateral approach, the U.S. last summer signed a pact with Australia, China, India, Japan and South Korea to create the Asia-Pacific Partnership on Clean Development and Climate. The partnership focus is on energy security and climate change mitigation, all of which will be done without mandatory commitments to reducing

GHG emissions. "The key is the flexibility that this vision outlines because our goal here is to try to complement other agreements and activities with practical solutions to problems," said Deputy Secretary of State Robert Zoellick in announcing the partnership.

But investment groups counter that though the commitments to promote clean energy through technology transfer are legitimate, implementation leaves a lot to be desired. Wall Street investment officials say institutional barriers, especially in least developed countries where lack of transparency is a concern, still significantly impede deployment of clean energy projects. One financier points out that registration of land and title are hard to procure in developing countries. Also "deregulation is not on national agendas and traditional Western country power purchasing agreements may not be viable," says the official.

Analysts say while the benefits of renewable energy are more easily capitalized in developed countries, there are more energy efficiency gains to be made in the emerging economies. The financing community maintains that a key issue with regard to renewable energy and energy efficiency is to "scale up" emerging economy programs. But a DOE official says such an expansion becomes difficult especially when some of the renewables, such as solar panels and fuel cells, give a low return on investment. The official says this will result in only proven and high return yielding technologies such as wind, small hydropower and biomass attracting sufficient investment or interest. Other technologies yielding lower returns become dependent on generous government subsidies, the source said.

Analysts say that for scaling up renewable projects, the most important players are commercial banks and financial institutions, followed by multilateral lending institutions and project developers, whereas for energy efficiency the emphasis is on utilities and energy service companies.

Proponents of renewable investments in emerging economies are calling for increased subsidies, in the form of: 1. new "financial risk mitigation instruments;" 2. stepped up multilateral lending; and 3. the replacement of subsidies for conventional fuels with seed money or working capital for local renewable enterprises.