

**US CONTRIBUTIONS TO A WORLD BANK ADMINISTERED  
CLEAN TECHNOLOGY FUND**

**TESTIMONY BEFORE THE HOUSE COMMITTEE ON  
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**Summary**

The proposed Congressional appropriation of \$400 million per year over five years to support the deployment of clean energy technologies in developing countries could demonstrate much awaited United States leadership in responding to the global crisis of climate change. If these resources are invested wisely, the benefits will reach under-served communities in developing countries in desperate need of more reliable energy and cleaner air. Successful investments would also demonstrate to United States policymakers, energy producers and investors, the feasibility of reducing energy sector emissions by adopting changes in our own technology mix. If combined with United States policies that cap and reduce domestic emissions, that support a global deal to combat climate change, and that help build the resilience of communities vulnerable to climate change, a significant investment in clean energy would represent an important contribution to avoiding the worst impacts of global warming.

\$2 billion over five years would dedicate an unprecedented amount of United States funding to clean technology in developing countries. It must, however, be emphasized that this will represent a small contribution towards the trillions of dollars necessary to meet global energy demand. Congress must therefore ensure that these resources and the institutions entrusted with managing them are committed to leveraging the greatest impact possible on investment choices in the energy sector worldwide.

Climate change and clean energy are not new issues for the World Bank, and its record in helping developing countries integrate climate change into economic development is mixed. The Bank has played an important role in pioneering new approaches to financing clean energy including through the use of carbon markets. Nevertheless, a recent study carried out by WRI reveals that the Bank has systematically overlooked opportunities to support the deployment of clean energy technologies, to mitigate emissions and to reduce climate risks. As late as 2007, more than 50% of Bank energy sector financing did not include climate change considerations at all. We therefore believe that any US investment in the CTF to support transitions to sustainable energy in developing countries should leverage a transformation of the Bank itself, in accordance with the following guidelines:

**1) A Clean Technology Fund should leverage transformative technologies and support progressive policies**

Congress should act to ensure that any public resources invested in the CTF support the deployment of technologies and policies that promote a profound shift away from carbon-intensive fuel sources. The CTF should be guided by principles that support this shift without pre-determining choices that should rest with developing country stakeholders and respond to local needs. The CTF should therefore, as the World Bank has suggested, promote transformational change while remaining technology neutral. Its investments should prioritize “zero carbon”

outcomes in the power sector, improvements in energy efficiency in existing power generation infrastructure, and it should favor investments that are shown to contribute to poverty alleviation. These principles would guide the CTF away from support for investments in technologies, such as supercritical coal plants, that are only marginally less GHG intensive and that are already more cost effective than conventional coal.<sup>1</sup> These principles should guide the CTF towards renewable energy sources, and investments in public transportation and energy efficiency that benefit poor consumers by lowering costs and increasing access and security of supply. The CTF will, however, need to address the likely continued reliance of many developing countries on coal. For new coal-fired generation facilities, carbon capture and sequestration may be able to play an important role in reducing emissions, if the many risks and uncertainties associated with these technologies can be reduced. CTF resources should also be available to build research and development capacity within developing countries to develop new technologies that are appropriate to local needs. Finally, developing countries should also be able to seek financial and technical support for improvements in policy and regulatory frameworks that will promote investment in clean technologies.

## **2) Transformation should begin with the World Bank's core energy portfolio**

Any Congressional appropriation to the CTF should promote the transformation of the core energy portfolios of the Multilateral Development Banks, including the World Bank, the Inter-American Development Bank, the African Development Bank, and the Asian Development Bank. The CTF envisions a role for the World Bank as Trustee, and for all the major MDBs as implementing agencies. Through MDB negotiated Country Assistance Strategies and internal bank procedures, MDB management and staff will have a direct influence on the programming of CTF resources. This should be seen as an opportunity for the Banks to demonstrate a commitment to integrating climate change considerations into all aspects of their core operations. The Banks should rigorously measure and manage the GHG emissions associated with its investments in all relevant sectors. The Banks should consistently work with developing country clients to identify low carbon approaches to development. Congress should use this opportunity to benchmark and monitor a higher standard of portfolio performance for all the Multilateral Development Banks that will have access to CTF resources.

## **3) The CTF should operate in accordance with widely accepted principles reflected in the United Nations Framework Convention on Climate Change and other sustainable development instruments**

It is essential that Congress plays a leadership role in a global response to climate change. Providing financial support for clean technology in developing countries will be a key part of that response. If these resources are to leverage change equal to the challenge of global warming they must be managed with credibility and legitimacy that catalyzes domestic policy reform, and inward private and public investment in developing countries. Ensuring that the CTF follows internationally agreed principles, reflected in the UNFCCC and other international instruments will be key to its legitimacy. These principles respect the right of each country to determine its own development path consistent with the Convention's objective to stabilize greenhouse gas emissions at safe levels. Donor governments should be prepared to demonstrate how support for the CTF is new and additional to development assistance targeted at poverty alleviation and other developing country

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<sup>1</sup> Supercritical coal technologies achieve efficiency rates of 40 – 60% compared to regular subcritical coal fired power plants which have efficiency rates of 20 – 30%. Their increased efficiency means that they require less coal fuel to produce the same amount of electricity, and as a result their operating costs are significantly lower than subcritical coal.

priorities. The source of the technology should not be “tied” to the nationality of the donor. The administration of the Fund should be guided by principles of transparency, inclusiveness and accountability, through the proactive disclosure of information upon which decisions are based, a balanced representation of developed and developing countries, and meaningful opportunities for civil society input and oversight. Its governance structures should be run by policymakers selected on the basis of their independence and expertise as well as their capacity to represent diverse interests. Overall, support from the US and other donors in the design and implementation of a CTF should be based on a partnership that incentivizes developing countries to take meaningful actions to reduce their emissions while promoting their own sustainable development priorities.

## **Background:**

### **Increased support for the deployment of clean technologies is needed**

Worldwide, more than 60% of global greenhouse gas (GHG) emissions come from the energy sector, where most countries continue to depend on polluting fuels and inefficient technologies. In most developing countries the need to sustain economic growth and alleviate poverty is increasing demand for energy. The rising costs of conventional fossil fuels such as oil, and growing concerns about energy security, together with growing awareness of the realities of climate change are sparking new interest in alternative options for meeting energy needs in all countries. There are significant opportunities to improve the efficiency of systems, and to increase the deployment of clean and renewable energy technologies. The realities of climate change demand fundamental transformations in how all countries produce and use energy. Making funds available to support the deployment of clean technologies to meet and reduce demand for energy can be an important contribution to this goal.

The proposed US contribution to a CTF would be administered by the World Bank as one of a portfolio of “Climate Investment Funds” that will “provide concessional finance for policy reforms and investments that achieve development goals through a transition to a low carbon development path and a climate resilient economy.”<sup>2</sup> More than 10 countries are expected to contribute to this significant multilateral effort, including the United Kingdom (\$1.58 billion over 3 years) and Japan (which is expected to commit at least \$995 million).<sup>3</sup>

While the proposed CTF would make an unprecedented amount of dedicated financing for clean technology available, these funds will not be adequate to meet the full costs of deploying clean technologies at the necessary scale. The International Energy Agency predicts that developing countries will need more than \$15 trillion of investment in their energy sectors by 2030. The proposed US contribution of \$2 billion over the next 5 years is a relatively small sum of money by comparison, and will need to be used strategically to catalyze truly transformative changes to help developing countries transition to a sustainable energy future.

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<sup>2</sup> As of May 2008, the World Bank proposes to establish a Strategic Climate Fund (SCF) that will support efforts to build resilience to climate change, in addition to the CTF. Regional MDBs including the Asian Development Bank, Inter-American Development Bank, and European Bank for Reconstruction and Development will also have access to the clean technology funds to implement projects.

<sup>3</sup> Reuters, “Climate fund seen totaling \$5.5 billion,” 28 May 2008.

## **The Clean Technology Fund should leverage transformative technologies and support progressive policies**

In designing the Clean Technology Fund, the World Bank intends to support large scale emission reductions, and catalyze momentous changes in how energy is used and produced. The Bank has proposed that the funds should be technology neutral so that the most appropriate technologies for local needs can be deployed at a large scale. A shortfall of investment in clean technologies is not the only barrier to transforming the energy sector. In most countries, policies and regulations tend to emphasize short term cost and supply considerations, rather than the long term benefits of cost savings, enhanced energy security and environmental performance offered by clean technologies. A combination of regulatory and market failure has led to energy prices that do not reflect the true costs of fossil fuels to public health, to the local environment and to the climate system. Decision-making in the energy sector tends to be both exclusive and non-transparent, dominated by interests with a stake in “business as usual” practices. Policy innovations that promote full cost analysis of technology options and more transparent, inclusive and accountable decision-making, are essential to leveling the playing field for renewable energy technologies.

*Financial resources are needed to support reforms in policy and regulatory frameworks that promote the supply of and demand for renewable, low carbon and energy efficiency technologies and practices.* These might include mechanisms such as demand side management systems such as incentives to encourage efficiency, feed-in tariffs for renewable energy, and renewable energy portfolio standards. In addition to supporting countries that decide to undertake these reforms, Congress should do more in the United States to demonstrate to the rest of the world how better energy policy can ensure clean energy innovation.

*If policy reforms are to take hold, they must be developed and implemented through transparent, open and credible processes.* Citizens and civil society have an important role to play in ensuring that such measures are well suited to local needs and realities. Support for policy reforms in developing countries should not lead to narrow prescriptions on technology choice, or strategies designed to force unrelated economic reforms. Such approaches are likely to undermine the legitimacy of reforms for domestic audiences in developing countries and could sour international negotiations on new commitments for developing country actions.

*The CTF’s emphasis on energy efficiency and on opportunities to support sustainable mobility through improved access to effective public transportation systems, is welcome and needed.* Increasing access to efficient and effective public transportation systems, particularly in cities, is an urgent priority in developing countries and can have significant environmental and social benefits. The proposed emphasis on opportunities to improve efficiency more broadly, including in buildings is also an important initiative. However, the Bank’s current proposal on the fund suggests that the CTF could also support the adoption of best available coal technologies, and switching from coal to natural gas, to achieve such reductions.

*Best available coal technologies such as supercritical coal are already more cost effective than conventional sub-critical coal in most cases.* The operating costs of such plants are significantly lower than subcritical coal because they require less fuel inputs. While natural gas fueled power may be less greenhouse gas intensive than conventional coal fired power, such technologies still produce significant volumes of greenhouse gas, particularly when emissions are calculated on a lifecycle analysis basis, and are already widely deployed on a commercial basis. It would be a poor use of scarce public resources to address climate change, to support investments in marginally less GHG intensive technologies that

are already more cost effective than conventional coal, and will still emit large amounts of carbon for decades to come.

*Distributed renewable energy technologies, and some energy efficiency programs are likely to have more direct benefits for poverty alleviation.* As the Bank proposal on the CTF recognizes, transmission and distribution infrastructure already suffer from chronic under-investment and maintenance. An emphasis on the “distribution” component of distributed energy, will be necessary in order to begin to make smaller scale renewable energy technologies competitive with large centralized grid solutions.

*New solutions to the climate impacts of coal are needed.* Improving the efficiency of existing coal fired facilities can make a crucial contribution to this end. For new coal facilities, emerging carbon capture and sequestration technologies may be able to play an important role in reducing emissions from established centralized energy systems to power economic growth. This technology has attracted significant interest, particularly in the fast growing economies of Asia which are highly dependent on coal for their energy needs. However, the risks and uncertainties around these technologies remain high.

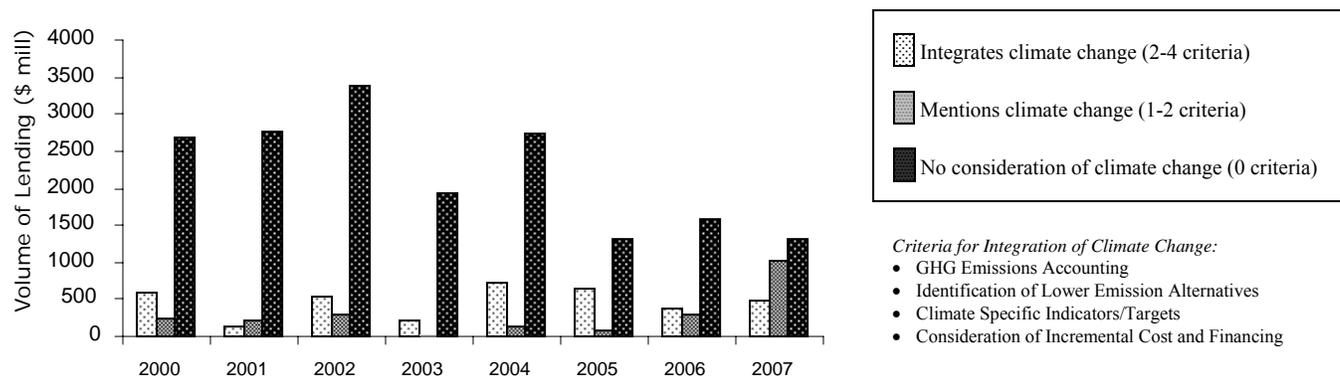
*The CTF should also be used to build in-country capacity to do research and development for new technologies.* Many middle-income countries already have very significant technical and scientific capacity, and there is a wide body of experience to suggest that such expertise can help tailor new technologies to be more appropriate to national needs. Given that in many countries energy service infrastructure remains – often for very good reasons—in public hands, building public research and development capacity could perhaps facilitate the deployment and commercialization of such technologies.

*The priority of the Clean Technology Fund should be to support “zero carbon” technologies in the power sector such as renewable energy, and improvements in energy efficiency in existing power generation infrastructure. Creative use of the Clean Technology Fund resources could deliver significant results in reducing the costs of promising zero carbon technologies to facilitate their deployment at large scale. Congress should seek clear and ambitious principles to guide the choice of most the most appropriate “clean” technologies for national needs.*

### **Transformation should begin with the World Bank’s core energy portfolio**

The World Bank can play an important role in supporting the deployment of clean technologies in rapidly growing developing countries. The Bank has recognized that it can do more to mainstream climate change into its efforts to support economic development. WRI analysis presented in the brief, *Correcting the World’s Greatest Market Failure: Climate Change and the Multilateral Development Banks*, reveals that operationally, opportunities to support the deployment of clean energy technologies to mitigate emissions and reduce climate risks are still not systematically incorporated into policies and projects supported by the World Bank.

**Figure 1: Volume of World Bank Energy Finance that Considers Climate Change**



Source: *Correcting the World's Greatest Market Failure: Climate Change and the Multilateral Development Banks* (WRI, June 2008).

*Climate change considerations need to be mainstreamed into decision-making at the World Bank.* Overall, attention to climate change and opportunities to support the deployment of clean energy technologies in World Bank Country Assistance Strategies (CAS), the documents used by the Banks to plan support to borrowing countries, remains inconsistent. Of 54 CASs reviewed, only 32 mention opportunities for GHG mitigation in sector level interventions; and 18 identify concrete targets or outputs to this end. As late as 2007, nearly 50 percent of World Bank lending for the sector did not consider climate change issues at all, and over the last three years less than 30 percent of its financing has comprehensively integrated climate change considerations (See figure 1).

*The use of the Clean Technology Fund to support renewable energy and energy efficiency in middle income countries such as China, India, Brazil and Indonesia can help the MDBs find new relevance in these countries.* The World Bank, and other MDBs such as the Asian Development Bank, Inter-American Development Bank, who would be entrusted with programming the Clean Technology Fund remain heavily invested in “business as usual” projects. Commercial private sector capital is now widely available, particularly in middle income countries, for such projects. It is essential that the World Bank consistently help member countries assess the full suite of options for low carbon, climate resilient development. Private financing for renewable energy technologies and energy efficiency programs is much less readily accessible, and urgently needed.

**Table 1. Climate Change Considerations in Energy Pipelines of the World Bank, IFC, ADB and IDB**

	World Bank						IFC					
	Integrates		Mentions		Ignores		Integrates		Mentions		Ignores	
	M\$	%	m\$	%	m\$	%	m\$	%	m\$	%	m\$	%
<b>2000</b>	583.2	16.5	254.5	7.2	2697.1	76.3	0	0	0	0	460.4	100.0
<b>2001</b>	135.8	4.3	220.6	7.1	2759.7	88.6	0	0	0	0	143.6	100.0
<b>2002</b>	542.7	12.8	306.5	7.2	3383.6	80.0	150.0	43.4	18.0	5.2	177.3	51.4
<b>2003</b>	219.0	10.0	30.0	1.4	1938.8	88.6	18.5	2.0	470.0	51.9	435.0	48.1
<b>2004</b>	732.6	20.4	128.5	3.6	2731.7	76.0	0	0	40.0	12.5	281.0	87.5
<b>2005</b>	652.0	31.9	86.0	4.2	1304.0	63.9	0	0	335.0	66.0	172.4	34.0
<b>2006</b>	364.0	16.2	293.7	13.1	1588.3	70.7	0	0	85.0	13.1	566.3	86.9
<b>2007</b>	486.2	17.3	1015.8	36.2	1302.7	46.5	50	5.4	621.0	66.9	257.0	27.7
<b>Total</b>	<b>3714.5</b>	<b>15.6</b>	<b>2335.8</b>	<b>9.8</b>	<b>17706.9</b>	<b>74.5</b>	<b>218.5</b>	<b>5.1</b>	<b>1569</b>	<b>36.7</b>	<b>2493.0</b>	<b>58.2</b>

	ADB						IDB					
	Integrates		Mentions		Ignores		Integrates		Mentions		Ignores	
	M\$	%	m\$	%	M\$	%	m\$	%	m\$	%	m\$	%
2000	0	0	53.0	13.2	350.0	86.8	0	0	0	0	1169.0	100.0
2001	8	1.4	350.0	62.84	199.0	35.7	0	0	375.0	29.1	915.0	70.9
2002	308	30.5	223.0	22.0	480.0	47.5	0	0	0	0	178.0	100.0
2003	35	3.4	54.0	5.3	938.0	91.3	0	0	0	0	379.0	100.0
2004	188	23.4	0	0	615.0	76.6	0	0	0	0	136.0	100.0
2005	0	0	285.0	23.9	909.0	76.1	0	0	0	0	1202.7	100.0
2006	1317	32.8	20.0	0.5	2682.0	66.7	30.0	2.0	582.0	38.0	919.0	60.0
2007	982	61.2	615.0	38.32	8.0	0.50	40.0	11.7	0	0	300.5	88.3
<b>Total</b>	<b>2838</b>	<b>26.7</b>	<b>1600.0</b>	<b>15.1</b>	<b>6181.0</b>	<b>58.2</b>	<b>70.0</b>	<b>1.1</b>	<b>957.0</b>	<b>15.4</b>	<b>5199.2</b>	<b>83.5</b>

Source: *Correcting the World's Greatest Market Failure: Climate Change and the Multilateral Development Banks* (WRI, June 2008).

GHG accounting is a critical tool to help identify opportunities for energy efficiency, and identify cleaner options for meeting energy needs. Although several MDBs have adopted GHG accounting practices for their direct operations as well as their investment portfolios, these efforts have yet to be operationalized. Current practice at the MDBs still does not yet consistently explore less carbon-intensive approaches to economic development. If MDBs can help build the capacity of actors and institutions in developing countries, such as electricity utilities and ministries, to measure and manage GHG emissions, they may have a substantial impact on helping reduce future emission trajectories.

*MDBs can help developing countries assess alternative approaches that might help countries reduce carbon emissions while still meeting their development objectives.* The decision as to which of these options will best meet needs for environmentally sustainable economic development will necessarily remain with developing countries. Money from the Clean Technology Fund could be made available to help meet the incremental costs of cleaner choices if MDBs conducted such analysis on a systematic basis.

World Bank Country Strategies need to identify how sectoral policies will affect emissions trajectories in client countries and how these strategies will be affected by predicted impacts of climate change. The goal of such integration should be to increase the quality of information and the range of choices available to decision makers, without locking client countries into prescribed policies or technologies.

*In order for the Clean Technology Fund to have a transformative impact, climate change considerations and measures to support the deployment of clean technologies must be reflected in all aspects of World Bank interventions in relevant sectors. Representatives of the US government on the Board of Executive Directors of the World Bank Group can play an important role in monitoring progress to this end.*

### **The CTF should operate in accordance with widely accepted principles reflected in the UNFCCC and other sustainable development instruments**

It is essential for the US to play a constructive leadership role in a global cooperative effort to respond to climate change, and an important step to this end is to ensure that the administration of the Clean Technology Fund is consistent with the principles of the UNFCCC. Several observers have expressed concerns that activities and programs implemented through the Climate Investment Funds and the Clean Technology Fund in particular may undermine or predetermine the outcomes

of global negotiations on technology transfer and financing through the UN Framework Convention on Climate Change (UNFCCC).

*The CTF should help pave the way to a global agreement on climate change through the UNFCCC.* The negotiations at the recent meetings of the parties to the UNFCCC and Kyoto Protocol in Bali at the end of 2007 kicked off a critical two year process, which will have to result in a more detailed vision of concrete actions that will result in a meaningful response to climate change. The road map that all countries including the US agreed upon in the Bali Action Plan has created an important strategic opportunity to help exploit synergies between the demands of development and poverty alleviation, and opportunities to mitigate climate change.

*US support for the Clean Technology Fund should be additional to continued and increased support for poverty eradication and economic development across the world.* The US can do much more to support the pervasive challenges of poverty that afflict millions of people around the world. While funds made available to support the deployment of clean technologies in developing countries must complement foreign assistance for poverty and development, and not detract from these programs. Indeed, a new challenge for the US going forward will be to ensure that initiatives supported by foreign assistance are consistent with the goals and objectives of the UNFCCC.

*The US should make sure that funding is made available on a grant basis to support the incremental costs of using clean technologies instead of fossil fueled or inefficient technologies.* Given that developed countries are responsible for the majority of the greenhouse gas emissions that have accumulated in the atmosphere to date, the UNFCCC recognizes that developed countries should support developing countries to respond to the challenges of climate change. By making these grant funds available the US can help developing countries make more sustainable choices, without unduly penalizing them for a problem they did not cause.

*Balanced representation of developed and developing country governments in administration of the CTF is crucial.* The World Bank in consultation with a range of stakeholders has proposed an equitable governance structure for the CTF that includes equal representation of donor and developing country governments on the Trust Fund Committee. This is important to ensure that developing country perspectives are adequately represented in decision-making on how to use the funds.

*It will be essential to maintain the highest standards of transparency and inclusiveness in the design of programs and projects that are supported by the clean technology funds.* The successful deployment of clean energy technologies to catalyze low carbon development requires wide ranging public debate. Current proposals on governance of the fund propose an annual partnership forum on the Climate Investment Funds that would include civil society, but this provision seems inadequate to ensure a robust level of citizen input. A more formal role for representatives of civil society in the governance of the fund – perhaps as an independent technical expert – would be valuable.

*The Fund must operate on the basis of maximum disclosure.* Adequate information on the choices that the various governing committees of the Clean Technology Fund are making and on their decision-making processes must be easily accessible in the public domain with adequate time for interested parties (particularly stakeholders in developing countries implementing clean technology programs) to be informed and engaged. A very narrow range of legitimate exceptions (such as for truly business confidential information - proprietary information, trade secrets, etc.) should apply. Early disclosure of documentation on proposed “low country” programs to be supported by the fund, and of project

proposals before they are approved by the Trust Fund Committee are essential. Timely public monitoring of the implementation and impacts of projects and programs funded by the CTF are also needed.

*These provisions for transparency and inclusiveness take on even greater importance in light of the links between programs implemented with the Clean Technology Fund and international negotiations through the UNFCCC. Making such information easily available can play an important role in ensuring that stakeholders in the UNFCCC negotiations are fully informed of developments, and so that these programs implemented with the fund do not predetermine the outcomes of negotiations on a post 2012 climate regime through established international processes.*

*If administration of the Clean Technology Fund is consistent with the principles of the UNFCCC, programs implemented have the potential to demonstrate to developing countries that they can in fact take meaningful low carbon actions to promote their own sustainable development priorities, with real support from developed countries such as the US.*