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Greenhouse Implications of Energy Policies of Multilateral Development Institutions

David A. Wirth
Boston College Law School, wirthd@bc.edu

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David A. Wirth
Senior Attorney
Natural Resources Defense Council

Through this exciting conference, the Climate Institute has brought together some of the most insightful thinkers from around the world to discuss the science of the "greenhouse" effect and policy responses for arresting and adapting to the impending climate modification. I do not want to repeat points made by previous speakers. However, I would like to provide some perspective on how we at the Natural Resources Defense Council (NRDC)--a private, nonprofit, environmental organization based in the United States with 95,000 members--are thinking about what is probably the most significant environmental issue of the next several decades.

The fundamentals of the greenhouse phenomenon are now well understood and the need for swift implementation of policy responses firmly established. Failure to respond to the threat of greenhouse warming would amount to an affirmative decision to wager the health and well-being of our own and future generations against overwhelming odds. There may still be some uncertainty concerning the rate and magnitude of warming anticipated. However, it is clear that the sooner necessary action is taken, the more effective it will be. Conversely, the longer implementation of a policy response is delayed, the greater the warming that will have accumulated "in the bank" and the more radical the measures that will be required to prevent further climatic upheaval. Moreover, once a crisis has been reached, it will be too late to act.

NRDC has recently launched an institution-wide "Atmosphere Protection Initiative" involving no fewer than 20 lawyers and scientists dedicated to crafting public policies to reduce or eliminate the serious threat of climate chaos. A major component of that effort is a study we have just begun at the request of the United States Department of Treasury. Our report will (1) examine the energy lending priorities of the World Bank and the regional development banks; and (2) make recommendations for structural and institutional reform of these multilateral lending institutions. Today I would like to describe the most recent conclusions of our work in progress--which, I must emphasize, are preliminary and subject to revision in light of future work. I would also like to extend an invitation to those present today and others with significant expertise or experience in this area to participate with us in this important endeavor.

EFFICIENCY AND CONSERVATION AS ALTERNATIVES TO CLIMATE-MODIFYING ENERGY INVESTMENTS IN THE THIRD WORLD

Encouraging sound energy policies in the developing world is crucial to solving the greenhouse warming problem. As economic development accelerates, Third World countries may account for the preponderance of greenhouse gas emissions as soon as the year 2000. Forest burning in Brazil, according to some sources, means that that country is already the third largest emitter of greenhouse gases, after the United States and the Soviet Union. Developing nations, with fewer of the extensive resources needed for successful adaptation to environmental disturbances at their disposal, also stand to suffer disproportionately from the effects of climate deterioration. There is, however, a potential equity issue lurking here. Developing countries have caused little of the problem, for which prosperous industrialized countries must bear the bulk of the blame.

The answer to this apparent dilemma is that the "greenhouse" problem is only one of several compelling reasons that require a swift reexamination of priorities for energy investments in Third World countries. For one, it is a practical impossibility to service the demand for energy services in the developing world through increased power generation capacity. Because of serious constraints on available capital, at best about half the projected energy needs in developing nations over the next 20 years can realistically be supplied by increased power generation.[1] Moreover, power generation projects in the Third World--as anywhere--often carry profound environmental risks. For instance, land degradation and local air pollution caused by mining and burning coal are all too often the high price paid for a new fossil fuel-fired power installation. Large dams often destroy forest and wetland ecosystems and displace and undermine the livelihoods of the poor and powerless.

At the same time, there is tremendous potential for supplying energy needs through conservation and improved end-use efficiency in many countries of the developing world.[2] It is a common fallacy that increased energy use is a necessary

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1 See, e.g., United States Agency for International Development, Power Shortages in Developing Countries: Magnitude, Impacts, Solutions, and the Role of the Private Sector (1988).

2 See, e.g., World Bank, End-Use Electricity Conservation Options for Developing Countries (Energy Department Paper No. 32, 1986); Goldemberg, Johansson, Reddy & Williams, Energy for a Sustainable World (1987); Goldemberg, Johansson, Reddy & Williams, Energy for Development (1987).

consequence of economic growth. In fact, according to Jose Goldemberg of Brazil, by the year 2020 it is possible to achieve a universal standard of living equivalent to that of Western Europe without increasing global energy consumption from today's levels.

Most developing countries, however, are still highly inefficient users of energy. Macroeconomic policies, such as electricity price subsidies, in many developing countries actually discourage conservation measures and efficiency improvements. One firm in Brazil, where electricity prices are highly subsidized, manufactures an energy efficient air conditioner for the export market, but a cheap, inefficient model for domestic consumption.

Investments in efficiency and conservation improvements are extremely attractive from many points of view. They require little capital, pay for themselves rapidly, ultimately contribute to the productivity of a country's overall economy, and typically service energy needs more cheaply than creating new generating capacity. Developing countries could avoid $1.4 trillion in power supply expansion costs between now and the year 2008 through efficiency and conservation improvements. Efficiency is a particularly cost-effective option in many developing countries, where significant new energy infrastructure that is now being put in place can benefit from state-of-the-art advances available in the industrialized world only through expensive retrofit programs.

THE ROLE OF THE MULTILATERAL BANKS

Efficiency and conservation investments are a major opportunity--to date nearly totally untapped--for donors such as the United States and the World Bank to assist developing countries in making wise energy choices and avoiding mistakes already made in the developed world while reducing risks to the entire planet from greenhouse warming. Nonetheless, development assistance in the highly environmentally sensitive energy sector often exacerbates the threat of greenhouse warming by heavily emphasizing "traditional" sources of energy, such as massive fossil-fuel fired power installations.

The World Bank, for instance, controls an annual energy lending portfolio of nearly $3.5 billion. This leverage is magnified considerably by co-financing arrangements and the tremendous influence the Bank's priorities have on development agendas in the Third World. The Bank requires a "least cost" study to precede approval of a loan in the energy sector. These analyses, however, consider only supply-side strategies for providing energy.

The Bank has no requirements for the consideration of non-CO_2 demand reduction measures, such as efficiency or conservation improvements, as alternatives to proposed loans to support increased energy supplies. Indeed, only a minuscule portion of the World Bank's energy portfolio has ever been devoted to conservation, efficiency, and renewable energy sources. In fact, the Bank has an explicit policy prohibiting investments in "new" or "alternative" technologies in the energy sector. According to a World Bank official with the title "Principal Industry and Energy Specialist,"

> In the world of energy, as in other areas, [the Bank's] role is not to create innovative technical solutions, or to help countries to gamble on new processes, but to identify the best practices that have been fully proven in practice and will work in a developing country situation, and encourage their wider adoption where merited by circumstances.[3]

Even the structure of the World Bank's energy and industry department guarantees that alternative energy investments receive short shrift. The only technical expertise on conservation and end-use efficiency at the Bank resides in an internal "consulting" group, which provides advice only upon request and does not have the power to propose alternatives to investments intended to increase energy generating capacity. Although Bank staff have refused to quote us a figure, it is widely agreed that considerably fewer than 10 of the institution's approximately 3,000 professionals have been trained in end-use energy efficiency and conservation technology.

NRDC'S STUDY OF THE DEVELOPMENT BANKS' ENERGY SECTOR LENDING PRIORITIES

As I said, we have recently undertaken a study of the environmental consequences--with a particular emphasis on implications for the world's climate--of the energy sector priorities choices made by the multilateral development banks (MDBs) of which the United States is a member. These include the World Bank, the Inter-American Development Bank, the African Development Bank, and the Asian Development Bank. Our primary emphasis at this stage is on the World Bank.

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[3] Eric S. Daffern, World Bank Policy in the Promotion of Energy-Producing Projects in Developing Countries (Reading, England, Apr. 7, 1987).

We initiated this study at the request of the United States Treasury Department, which instructs the U.S. representatives to the MDBs. The goal of the study is to establish the need for and to make recommendations concerning structural and institutional reform of the MDBs' energy lending priorities. We expect to use the final report to stimulate discussion on this important issue among key policymakers, such as bank officials, the Treasury Department, the U.S. Congress, and officials of other donor and borrowing countries. Because the document was requested by the U.S. government, we expect it to have a particularly high profile among policymakers.

Some of the preliminary recommendations we have been considering include the following:

- Substantial increases in the number of professional staff trained in end-use energy efficiency and conservation. In order to engage in lending in the areas of efficiency and conservation, it is apparent that the banks must have significantly improved technical capacity and adequate personnel to devote to project preparation. At present there is virtually none.

- A least-cost planning requirement that includes end-use efficiency and conservation. Experience has shown that efficiency and conservation invariably win when they compete with new supply on economic grounds. The banks should expand their least-cost methodologies to reflect the fact that a kilowatt saved is as good as a kilowatt generated, and environmentally preferable as well. For instance, a component reflecting adverse effects on climate should be included in the calculated cost of a new fossil fuel-fired power installation. Staff professionally trained in end-use efficiency should have the responsibility to review these studies and the power to question or reject their conclusions.

- Establishment of lending targets for efficiency and conservation. One of the principal impediments to undertaking energy efficiency and conservation projects is the lack of incentives for development bank staff to promote such projects and for borrowing country governments to propose them. For instance, the World Bank's controversial $500 million electric sector loan to Brazil, scheduled for consideration by the Bank's Board of Directors in January of next year, reportedly includes only $1 million--0.2% of the total--for efficiency improvements. The Bank should set aside a sum of money--beginning with at least 10% of the World Bank's $3.5 billion annual energy portfolio and increasing over time--strictly to finance end-use efficiency and conservation projects.

Just as important as--or perhaps more important than--the final product is the process by which it is produced. As in all of our work on the issue of environmental reform of the development banks, a close partnership with nongovernmental organizations (NGOs) in the Third World is essential. We anticipate sponsoring an in-depth review of successive stages of this project, beginning with a draft outline. It is already apparent that the issue is far more complex than can be dealt with in a presentation of this length or, indeed, by the staff NRDC has to devote to it. Organizations and individuals--and particularly those from developing countries--with experience and expertise in this field are warmly invited to contact us to participate in this process to assure both the quality and the legitimacy of the final product. Simultaneous with this broad review process, we will be informally consulting with development bank and U.S. government officials to assure the ultimate implementation of recommendations advocated in the document, which should be highly influential in encouraging positive change in this critical sector.