

**Ministerial Roundtable B:
Financing Options for Renewable
Energy**

Thursday, 3 June, 14.30 – 16.30

Venue: Bundesrat

Internationale Konferenz
für Erneuerbare Energien, Bonn
International Conference
for Renewable Energies, Bonn



KEYNOTE SPEECH

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Opening Remarks

I would like to begin by congratulating our German hosts and friends for their successful efforts in organizing this important conference, and for the opportunity to open this panel discussion on the key topic of financing with such distinguished fellow panelists. It is indeed both an honor and a pleasure to be here with you, and given Germany's leadership in the field of renewable energy it is only fitting that we should all be meeting here.

It is an honor and pleasure to open this panel in no small measure because the topic of renewable energy has been a personal interest of mine for a number of years. When I had the privilege of serving as secretary general of the UN Conference on New and Renewable Sources of Energy in Nairobi, in 1981, interest in renewable energy also was running high. At that time, some of you may remember (if you are not too young), the world was gripped by concerns about scarcity of conventional energy resources, especially oil and gas. In the wake of the 1972 Stockholm environment summit, there was interest in renewable energy as a way to help support economic development in poorer countries, and to protect the environment. But much of the concern for promoting renewable energy in richer and poorer countries alike was as a way to lessen both economic and geopolitical pressures in conventional energy markets.

Renewable Energy Today: Two Principal Goals (poverty alleviation and climate change mitigation)

Today we once again find these pressures and concerns on the rise, but the fundamental basis on which renewable energy is promoted has shifted profoundly since the early 1980s. The unit costs of many smaller scale renewable technologies have dropped precipitously

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since the 1980s, just as their advocates predicted, and likely will continue to do so as experience with their use accumulates. But the costs of conventional primary energy resources and of electricity generation and distribution also have remained steady or dropped with expansions of the recoverable resource base and increases in systemic efficiencies of operation. In a great many locations, smaller scale renewable energy has not yet won the race in the marketplace on cost alone. Instead, we look to smaller scale renewable energy as an option to accomplish two crucial goals, one shorter-term and one longer-term.

The first and more immediate goal is to lighten the burden of poverty and enhance the quality of lives of the billions of people who still lack access to reliable, affordable and environmentally safe energy services. There are few symbols of the consequences of global inequality of incomes and opportunities more vivid than satellite imagery showing a brightly lit developed world and a dimly lit or dark developing one. The practical consequences of lack of good energy services permeate society, including problems for productive activities, education, indoor air quality, health services, basic human comfort, communications, and family and community relations.

The other and longer-term goal is to protect the global environment, in the context of climate change from fossil fuel combustion. Without progress over the next couple of decades, inevitably and tragically we will face a future of growing energy demands and growing environmental pressures without adequate tools to respond cost-effectively. Non-marginal progress in the technical and economic efficiency of various forms of renewable energy is one needed component to “decarbonize” the world’s energy system.

IDB Renewable Energy Activities

With this change in emphasis on the rationales for promoting renewable energy has come a rich array of practical experiences from the field. Renewable energy is a significant and growing part of total activity in the energy sector. In recent years the IDB also has renewed and diversified its renewable energy activities, as well as activities related to CO2 mitigation and sustainable development that link with renewable energy.

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Two IDB Project Examples

A few brief examples may help to underscore our interests in further expanding our renewable energy activities. Since 1994, IDB micro-credit and technical assistance in Peru has enabled the construction of 24 micro hydro plants with more than 1.5 megawatts capacity in isolated rural communities. In some cases diesel generators were displaced by the hydro capacity, reducing local pollutants and CO2 emissions as well as fuel purchasing costs. In other cases villages previously had had no access to electricity. A total of 25,000 inhabitants have benefited from this project. The executing agency, Intermediate Technology Development Group (ITDG), received the 2000 Climate Technology Leadership Award from the Climate Technology Initiative of the International Energy Agency (IEA) for its work on this project.

Since 1996, first the Fundação Teotonio Vilela and then another Brazilian NGO, Eco-Engenho, have been installing photovoltaic energy charging stations in very isolated semi-arid rural areas in the northeast of Brazil. Local customers can use these stations to recharge electric batteries for domestic and business use for a fee. Once energy demand grows, the solar panels of the charging stations can be decentralized and installed in individual homes employing innovative fee-for-service financing. The Bank's program, which is also supported by the Brazilian Banco do Nordeste, has provided micro-finance and technical assistance to microenterprises responsible for the installation and maintenance of the solar energy systems. Eco-Engenho has successfully helped develop over 90 microenterprises providing about 12,500 local inhabitants access to electricity services in about 2,700 residences.

IDB-German Partnership

To further these ends, it gives me enormous pleasure to announce to you today the next key step in this trend, the signing with our German colleagues of a new strategic partnership agreement designed specifically to foster joint projects and co-financing in the field of renewable energy. Under this agreement, we will enhance the identification and programming of renewable energy opportunities in our region. We are very grateful to our

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German friends for this chance to work together and we welcome the opportunity to further expand our circle of collaboration in this field.

Need for Greater Capacity Building in Renewable Energy Activities

All of us, representatives of wealthier and poorer constituencies alike, can learn important lessons from our experiences for increasing the effectiveness of our efforts in the future. Before turning to financing issues, especially those confronting developing countries, I would like to offer a few more general comments.

As many others have emphasized, success in implementing renewable energy investments requires a variety of prior capacity building initiatives and background assessments of particular technical, economic, environmental, and social conditions. These kinds of initiatives have at least some of the characteristics of local or regional public goods, and as such markets alone will not adequately provide them even under the best of circumstances. The IDB and other development banks, as well as national and multilateral donor agencies, have a role to play here in helping to finance such activities with non-reimbursable resources as well as providing technical support for their execution. To ensure maximum results for the investments made, partnerships that incorporate full participation and some cost sharing by beneficiaries are desirable. Recent developments in Brazil illustrate one such approach, in which a government agency coordinates concurrent social and environmental impact analyses of a number of projects, which can then be undertaken by private investors.

IDB Energy Sector Priorities

The IDB's recent activities have been part of a larger and broader package of investment and capacity building efforts to improve the economic, environmental, and social performance of the energy sector in our region. The Bank's Energy Strategy emphasizes the crucial importance in the energy sector of three goals: (1) Promoting greater economic efficiency – providing valuable energy services to those who need them at lower cost. (2) Ensuring financial sustainability and transparency – the need to have the costs of providing energy be clear, and provisions for governance of the sector such that markets can function effectively.

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(3) Protecting and promoting environmental and social values – ensuring that the costs of energy services are not externalized to the environment, and that the full range of social benefits from improved access to affordable energy is realized. This last goal is further elaborated in the Bank's Environment Strategy. Inevitably and inherently there are tensions and tradeoffs among these criteria, and these must be reconciled through a combination of sound judgment and inclusive participation by all stakeholders.

The Bank's Energy and Environment Strategies are to be implemented through new Energy and Environment Policies. These policies are being made available to civil society in order to solicit their comments and feedback. I would like to take this moment to invite all of you here to assist us by participating in this consultation (details for which can be found on our web site).

Financing Renewable Energy Projects

With these observations as backdrop, let us turn more directly to issues related to financing new renewable energy, particularly in the context of developing countries where resources of various types are scarce and needs are many and diverse.

Key Barriers

The basic outlines of the challenge facing us in this area are relatively familiar. While experience has increased understanding of many new and smaller-scale renewable energy technologies and lowered their costs, many of these technologies – especially in rural areas – still involve investments whose technical *and* financial performance in specific settings is subject to uncertainty. The resulting barriers are especially unfortunate when, as in many cases, smaller investments may pay the highest proportional benefits in terms of rural economic and social development and poverty alleviation through the availability of clean, safe, affordable, and reliable energy that enhances productivity, facilitates education, and allows improved delivery of health care services, among other benefits.

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Even where project proponents and other specialists believe a project is technically and economically sound, moreover, broader problems of availability of affordable capital – especially for smaller scale activities – may hamper project finance. Also hindering the potential for projects can be various institutional and governance problems including lack of clarity in who controls the resource, difficulty in enforcing commercial agreements, tax and regulatory policies that distort energy markets in various ways, and barriers to accessing domestically or internationally provided components and expertise.

Addressing the Challenges: Need for Better Enabling Activities

It is clear to me that a set of new and strengthened partnership activities based on comparative advantages of various actors is needed to attack the variety of barriers to successful expansion of smaller scale renewable energy. To start, good enabling conditions for sound renewable energy investment requires strengthening the institutions and clarifying the rules that govern energy sectors. Moreover, since a number of barriers to otherwise cost-effective and developmentally effective renewable energy investment may be found in broader challenges facing financial markets, various product design innovations and capacity building efforts in these markets may help lower renewable energy barriers and benefit other productive activities. One common barrier is the need for a longer payback period given the relatively higher cost of the investment phase.

To cite one example, the IDB's Multilateral Investment Fund (MIF) currently is considering a financing venture called the Central American Renewable Energy and Cleaner Production (CAREC) Facility that will provide debt and quasi-equity financing ("mezzanine-financing ") for small scale clean and renewable energy projects. The Facility builds on several previous successful efforts by the MIF to provide equity and grant financing for renewable energy and energy efficiency. Combined with a limited amount of grant financing to help "seed" the project pipeline, the approach is to provide more appropriate financing instruments that fit well with the needs of project developers.

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Importance of Small Renewable Energy Projects in Underserved Areas

The social development benefits of expanded energy availability in poor and rural areas can be very high, but especially in more lightly populated rural areas, the cost per customer of extending service also is inherently higher than in more densely populated areas. In many cases, smaller scale renewable energy is an excellent option to fill the gap; but it may still be expensive relative to the ability of the served population to pay. In such situations there is a clear argument in favor of government involvement in helping to finance the extension of energy services. But this can be done most effectively through subsidies of limited duration targeted toward extension of access and a “lifeline” level of service to cost-effective energy services. This is much preferable to broader-based subsidies of energy consumption that are poorly targeted and needlessly expensive.

Importance of Increased International Partnership: Example of IDB

Last, but certainly not least, there are important international partnership opportunities for linking renewable energy use to protection of the global environment. For its part, the IDB has over the past couple of years raised considerably its own attention to how sustainable economic development in the region and mitigation of greenhouse gas emissions can be linked synergistically. We look forward over the next year to new partnership efforts to more systematically mainstream both “carbon management” and “carbon finance” into the Bank’s activities, in particular in its expanding renewable energy activities.

Conclusions: Highlighting the Key Issues and Challenges

A number of challenges face stakeholders and decision makers in richer and poorer countries in effectively promoting and financing renewable energy. To stimulate our discussion, I would like to close by highlighting a few such issues.

- A number of wealthier countries, certainly including Germany and others in Europe, have made impressive gains in the use of renewables in their own energy systems. In the United States there is continued and growing interest as well in expanding

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renewables use. Since head-to-head cost competition does not yet favor renewables in many locations, much of this success has been achieved with the help of various regulatory mandates including feed-in tariffs and other preferences or quantitative renewable portfolio standards for inclusion of renewables in the grid. The relative merits of these various options in terms of their effects on renewables use and long-term cost trends versus current electricity prices continue to be debated. Their potential applicability to developing countries, where concerns about cost and affordability of service are keen, and there are a variety of energy options including energy efficiency to consider, also requires serious consideration.

- A criticism of conventional power sector planning and operation, at least in the past, held that it was supply-driven (“if we build it they will come”), rather than demand driven (seeking to provide services tailored to demands, as well as technical efficiency of supply). The same pitfall also needs to be avoided in promoting renewable energy. We must remember, as pointed out by so many experts from otherwise differing points of view, that energy systems of whatever type are a means to an end, not an end in themselves. In selecting among options for providing energy services, we must consider how to properly take account of the various needs to be met – commercial and social – and the costs – economic and other.
- In considering the future of renewable energy, stakeholders in individual countries and in international institutions the world will continue to struggle with the role of larger hydroelectric projects. Certainly these projects can have serious environmental and social consequences, and there are examples of bad projects, including in Latin America. However, larger hydro also can be a very cost-effective source of renewable energy, and when designed and implemented with appropriately strong safeguards, environmental and social problems can be avoided or minimized.
- Further progress in promoting renewable energy in both developed and developing countries depends crucially on further cost-reducing innovation, in development laboratories as well as in the field. Developed countries still carry out the bulk of this research and possess most of the financial wherewithal for doing so, though larger

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developing countries are very active as well. How can international cooperation and funding for improving renewables technologies and their diffusion be significantly strengthened and made more effective?

- Finally, I think it safe to say that everyone here understands that the market situation facing renewables world-wide will depend greatly on the incentive to use these technologies as part of a portfolio of responses to targets for reducing CO₂ and other greenhouse gases under the UN Framework Convention on Climate Change and the Kyoto Protocol. Developing countries do not currently have numerical targets and timetables for CO₂ reductions and any such obligations depend on future negotiations. In the meantime, how developed countries choose to respond to their negotiated obligations, and how they choose to involve developing countries voluntarily as partners through emerging “carbon finance” markets, clearly will materially affect the economic evolution of renewables.

Closing Remarks

Since the 1981 meeting in Nairobi, some elements of the renewables issue have changed greatly and others remain essentially the same. The specific drivers of concern for increasing renewable energy have shifted, as has our understanding of how best to intervene effectively to do so. Essentially unchanged, however, is the recognition that increased access to clean and affordable energy is a critical element on the path to sustainable development. There are many challenges to this end, but also many fruitful paths forward. We at the IDB look forward to walking with you down those paths. Thank you very much.