

# REPSO urce

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Winrock International receives support for the REPSO network from the U.S. Agency for International Development

## Increasing Support for Renewables in Brazil



REPSO Brazil

From left: Roberto Moussallen, Secretary of Infrastructure and Energy; Firmino Ferreria, Electrobrás President; Rodolfo Tourinho, Ministry of Mines and Energy; Prof. Marcel Sobrino, Chancellor of UNIFACS

In June 1999 the Brazilian Power Sector Regulator (ANEEL) held a public hearing on a resolution limiting the power purchase costs that distribution utilities may pass on to their captive customers. This proposal is one of several measures that could significantly impact the growth of renewables in competitive grid-connected and dispersed markets.

The proposed resolution caps the portion of a distributor's power purchase costs that it can "pass through," primarily to its small retail customers. These values differ by generation technology or fuel input, ranging from roughly US\$ 0.14/kWh for solar PV to US\$ 0.0391/kWh for wind power. By comparison, the value is US\$ 0.0285 for electricity generated from natural gas. While the values for renewables, including small hydro and biomass, exceed the levels for conventional fuels, these "pass-throughs" are still too low to compete in the grid-served market. One wind energy developer has suggested that a minimum pass-through of US\$ 0.066 is needed. Higher pass-throughs may not translate into greater profits for renewable energy

companies since distributors will prefer to purchase the cheapest grid-fed power, which in Brazil means large hydro. However, very low pass-throughs for renewables will remove the incentive to move forward with projects in development. ANEEL will provide the final resolution in the coming months.

Prospects in off-grid markets are improving dramatically despite challenges. ANEEL recently passed a resolution, still pending approval by the government, extending the fuel consumption account (CCC) subsidy to renewable energy generators serving the isolated systems of the northern region. The CCC has traditionally subsidized fuel purchases for diesel mini-grids within the northern region. The reform recognizes that renewables are often the most efficient energy source for serving remote communities characterized by low load densities and low average incomes. The most favorable terms are offered to renewables rather than conventional generators. The CCC will cease operations in 2013.

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## Keeping Rural and Renewable Energy "On the Table"

By Bill Howley, Director  
Winrock International Brazil

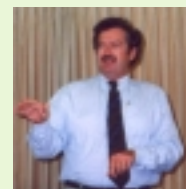
"Sustainable means market." This is how Paul Klimas began his remarks recently at the USAID-sponsored Winrock International Renewable Energy Project Support Office (REPSO) Network retreat. As private companies increasingly invest in rural and renewable energy services, regulatory risk is a major deterrent to market development. In simplistic terms, policy work in the area of renewable energy commercialization generally means one of four things:

- Establishing transparent "rules of the game"
- Removing barriers
- Providing incentives
- Balancing competing interests in development, equity, and environment

In countries where Winrock International and its partners are accelerating the commercialization and widespread use of clean and renewable forms of energy, policy work to promote market-led solutions is a key activity of the REPSO Network. Keeping rural and renewable energy "on the table" in rapidly evolving regulatory policy dialogue is quite a challenge—yet politicians, technocrats, and officials from a wide range of institutions (including the development banks, NGOs, consumer advocacy groups, government, and the private sector) are working together in search of viable solutions.

As energy markets are restructured, re-regulated, privatized, and re-capitalized around the world, policymakers and advocates of competing interests struggle against the clock and one another in search of a balance between individual and collective rights, responsibilities, and rewards. It is the unfortunate case that

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Bill Howley

# Interview with

**Since this edition of REPSource focuses on policy, we called on Carl Weinberg, Winrock Senior Associate and renowned policy advisor, to share his thoughts on the direction of renewable energy policy around the world.**

**WI: Given the global trend towards deregulation and liberalization of electricity markets, what will be the likely impacts on renewable energy development ?**

**CW:** Liberalization is moving at different speeds and in different ways from place to place, so implementation is still an open question. The impact on renewables therefore is hard to evaluate and assess.

There are some challenges that have consistently appeared. For one thing, liberalization leads to market uncertainties, which leads investors and lenders to shorten their investment horizons and increase concerns about capital risk. This puts renewables at a real disadvantage since they require significant early capital investment. You might say that renewable energy developers pay for their fuel up front, through financing studies to characterize a resource and determine the optimal plant site. However, the [financial] industry seems to have less tolerance for that risk than fuel price risk.

Liberalization also means the evolution of "new rules of the game" and often a new set of organizations that are not totally sure of their responsibilities. This has the potential to create barriers for renewables. In most cases the renewables industry is neither developed enough nor

does it have the political power to have a seat at the table when the new rules are being developed. As such, high-level policymakers may lose sight of the important role of public interest research and development (R&D) and programs in support of renewables and universal service. They may instead choose to rely on the power of unfettered markets to address these problems. However, markets do not necessarily move in the direction desired by society unless all the concerns of society are included in the market evaluation. If environmental and equity consequences of electricity generation and distribution are not valued in the market, then renewables will have a difficult time competing.

On the other hand, liberalization and restructuring also provide new opportunities. In California for example, a "green" power market has been developed which provides environmentally friendly pricing and open access to transmission and distribution grids. These opportunities are both at the wholesale level, far from load centers, and are appearing in the retail level, right at the customer's location. The applicability of renewable energy technology across this entire delivery spectrum is one of its strengths. To me though, the most important aspects of this change are the innovative thinking and innovative approaches that are emerging. The old rules and decision-making criteria are being re-evaluated, rethought, and reinstated. Public purpose programs also need to be rethought, and the environmental impact of electricity generation needs to be disclosed to the consumer. With this innovation, it is my hope that a new system of providing electricity for all the people across the globe will eventually emerge, along with a legacy of liberalization and restructuring.

**WI: What type of policy measures should countries interested in increasing private investment in renewable energy consider?**

**CW:** Policies to support renewables fall into two categories:

1. Creating a market and then attracting capital, or
2. Creating the capital and attracting the market.

In the USA the two approaches are characterized by the Renewable Portfolio Standard (RPS) and the Systems Benefit Charges (SBC). The RPS establishes a target that must be met, and the SBC establishes a pool of money to be used to purchase renewables from the market. Either approach can be successful or can be managed to failure. They are also not mutually exclusive, as several states have adopted both. The RPS is probably better for the wholesale market and the SBC is easier to apply to the retail market. Careful thought needs to be given to implementation, however.



*Carl Weinberg at Winrock REPSO Retreat in March 1999*

# Carl Weinberg

**WI: Can you think of examples of countries that have successfully implemented policies to attract private investment in renewable energy projects?**

**CW:** England's Non-Fossil Fuel Obligation (NFFO) has done well. By mandating the wholesale purchase of significant quantities of renewables from a variety of technologies, NFFO has created a market for renewable power. NFFO also creates a pool of capital to stimulate market purchases of renewables. This same approach is being applied in California with very specific desired outcomes.

The most favored approaches used thus far have centered on tax incentives and standard power purchase contracts. In the case of tax incentives, it is important to give preference to incentives which support *production* as opposed to those that merely subsidize the *construction* of a generating facility. The standard long-term power purchase contract has been the most successful approach for rapidly developing an active renewable market and megawatts of generation. If the price and contract terms are set properly, known in advance, and likely to remain constant, the renewables industry can evaluate rapidly whether it will be profitable to build and operate a facility with minimal transaction costs and lead time. Where this approach has been instituted it has produced more renewable generation than was anticipated. Germany's Electricity Feed Law (EFL) represents one such example. The EFL is a variation of a standard offer contract that requires utilities to buy renewable power at 10¢, in the case of wind energy, for the life of the plant. If this approach is attempted a limit on the quantity of megawatts should be considered, which is what Germany eventually did.

**WI: What is your view on the use of subsidies to stimulate interest in renewable energy investments?**

**CW:** There is always a question of why renewables should receive support. After all, if deregulated markets are to operate efficiently, such support can only lead to market distortions. This statement would be OK if there was such a thing as a perfect market, which there isn't. This is particularly true for electricity generation, where the significant environmental costs of generation are not adequately factored into market pricing. The market is further distorted by a government's attempt to increase electricity for economic development. It has always been a mystery to me why we would give fossil fuel production a depletion allowance tax break worth billions for extracting depletable fuels, but we have to apologize for supporting fuels that do not deplete. It ought to be the other way around. Many countries also provide support for the cost of diesel fuel for remote communities which distorts the market price. If you consider the support costs, renewables are the most cost-effective solution. Any support for renewables would be appropriate to offset the support presently going to fossil fuel in addition to the environmental mitigation renewables provide.



**WI: Finally, could you comment on the U.S. Government's current domestic policy on renewable energy?**

**CW:** The Government's current policy is favorable for renewables. It has supported a strong R&D program and has recently increased the goal for the purchase of renewables by Government organizations—a cautious but steady move toward increasing renewable and energy efficiency use. In the USA there is a mixed picture on restructuring policy. Most of the activity is occurring at the State level, and Congress seems content to let that continue for a while. The current Administration has proposed a restructuring bill that includes support for renewable energy in the form of an RPS, as well as support for distributed resources through net metering provisions, distribution access standards, and matching funds to support energy efficiency. The Administration's bill also establishes a requirement for an end date when all States must be in compliance. It is a well thought-out and balanced proposal. A number of other bills have been introduced in Congress, and it will be interesting to observe how these different approaches are resolved. The renewable and the environmental communities will have to be alert and involved to insure that a more sustainable energy policy emerges from the proposed policies. <sup>vi</sup>

*Carl Weinberg is the founder and chairman of Weinberg Associates, and serves as a Winrock Senior Associate. He has authored numerous books and articles on the topic of renewable energy and energy policy, including "Utility Strategies for Using Renewables," and has contributed to the development and implementation of energy policies and strategies worldwide. Mr. Weinberg has served as the manager of Pacific Gas and Electric's R&D department, as president of the American Wind Energy Association, and with the federal government as a member of the U.S. Working Group of the Global Energy Efficiency Initiative.*

# Renewable E

The following article summarizes points fully developed in the *Renewable Energy Policy Manual* from the U.S. Agency for International Development (USAID). The Manual can be downloaded from [www.usaid.gov/energy](#).



## A Policy Prescription for Leveraging Renewable Energy in Liberalizing Electricity Markets

In order to generate additional capital (from the sale of public assets) and reduce the outflows of resources required when subsidizing state utilities, many governments around the world have opted to privatize their national electricity companies. In many cases this process involves the unbundling of the sector's generation, transmission, and distribution assets, and establishing a market structure that derives its prices from short-run costs. An objective of such a system is often rapid development of new generation at the lowest marginal cost. As a consequence, power projects that have the lowest initial capital costs may have a distinct advantage.

Renewable energy technologies represent a cost-effective, long-term, responsible option for meeting many public electricity needs and forwarding larger national policy goals. However, without first creating specific political and legal tools to promote the penetration of these technologies (throughout the entire power sector—both on-grid and off), the “competitive” market will still likely favor fossil-fueled generation.

The long-term benefits of developing renewables-based generation are many. First, as low or no emission, non-extractive (excluding geothermal) energy sources, renewables avoid public health costs and resource damages associated with pollution caused by fossil fuel extraction, combustion, and transportation. Additionally, the development of a global trade in carbon emissions reduction credits would make avoided emissions a valuable commodity. Second,

diversification of a country's power mix through the incorporation of indigenous renewables insulates the country from foreign fuel price volatility, which can in turn mitigate potential balance-of-payment and currency speculation problems. Third, developing renewables projects generally creates new and often skilled jobs, the income from which is multiplied throughout local economies. Lastly, the modularity of renewables often makes them the lowest cost options for rural electrification, which facilitates increased entrepreneurial activity and productivity often in economically depressed areas.

Despite these advantages, private sector investors often face barriers to renewables development. Developing renewable energy projects depends on very detailed, site-specific natural resource data. This information is often derived from well drilling (in the case of geothermal) or monitoring and analysis (such as with solar, wind, and hydro). These costly studies represent a significant portion of the overall project cost for renewables and can increase the project development lead-time. Vaguely defined or inconsistent legal and regulatory issues concerning renewable resources create uncertainty regarding resource access (such as land concessions and river rights-of-way), the recuperation of prefeasibility investments, and project profitability. Similarly, most commercial lenders refuse to finance renewable energy power plants that lack a substantial long-term, fixed-rate, power-purchase commitment. Lastly, as turnkey thermal technologies typically offer greater economies of scale, require much lower initial capital cost investments, and often run on subsidized fuels, the playing field is heavily tilted against renewable resource-based power projects.

(See Policy, page 7)

# Energy Policy

Policy Manual, prepared by the U.S. Export Council for Renewable Energy, with support from  
downloaded in its entirety at <http://solstice.crest.org/renewables/usecre/manual.html>



**The following eight-step process may be useful for legislative strategists establishing renewable energy policy:**

**Step 1. Articulate the hierarchy of broad national economic, infrastructure and energy goals, clearly differentiating between the desired ends and the means devised to reach those ends.** Use this statement as a touchstone in evaluating, establishing, and defending a national renewable energy policy.

**Step 2. Determine within the overall development goals of the nation, the importance of achieving particular objectives in the electricity sector.** A government's establishment and promotion of national priorities are neither inconsistent nor antagonistic to the objectives of a market-driven system. Beyond setting targets in terms of new capacity or electrified households, this exercise will clarify the investment and management roles of the government and the private sector in meeting goals for the development of rural and remote areas, the development of new industries, and the national goals for resource self-reliance.

**Step 3. Establish the role of renewable resources in the energy mix.** Identify the available or potential renewable resources. Determine whether such a supply and demand analysis supports a goal of attracting new capital investment into new renewable resource-generating capacity. Define the term "Renewable Resources." Clarify that definition by setting forth the specific resources and defining each separate renewable resource. Incorporate technical, political, and legal concepts

**Step 4. Articulate renewable energy objectives.** Establish objectives for each renewable resource. Consult with each renewable energy industry. Identify the developer's needs, the legal rights the government must grant to fulfill those needs, and the accompanying legal duties the government should impose.

**Step 5. Identify existing and potential impediments.** Some examples might include a lack of clarity regarding authority to generate or distribute electricity, and ability to delegate that authority. Others might focus on whether tax and import tariffs provide necessary compensation for internalizing environmental and social costs of renewable energy-generated electricity. Still other examples can be found by looking at the overall legal and investment regimes in place: do they adequately enforce contracts and preclude expropriation? Are there foreign investment restrictions affecting currency exchange, foreign equity, and earnings or investment repatriation?

**Step 6. Identify the available mechanisms to remove the barriers to achieving renewable energy policy objectives.** Identify incentives which may apply broadly to all private investors in any infrastructure project. Identify incentives which bridge hurdles to private sector investment in renewable energy power generation and which may apply to unique situations of a specific renewable resource.

**Step 7. Design a legal vehicle.** Strive for expedited implementation of the policy objective, but ensure that government undertakings may be relied on without frequent ministerial, judicial, or arbitral interpretation. Test proposed laws within the community that the law will govern before the law is finalized.

**Step 8. Design a regulatory vehicle.** Implement the policy objectives established in the law.

*Information on these two pages is from "The Renewable Energy Policy Manual," prepared for the U.S. Export Council for Renewable Energy by A. John Armstrong, Esq. & Dr. Jan Hamrin.*



From left: José Mario Abdo, ANEEL, Osvaldo Soliano, Brazil REPSO, Firmino Ferreira, Electrobrás

ANEEL is also clarifying the rules whereby third parties may provide electrical services to off-grid customers within the new distribution concessions. A hearing was held to resolve the status of existing rural electricity cooperatives (RECs) as either public service providers (permissionaires) or authorized producers serving only their membership. In addition to RECs, ag coops, NGOs, and other private enterprises may form Rural Energy Service Companies (RESCOs) to act as permissionaires or authorized producers. The hearing sought to define the service territory of the licensee or authorization holder, and provisions for compensation for any expropriation/transfer of property resulting from this process. Without effective protection of their assets, service providers within the concession territory will be unable to raise reasonably priced capital; this tension is a key point of contention in the dialogue. Concessionaires are unwilling to give up potential future markets in rural areas (presently unprofitable). Permissionaires need assurance that they will be free to compete and earn a competitive return on their capital. In some cases concessionaires and permissionaires may form alliances and jointly address given market segments; however new permission or authorization can only be awarded through a yet-to-be-defined public bidding process.

Finally, it is noteworthy that REPSO Brazil and USAID are actively participating in defining the policy agenda for the energy sector. The Brazilian Congress recently established the policy body for the energy sector, known as the Brazilian National Council on Energy Policy (CNPE). In May, REPSO Brazil, USAID, the Ministry of Mines and Energy (MME), the National Petroleum Agency (ANP), and UNIFACS University co-sponsored the "Salvador Forum." The Forum served as a preparatory discussion of the potential energy policies and issues that might make up the CNPE's initial agenda, as well as guidelines for its activities. The national Minister of Energy, President of Eletrobrás, and other energy decision-makers attended. 

## Proposed Mexico Restructuring


Faced with the need to increase electricity generation capacity by at least 30%, at an estimated cost of US\$ 25 billion, the Mexican Government is moving to restructure the electric sector to allow for increased private sector participation.

The Mexican Secretariat of Energy has submitted a proposal to Congress for the unbundling of generation, transmission, and distribution and for the creation of an independent system and market operator (COSEN). Under the proposal, transmission and distribution services would be awarded in concessions and regulated separately, and COSEN would prioritize the dispatch of wholesale power on a short-run marginal cost basis. The proposal also provides for the creation of a subsidy policy to meet explicit social welfare objectives such as total or "universal" electrification. The Government began collecting public and agency input on the proposal in February 1999 and the Mexican Congress is expected to vote on the proposal in the latter half of this year.

The Mexican National Commission for Energy Savings (CONAE), which is under the Secretariat of Energy, has begun promoting renewable energy development in addition to its efforts to promote primary energy conservation. Winrock is providing support to CONAE in its renewable energy promotion efforts. Winrock support has included the preparation of two policy-related papers in 1999.

The first paper, entitled "Policy Proposal for Structural Reform of the Mexican Electricity Industry: Implications for the Renewable Energy Sector,"<sup>1</sup> examines the possible implications of the proposed restructuring plan on the renewable energy sector and reviews policy mechanisms applied. It employs the analytic framework developed in the Renewable Energy Policy Manual (see summary on page 4) to arrive at recommendations for both on-grid and off-grid sectors. One area of concern common to most power sector restructuring proposals and processes worldwide is that the de-emphasis on long-term power purchase contracts negatively impacts renewable energy project development. This is due to the relatively higher investment costs, but lower operating costs, of renewable energy projects. Even with lower operating costs it is difficult to finance projects if the effect of power sales and

revenues on long-term power purchase agreement contracts (PPAs) cannot be accurately predicted. Without such contracts, financing the construction of a renewable energy project becomes more expensive relative to conventional plants that have low construction costs and high life-cycle fuel costs. The paper therefore recommends that bid prices in both the short-term and remaining long-term markets adequately reflect long-term fuel costs. The paper equates a long-term perspective to 15 years. It also recommends that a balanced energy mix and environmental performance be explicitly linked to the subsidy payment regime. The paper concludes that since renewable energy typically represents the most cost-effective solution, the Government should not set subsidy levels higher than necessary with respect to bids to service off-grid areas.

The second paper, entitled "Electricity Restructuring and Renewables Policy in the United States,"<sup>2</sup> draws on experiences with the development and implementation of renewable energy policies in the U.S. to present a menu of possible mechanisms and related issues and lessons suitable for Mexico. The paper suggests that while any number of long-term tax, cash, and contract incentives may be suitable, no simple single policy will sufficiently promote renewable energy development. Instead, the Government would do well to focus on developing "industry infrastructure" and "market transformation" mechanisms, in advance of or along with large-scale subsidy-based policy. The authors cite the funding of resource assessments, transmission studies, education and training programs, and technology R&D as prime examples of policies to build infrastructure. They further recommend developing regulatory instruments conducive to renewable energy resource sites and permits. 

<sup>1</sup> Armstrong, A. John, "Policy Proposal for Structural Reform of the Mexican Electricity Industry: Implications for the Renewable Energy Sector". Draft commentary presented to Winrock International.

<sup>2</sup> Hamrin, Jan and Ryan Wiser, "Electricity Restructuring and Renewables Policy in the United States". Prepared for Winrock International, 2/99.

## Policy *(continued from page 4)*

To remedy these disincentives, governments must create transparent power-generation regimes composed of predictable legislative and regulatory processes that specifically address the needs of renewable energy. Additionally, governments must define an appropriate role in shaping resource concession processes and promoting universal electrification.

A first step in establishing a policy framework that encourages renewables is to articulate and prioritize national energy policy goals and electricity sector objectives. In so doing, the policy maker would identify obstacles to achieving renewables objectives, spelling out statutory guidelines for government decision-making processes, the treatment of foreign versus domestic parties, investment security, and repatriation. The framework defines rights for each type of renewable energy resource governing access to land exploration, extraction or use, and conversion to electricity for sale. Further, a legislative framework identifies or signals the creation of mechanisms to remove barriers to renewables objectives. Defining appropriate mechanisms will draw on the knowledge of stakeholders, but may include: adopting a carbon tax or a pollution-based price index, leveraging multi-lateral development bank funds or loan guarantees, offering specific tax incentives, directing government power purchases, or mandating a renewables portfolio standard. The legal instruments used to appropriate these mechanisms as well as establish statutory guidelines should not require frequent judicial or legislative interpretation. Lastly, proposed statutes should be tested within relevant communities (including local and foreign industry associations) to determine unanticipated inconsistencies.

Implementing electricity regulations will complement the objective of increasing the use of environmentally responsible renewable resource development with private sector needs to select the most effective and profitable means to accomplish the task. To successfully accomplish this task, policymakers must first have a clear vision of the organizational structure of the entity or entities responsible for administering regulations, authorizations, and concessions.


Many issues need to be considered when prescribing the power concession process. For example, concessions should meet private sector needs for streamlined and clearly defined processes that maintain transparency and fairness. As such, concession committees should be composed of individuals qualified to appraise a renewable resource development opportunity. Mandated “use-it-or-lose-it” development restrictions on a resource should be clear at the outset and perhaps linked to the granting of temporary concessions tied to exclusive development options. Lastly, the concessions process should obviate the need for many additional permits, which often introduce hidden regulations and time delays.

Once a developer has obtained the necessary concessions to develop a renewable resource, they must find a way to market the product of value, electricity. For on-grid projects this typically means bidding on a utility’s solicitation for capacity and associated energy (even if that bidding is on a spot market for a day’s worth of supply). Traditionally, bidding systems have favored larger, stand-alone fossil plants. However, alternative bidding systems in the form of site-specific, tariff-based, hybrid, or pre-qualification/ negotiation models correct that bias to some degree.

With many of the privatized systems, project financing is complicated by the lack of long-term power purchase agreements (PPAs). Renewable energy projects, with a majority of their costs at the front end, require a significant period to amortize their loans

and generate a reasonable return for the investors. If a PPA is even offered, a utility’s standard PPA may bias against renewables if it does not give consideration to a resource’s generating capacity and dispatchability (control of output). For example, if utilities only offer PPAs specifying full dispatchability, intermittent renewables like solar and wind will not be selected. This is in spite of the fact that the added energy they bring to the grid often coincides with peak demand. Similarly, a utility’s PPA may call for payment based on units of energy delivered and thereby negate a strategic advantage for intermittent renewables.

In the case of rural and remote electrification projects, standard concession processes have failed to attract significant private sector investment. Conventional private power developers typically view rural and remote populations as poor credit risks, despite evidence suggesting a substantial marginal willingness to pay for electrical service. They further doubt the ability of rural and remote individuals to pay for full electrical service, and consequently of a project’s potential for full cost recovery. Policymakers must therefore create innovative financial incentives and opportunities, which leverage rural customers’ ability to pay, before private sector investors will show significant interest in renewable-based, off-grid power projects. The level of appropriate incentives varies with cost recovery expectations set according to national and energy policy agendas. However, incentives should not remove all tariff responsibility from consumers and should target local contributions where possible. Incentives also should not interfere with setting pricing equal to the costs of services. These characteristics foster sustainable markets and facilitate phasing out incentives.

Even after appropriate incentives have been created to interest private sector investors in rural and remote markets, implementation issues may still pose problems. Based on the lessons learned through years of addressing such problems, government agencies should develop implementation guidelines. Such guidelines may recommend means of improving program management by, for example, offering suitable alternatives to charging a straight kilowatt-hour tariff that eliminates the need to install and read meters. Guidelines might also address less tangible social factors, such as a project’s need for a local champion and an objective depoliticized review board. Lastly, guidelines might address education and training programs to keep the community involved as proactive project stewards. Policymakers can also provide project developers with additional lessons learned by facilitating private sector partnerships with NGOs, cooperatives, extension services, equipment manufacturers, and multilateral development agencies. 

### Requirements for Accelerating Utilization

- User Understanding and Acceptance
- Appropriate Financial and Legal Structure
- Equitable Policy Environment
- Better Resource Characterization

# What's New in REPSO?

## Central America...

### Guatemala Considers Policy Options

Three years after Guatemala passed legislation to restructure its electric sector, in large part to attract private sector investment, some 270 MW of coal-fired electric generation capacity have been constructed or are under way. As a result of such construction, the majority of Guatemala's grid-based power generation has shifted from domestic hydro power to imported higher-emission fossil fuels. This trend has obviously raised concerns with government regulators. In particular, members of the National Commission for Electric Energy (CNEE), the entity charged with regulating the grid, began investigating the feasibility of promoting renewable energy resource development in-country.

After seeking initial consultations from renewable energy policy experts including Winrock's REPSO partner in Guatemala, Fundación Solar, CNEE determined that new legislation to promote renewables development was feasible and further called upon Winrock to lead the technical assistance effort.

In response to CNEE's request, Winrock mobilized a team of legal, policy, and financial experts to begin developing a menu of policy options to be tailored to suit the goals of the CNEE. Since December 1998 the Winrock team and CNEE have been in discussion about the legislative and regulatory disincentives to private sector investment in domestic renewables. Two main obstacles are the preference of deregulated markets for short-term power purchase contracts and the lack of resource development laws. The former limits the timeframe in which developers of renewable energy projects can recoup their capital investment, which makes financing more expensive. The latter diminishes the potential benefits to be reaped from the significant costs of identifying an economically feasible site.

While the outcome of this dialogue has yet to take a final form, several of the options identified by the Winrock team are under consideration by the CNEE, such as: (1) renewable energy tax incentives, (2) extended bidding periods for new generation solicitations, and (3) lengthened power purchase agreements. The results will likely be known within the next few months, when CNEE attempts to get new legislation passed through the Guatemalan congress.

## Brazil...

### New Renewable Energy Trade Guide

The Brazil REPSO has a new tool to attract the attention of potential renewable energy investors, and indeed anyone doing renewable energy work in Brazil. The *Brazil Renewable Energy Trade Guide '99* is now available on-line! It can be downloaded at <http://www.solstice.crest.org/clients/repso/trade.html>

The guide includes up-to-date information on the general business environment and current policies affecting renewable energy projects. Additional sections detail in-country governmental finance sources for renewables and in-country contacts within various relevant public and private sector entities.

## India...

### WII's First Board Meeting

Winrock International India (WII) celebrated its Founder's Day on 16 June 1999, which was attended by Dr. Frank Tugwell, President, Mr. Richard Cobb, Vice-President, and other senior directors of Winrock International, USA.

WII also held its first Board Meeting as a registered NGO the same day in New Delhi. Among the Members of the Board of Governors present were Ms. Pushpa Sunder, Founder Executive Director, Indian Centre for Philanthropy (Chairperson); Mr. Rakesh Bakshi, Chairman, RRB Consultants and Engineers (P) Ltd.; Prof. V.S. Vyas, Professor Emeritus, Institute of Development Studies, Jaipur; and Dr. Shyamala Abeyratne, Country Director, WII (President). Recently Mr. L.M. Menezes, Former Secretary, Ministry for Non-conventional Energy Sources, Government of India, also agreed to join the WII Board.

## Indonesia...

### YBUL Aids in Advance of RE

Monetary and political uncertainty continue to hinder implementation of new renewable energy generation projects in Indonesia.

However, Winrock's in-country partner, YBUL, has taken full advantage of this transition period to further advance the case for renewable energy with the Government.

USAID/Jakarta and YBUL have facilitated representation for renewables on the board of the newly created Indonesia Electric Power Society (MKI). The MKI was established by large power corporations/companies in Indonesia to provide a non-government direct feedback forum for the GOI (the Minister of Mines and Energy in particular) and PLN, the state utility. This was done in response to the 1998 announcement of a five-year plan calling for the restructuring and privatization of PLN. The representative, Ir. Puguhi Sugiharto, Msc, (who also happens to be a member of APETINDO, the Indonesia association of renewable energy companies) can now directly influence the resource utilization discussions within the electricity business.

Additionally, the voice of YBUL's REPSO office, RENI, has been strengthened with the government through the Indonesian Renewable Energy Society (METI). RENI was instrumental in the formation of METI, which consists of representatives from the private sector, academia, and the NGO community; and RENI has been asked to host the METI secretariat. METI is able to meet directly with the minister.

The GOI has taken note of YBUL's efforts at coalition building. In recognition of its leadership role within the renewable energy community, the Minister of Mines and Energy has charged YBUL to draft additional components for the Small Power Producer scheme (PSKSK). The new components will address the need for channeling more of the benefits and profits of PSKSK energy projects to rural communities for some specific mini-hydro projects.

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## Editorial *(continued from page 1)*

rural and renewable energy are often forgotten (or at best relegated to tertiary, after-the-fact measures) in the process. It is understandably one of the first priorities of national and regional governments to maximize the return on the sale of state-owned enterprises in electricity generation, transmission and distribution. In many countries around the world, getting as much money as soon as possible by selling off public assets takes precedence over establishing transparent regulatory policies, and in some cases the sell-off process has preceded even the establishment of the regulatory agencies themselves.

State governments know that they will get less money for selling state companies if they reduce the degrees of freedom of potential buyers by encumbering them with mandated social or environmental responsibilities. Furthermore, the profitability of rural energy activities has historically been the least attractive and therefore not readily privatized. As such, many governments have elected to put forth an inchoate patchwork of system-defining parameters to facilitate the sale of assets, and deferred codifying treatment of thorny issues. Sustainable energy policy advocates therefore must play the role of gadfly, interjecting discussions of serving unelectrified (largely rural) populations, energy supply shortages, limited capital and information availability, and varying degrees of readiness of governments, industry, and civil society to address the rapidly changing dynamics. It is a role summed up in the words of Carl Weinberg, who declares we are “trying to fill a leaky expanding bucket.” While many renewable energy applications are widely held to be economically and technically feasible, the REPSO Network is working to demonstrate socially and politically desirable models which are also institutionally and financially feasible.

At the macro level, says Brooks Browne of the Environmental Enterprises Assistance Fund, private sector development of rural and renewable energy markets can only occur with three indispensable essentials: making sure that there is a “workable” investment climate, that capital markets are somewhat developed, and that private sector success and profitability are favored by the policy framework. Assuming that these basics are in place, there are a number of specific activities that the REPSO Network can and have taken to keep rural and renewable energy “on the table.” These include, but are not limited to, policy analyses and recommendations, provision of information to relevant stakeholders, convening of decision-makers and counterparts, bridging gaps between polarized constituencies, conducting training exchanges and capacity building, nurturing and replicating “fast-track” model projects, encouraging the entry of new participants, preparing and circulating idea papers on decentralized and distributed energy programs, counseling bilateral donors and host-country governments against market-spoiling technology give-aways, and encouraging the blending of public social spending with private investment.

The REPSO Network is actively engaged in raising rural and renewable energy services issues early and often in the policy dialogue in target countries around the world. The goal is to sensitize key decision-makers and relevant stakeholders, to make the issues visible, to provide information on viable options, and to promote policy instruments (presidential decrees, legislative acts, and implementing regulations) supportive of rural and renewable energy commercialization. 

**Winrock International** is a private, nonprofit organization that works with people to build a better world—increasing agricultural productivity and rural employment while protecting the environment. Winrock’s staff of more than 200 implements projects in 40 countries. Activities are funded by grants, contracts, and contributions from public and private sources. Winrock is headquartered on Petit Jean Mountain near Morrilton, Arkansas, and has offices in Arlington, Virginia, and around the world.

# Contacts

## Brazil

Dr. Osvaldo Soliano Pereira  
Av. Luiz Tarquinio Fontes no. 2580  
Villas Trade Center  
Edf. Villas Empresarial S. 106/107  
42.700-000 Lauro de Freitas  
Bahia, Brazil  
Phone/Fax: 55-71-379-1759  
E-mail: mail@winrock.org.br

## Guatemala

Mr. Ivan Azurdia  
Mr. Hugo E. Beteta  
Fundación Solar  
15 Avenida 18 - 78, Zona 13  
Ciudad Guatemala, Guatemala  
Phone/Fax: 502-332-2548  
E-Mail: funsolar@ns.guate.net

## India

Dr. Venkata V. Ramana  
No. 7 Poorvi Marg  
Vasant Vihar  
New Delhi 110 057  
India  
Phone: 91-11-614-2965  
Fax: 91-11-687-6004  
E-mail: winrock-delhi@cgnnet.com

## Indonesia — RENEI

Dr. Lolo Panggabean  
YBUL  
Jln. Mendawai III No. 2  
Kebayoran Baru  
Jakarta Selatan, Indonesia  
Phone/Fax: 62-21-739-6481  
E-mail: ybul@indo.net.id

## Nepal

Mr. Bikash Pandey  
Winrock International  
APROSC Building  
Ram Shah Path, P.O. Box 1312  
Kathmandu, Nepal  
Phone: 011-9771-254-687  
Fax: 011-9771-262-904  
E-mail: bpandey@mos.com.np

## Philippines

Ms. Grace Yeneza  
Preferred Energy, Inc.  
10/F, Strata 100 Building  
Emerald Avenue, Ortigas Center  
1600 Pasig, Metro Manila  
Philippines  
Phone: 632-631-2826  
Fax: 632-632-7097  
E-mail: repsos@cnl.net

## What's New *(continued from page 8)*

### Nepal...

#### Pre-feasibility Studies On-going

Five small-hydro feasibility studies are ongoing with cost-share investments from REPSO Nepal. It is expected that a couple of these projects will reach financial closing within the year. When constructed, the projects will supply the national grid with 15 MW of power.


Studies have been completed of two small hydropower projects (240 kW and 600 kW) serving isolated load centers in tourism areas. These studies have determined how the energy produced can be more fully utilized to replace firewood and at the same time to improve the area's financial situation.

REPSO Nepal is supporting the Himalayan Light Foundation's review of a feasibility study that looks at the packaging, production, and marketing of handicrafts together with solar home systems so that they can be paid for by the generated income.

REPSO Nepal's recently completed pre-feasibility study extending electric trolley bus services within Kathmandu Valley has generated significant interest from private investors. A study has also been completed for the Orthodox Tea Producers Association of Nepal to examine opportunities for using renewable energy in irrigation and tea drying.

### Philippines...

#### World Bank/ESMAP Policy Review Support

REPSO Philippines/PEI is supporting a World Bank/ESMAP Technical Assistance Activity which is reviewing the Department of Energy's Non-Conventional Energy Program. This activity will examine the overall policy environment for renewable energy development in the Philippines, and identify investment projects for possible World Bank financing. REPSO Philippines/PEI has provided key technical and logistical support for ESMAP teams and is leading efforts to plan and organize a "Renewable Energy Policy and Project Seminar" for senior Philippine decision-makers. Seminar participants will review the initial findings of the World Bank ESMAP TA Activity and discuss several possible World Bank investment projects. 

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Winrock International  
Renewable Energy Division  
1611 N. Kent Street  
Arlington, VA 22209 U.S.A.  
Phone: (703) 525-9430  
Fax: (703) 243-1175  
E-mail: fe@winrock.org

#### Editor: Judy Siegel

#### Contributors:

John Armstrong  
Andrea Collins  
Jan Hamrin  
Bill Howley  
Mark Lambrides  
Mark Newton  
Osvaldo Pereira  
PJ Saliterman  
Carl Weinberg

Layout: Fay Ellis

## REPSOource

Winrock International  
Renewable Energy Division  
1611 N. Kent Street  
Arlington, VA 22209 U.S.A.



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