

THINKING BRAZIL

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Latin America's Giant Forced to Address Causes and Consequences of Energy Crisis



Last spring, prior to the energy rationing scheme announced by the Cardoso government, Brazil @ the Wilson Center held a day-long seminar entitled "Energy and the Environment in Brazil" under the auspices of Texaco. On April 25, 2001, energy sector specialists, academics, and politicians from Brazil and the United States gathered at the Wilson Center to discuss the impending crisis in Brazil. The overall consensus that emerged from the conference was that Brazil needed to diversify its energy supply while seeking "clean" sources that will ensure its long-term sustainability. In this last point lie the questions of how to balance the sector's expansion with the protection of the country's unique ecosystem.

Since the government of President Fernando Henrique Cardoso declared an energy crisis last spring (May 18, 2001), a new word has entered into the conversations of politicians, economists, industrialists, and everyday Brazilians: "*o apagão*" (the big electric 'blackout'). The convergence of events, including excessive droughts and a rising demand for energy, has forced the government to declare an energy emergency in the world's eighth largest economy. Eighty percent of the citizens in this nation of 170 million have been told the only solution for avoiding the rolling blackouts and unexpected power outages that California suffered, is for all Brazilians in the affected regions (Northeast, Center West, and Southeast) to reduce their monthly energy consumption by 20%. Incentives have been designed by the major energy companies in the country to offer rebates for residential and small consumers that cut their energy usage by more than the target rate. A secondary market has even been established for the selling of energy that is "saved" by large companies to be sold to others who have not met the targeted reduction. Apart from these "carrot" approaches, "stick" policies have been implemented for all consumers (commercial as well as residential) that impose steep fines and the threat of termination of service for failing to meet targeted levels. With the implementation of such measures beginning on June 4, 2001, Brazilians have been forced to change

their daily routines and modify their habits. Companies and factories have reduced their hours of operations, residents have drastically limited their use of appliances and lights, the federal government has suggested a four-day workweek for all of its employees, and most commercial businesses have changed or limited their business hours. Pedro Parente, Chief of Staff for President Cardoso and head of the task force for the energy crisis (*Câmara de Gestão da Crise de Energia Elétrica*), believes that meeting the specified target of a 20% reduction will contain the crisis and avoid random power outages.

While Brazilians accordingly have adjusted their habits to the austerity measures, the decision of the Cardoso government to institute the *apagão* has led to many criticisms and questions about its effectiveness in preventing the situation. Energy experts blame the depth of the current crisis on poor government planning. (Continued on pg. 3)

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The Evolution of a Crisis: A Historical Perspective of Energy in Brazil

The energy sector in Brazil has evolved out of historical events, political forces, and consumer exigencies. A major refocusing of the sector occurred after the 1973 and 1979 oil-price shocks when Brazilian policy shifted towards diversifying the sources of its energy supply. Seminar participant **Dr. Luis Pinguelli**, Vice Director of the Graduate School of Engineering at the Federal University of Rio de Janeiro (COPPE/UFRJ) noted that this monumental crisis led to several innovations and changes for Brazil's energy sector. The exploration for alternative energy sources resulted in the promotion of alcohol-powered cars (from a sugar cane derivative), construction of off-shore oil facilities, expansion of hydroelectric generation, and the decision to build a series of nuclear power plants (Anwar I, II, III).¹ The decline in crude oil prices between 1985-86 caused a reevaluation of many of these policies such as the desire for Brazil to become self-sufficient in oil production. There was popular backing for Brazil to achieve self-sufficiency in order to end the threat of supply-side shocks and to provide a buffer for the radical fluctuations in world oil prices. The drive to open markets and liberalize economic structures during the 1990's produced a new realignment of official policies toward the sector. The government viewed increased foreign investment in the sector as the primary means to promote its exploration. Brazil would use international "know how" and financial leverage to encounter new sources for its energy supply to permit them to be a net-exporter of oil. For **Luiz Antônio Fleury**, former President of the *Comissão de Minas e Energia* for the Brazilian Congress, these years were characterized by the government's interest in creating the competitive atmosphere needed to attract foreign investors, especially in the area of power generation. As a result, there began in 1995 a gradual withdrawal of the state as the principal "entrepreneur" from the sector. Private energy operators (many multinational players) increasingly assumed these responsibilities and government actions were relegated to regulatory matters.

However, the fervor of the 1990's to liberalize Brazil's economic structures is now under scrutiny. Six years after the initial privatization efforts, a clear consensus has yet to be formed in Brazilian policy circles on whether the process has been beneficial for the expansion of the energy sector. This debate over the liberalization of the sector parallels events that have occurred in the state of California. The onset of California's energy crisis following its privatization has underscored the problems that can arise from permitting the private sector (investors and operators) to provide a public good (energy).

These developments were the source of inspiration for the April seminar "Energy and the Environment in Brazil" held at the Woodrow Wilson Center. Rising concerns about the sustainability of the energy situation in Brazil prompted Luis Bitencourt, Director of the "Brazil @ The Wilson Center," to organize a day-long meeting on the subject. The case of California framed one of the sessions of the seminar, "Energy Demand and Production in Brazil," and was also addressed by Mr. Fleury during his keynote speech. In 1995, California began to ardently deregulate its energy sector but power generation facilities failed to amplify their installed capacity given the inclusion of a pricing disincentive into the framework used for privatization (i.e. the end tariff was regulated). Following the state's economic expansion during the 1990s, the demand for energy increased and price gauging occurred. Generators would supply power at higher prices to the distributors who, in turn, had to internalize these elevated costs because of the regulated pricing structure for end-users. Mr. Fleury signaled that there were similarities between California and to what was occurring in Brazil. Privatization and deregulation led to the absence of strategic investments in new generators and energy facilities required for meeting the country's expanding demand. However, the rising costs of energy in Brazil were transferred to the consumers rather than being absorbed by the distributors as had happened in California. Dr. Pinguelli commented during the seminar that this outcome was a result of regulatory failure and the institutional weakness of the agencies endowed with oversight functions in the country.

The future of the energy sector in Brazil will undoubtedly be conditioned by the government's response to the current crisis. For this reason, it is of fundamental importance that any actions taken recognize the historical forces that have contributed to the development of Brazil's energy policy. As Dr. Pinguelli states in a forthcoming WWICS Working Paper,² one must have in mind all the factors that have shaped Brazil's energy policy "...in order to avoid decisions that are irreversible or reversible only slowly." Outstanding issues that must be addressed going forward include the rising consumer cost for the use of energy (6.0% rise in energy taxes a year), insufficient reserves, and the excessive dependence on one source of energy (hydroelectric power). In this sense, the government, in conjunction with key stakeholders such as private energy operators, residential consumers, and industrialists, can develop a long-term, sustainable strategy that meets both the historical exigencies and evolving demand for energy in Brazil.

¹These comments are included in a working paper, *Deregulation of Energy Sector in Brazil: A Comparison between Electrical Energy, Oil and Natural Gas Sectors* written by Dr. Pinguelli which is forthcoming from the "Brazil@The Wilson Center" Project and the Latin American Program. The Anwar Projects were sponsored under a partnership with Germany.

² Pinguelli, Luiz. Forthcoming. *Deregulation of Energy Sector in Brazil: A Comparison between Electrical Energy, Oil and Natural Gas Sectors*. Washington, DC: The Latin American Program-WWICS.

under-investment in the sector and the severe drought that has reduced by 30% the hydroelectric reservoirs that supply 90 percent of the country's power.¹ Rainfalls during last summer were 71% below average levels and the country is experiencing its worst drought in more than 70 years. Nevertheless, economists, the media, and common Brazilians alike have pointed to the Cardoso government's lack of attention to and investments in the energy sector.

President Cardoso's popularity has fallen to 28 percent from 46 percent in April, according to one recent poll.² Criticism of his government emanates from its failure to respond to official technical studies completed on the declining supply of energy over the past five years.³ Ironically, his critics must acknowledge that this excessive demand for energy has been the result of the country's robust growth since President Cardoso took office. During the 1990's, energy demand grew 45% as the economy expanded although installed generating capacity rose by just 28%. The national energy regulatory agency (*Agência Nacional de Energia Elétrica*, ANEEL) has estimated that to meet further growth in demand, Brazil's generating capacity will have to rise by 5.0% a year.⁴

A Leader in the Debate: Brazil @ The Wilson Center

Even prior to the government's formal declaration of an energy crisis, the issues that were confronting the sector in Brazil could not be ignored. In February, the credit rating agency of Standard & Poor's warned that Brazil was at risk of facing the same energy shortages as were affecting California in the United States.⁵ It was in this context that the Brazil @ The Wilson Center spearheaded a debate on the topic by holding a seminar on the issues confronting energy, the environment, and its sustainability in Brazil. On April 25th, sector and country experts were invited to participate in "Energy and the Environment in Brazil." Speakers included Congressman **Luiz Fleury**, former head of the Commission on Mines and Energy in the Brazilian Congress, **Thomas Lovejoy**, Chief Biodiversity Advisor for the World Bank, and **Luiz Pinguelli Rosa**, Assistant Director of the Graduate School of Engineering at the Federal University of Rio de Janeiro. Four panels throughout the day

discussed the noted increase in Brazilian energy demand, the build-out of electrical power generation facilities, options for future production and the environmental implications from current policies. In one session entitled "Energy Demand and Production," parallels between the energy suffered by the state of California and the looming problems in Brazil were drawn. The day-long seminar, funded by a generous grant from Texaco, helped to contextualize the historical evolution of the energy sector in Brazil and the necessary steps required to ensure its sustainability.



The Search for Answers

The dynamic linkages between a country's economic growth, its sustainable energy sources, and its environmental policies were questioned and explored during the daylong seminar "Energy and the Environment in Brazil" held at the Woodrow Wilson Center on 25 April, 2001. The underlying premise of the conference, and the predominant assumption among its participants, was that the causality of their relationships must be understood in order to make the appropriate policy decisions for the energy sector and the country. The Director of Brazil @ The Wilson Center, Luis Bitencourt, originally conceived of the concept for the seminar because of the faster than expected expansion of the demand for energy relative to existing supplies. Given this context and the recent events in California, answers were desperately needed about the future of the sector. Interestingly, it was during the weeks immediately preceding and following the conference that the Cardoso government began to unveil plans for an energy-rationing scheme.

Power as a Source of Economic Growth

The dynamic relationship between economic growth and reliable energy resources has been revealed through the current crisis. The experiences of Brazil demonstrate that rationing and unstable supplies of energy (Continued on pg. 4)

Footnotes

¹Excerpt from *Energy Crisis Leaves Brazil in Perpetual Twilight*. Sustainable Development International On-line.

<http://www.sustdev.org/energy/Industry%20News/06.01/19.01.shtml>.

² Poll was conducted in Brasília by the *Correio Braziliense* newspaper. Taken from *Energy Crisis Leaves Brazil in Perpetual Twilight*. Sustainable Development International On-line.

<http://www.sustdev.org/energy/Industry%20News/06.01/19.01.shtml>.

³Rothers, Larry. 2001. *Brazil, Fearful of Blackouts, Orders 20% Cut in Electricity*. 19 May 2001. *New York Times*.

⁴ *Brazil Report*. 13 March 2001. Latin American Regional Reports. London, England: pg. 4.

⁵ *Brazil News*. Brazil Information Center. July 2001. Washington, DC: Vol. 2 Issue 5.

Thinking Brazil is a publication of the **Brazil @ the Wilson Center**. This project is founded on the conviction that Brazil and the U.S.-Brazilian relationship deserve to receive better attention in Washington. Brazil's population, size, and economy, and its unique position as a regional leader and global player fully justify this interest. In response, and in keeping with the Center's mission to bridge scholarly research and public action, **Brazil @ the Wilson Center** sponsor activities designed to create a "presence" for Brazil in Washington that captures the attention of the policymaking community. **Brazil @ the Wilson Center** is grateful for the support of the Ministry of Culture of Brazil, ADM, Cargill, Texaco, FMC, and Raytheon.

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can have severe implications for a country's expansion. The current shortfall in Brazil's energy supply is expected by analysts to translate into a two-percent or more reduction in economic growth (Gross Domestic Product, GDP) from original forecasts. Following the economy's erratic expansion in the 1990's and a downturn in 1999 (-0.1% YOY), the country should witness only a slight increase in GDP during 2001 (+2.0%-3.0%) after last year's robust level (+4.2%, 2000). The composition of Brazil's industrial base (steel, auto manufacturing, mining) has created a dependency upon a reliable and constant stream of energy that current sources of power are not able to satisfy.

During the conference, **Paulo Ludmer**, the Executive Director of the *Associação Brasileira de Grandes Consumidores Industriais de Energia* (Brazilian Association of Large Industrial Consumers of Energy, ABRACE) explained that his association's members (53 in total) must have constant access to quality and competitively-priced energy. ABRACE members represent the largest consumers of power in Brazil. They account for almost half (45%) of Brazil's entire consumption of oil and one-third of the total amount of electric energy used in the country. Mr. Ludmer underscored during the meeting that the availability of energy was the key for increasing Brazil's industrial output. As events would prove, it was a prescient observation. These fifty-three industries, mainly operating in the areas affected by the energy crisis, have been forced to curtail operations and temporarily layoff workers. The economic contraction in industrial production has depressed consumption and produced spiraling effects in related sectors, further hampering the prospects for the country's growth. Mr. Ludmer noted that Brazil would most likely experience additional negative consequences from the *apagão* not only in terms of unemployment and growth but also in reduced levels of tax revenues, trade, and rates of investment.

Mr. Ludmer and ABRACE members insist that there is a range of secondary effects from the energy crisis that must be evaluated

for the sector. The development of an energy wholesale market, the stake and participation of the government in utility companies, the future pace of privatization, and the integration of upstream and downstream operations (i.e. continental integration) will be effected, both positively and negatively. As he cautions, it is critical that during this time of crisis the government steers Brazil away from choosing temporary solutions for long-term problems, possibly undermining whatever advances that already have been achieved. The caveat Mr. Ludmer issues, similar to Dr. Pinguelli's, is that history is most relevant if Brazil hopes not to repeat past mistakes. The current model of a privatized and competitive service should remain the compass "essential to guide our steps" and to limit the duration and intensity of the current "turbulence" that Brazil is experiencing.

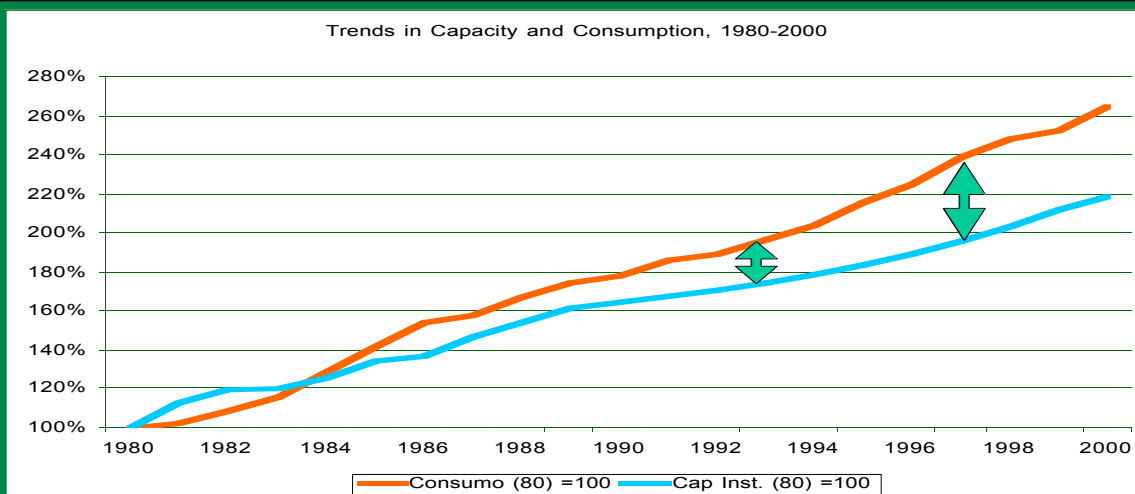
This path towards continued privatization and competition appears for many sector observers as the only option to develop Brazil's energy resources. **Mr. Neil Burgess**, Vice President of Power and Gasification for Texaco Brasil S.A., signaled how a developing country like Brazil could make the sector more attractive for potential investors. *First*, certain risks must be addressed before an international investor can enter the market. The country's reliance upon one power source (hydroelectric power), an uncertain regulatory environment (e.g. seizure of the semi-privatized electric generator Cemig in Minas Gerais), and the instability of the Real (R\$) are some of the risk considerations that an international player like Texaco must define, evaluate and mitigate before investing. This type of risk evaluation has contributed to the increased attractiveness of power distributors in Brazil for investors rather than other areas that are in desperate need of capital inflows such as thermal generation. Rigid pricing structures, foreign exchange risk, and mismatches between power purchase agreements and fuel supply commitments have discouraged international incursion into this area of power generation. *Second*, the government must become an active player in the construction of "bridges" between establishing an effective regulatory environment and creating a competitive market to stimulate participation by international investors. Effective and enforceable government policies serve as the principle mechanisms to reduce investor risk and promote further privatization of the sector. The creation of clear performance obligations, enshrined in long-term contracts, is one method to promote the conditions that will permit both the investor and sector to benefit (in terms of efficiency, innovation, and needed capital investments).

For **Mr. Everton de Almeida Carvalho** of INB (*Industrias Nucleares Brasileiras*), there have been notable and positive developments in the energy sector that will help entice international companies and reduce their perceived risk of investing in Brazil. Three such changes are the introduction of competition into certain segments of the electric sector (generation and distribution), the creation of regulatory instruments to enhance market

Table 1: Installed Capacity (MW) of Brazil's Energy Matrix

Hydraulic	52,039.27
Thermal	5,407.83
Itaipu (50%)	6,300.00
Nuclear (Angra 1)	657.00
Autoproduction	3,024.56
Independent Producers	1,376.18
Total	67,804.84

Source: ANEEL 1999. From: Carvalho, Everton de Almeida. Presentation: *The Brazilian Sector and the Role of the Nuclear Power Plants. Energy and the Environment in Brazil Seminar. 25 April 2001. Washington, DC: WWICS.*



Graph 2: Evolution of Energy Demand and Supply, Brazil

Source: D' Araujo, Roberto Pereira. Presentation: ILUMINA. Energy and the Environment in Brazil Seminar. 25 April 2001. Washington, DC: WWICS.

flexibility (non-discriminatory tariffs and open access to transmission and distribution systems), and the privatization (partial) of the country's distribution and generation networks. The establishment of agencies that have the capacity to ensure the efficient functioning of the sector will also assist towards these ends. The creation of a national energy regulatory agency (ANEEL), the Electric Energy Wholesale Market (MAE), and the National Electricity System Operator (ONS) will define the scope and improve the effectiveness of the state's regulatory activities. Nevertheless, the process has not been as dynamic as in other sectors in Brazil or neighboring countries that have undergone similar privatizations (e.g. Argentina and Chile). The inability to construct more "bridges" between government regulatory and competitive structures has only undermined the productive capacity of the sector. The current energy crisis that confronts Brazil is evidence that the country and its citizens have been the biggest losers from the improper management of the sector. As Mr. Burgess reflected at the close of his presentation, "the most costly power is...the power you do not have." Dr. Bitencourt is concerned the government may take measures that address the current crisis but fail to present a comprehensive strategy for the country's energy sector. "After this crisis, faced with rationing and depending on rain, a comprehensive plan to address the current and future energy demand in Brazil must be envisaged." Nevertheless there are two major obstacles for such an outcome. First, there is the usual Brazilian aversion to long-term, strategic planning and, second, is the fact that next year's presidential elections will most likely postpone the resolution of any pending problems.

Viable Energy Alternatives to Meet Demand

The near exhaustion of the country's energy supplies has led to a renewed and vigorous quest for encountering sustainable

energy sources. An entire section of the seminar was dedicated to this topic and it remained an undercurrent throughout all of the presentations and discussions. **Dr. Roberto D'Araujo** of ILUMINA (Institute for Strategic Investment in the Electric Sector) explained that ensuring a sustainable supply of power provides for an energy reserve to act as insurance against adverse situations like the current scenario. One source for such a sustainable supply could be nuclear power. It was within this context that Mr. Carvalho, of INB, posed some questions on the increased role that nuclear power plants should assume in the energy matrix of Brazil (See Table 1). The construction of nuclear reactors in Brazil began in 1975 under a cooperative agreement with Germany to build eight facilities that would produce 10,400 MW by 1990. There have been only three reactors completed from this agreement and the program has since been abandoned because of high cost overruns. For the three facilities constructed (Angra I, II and III), the project had exhausted 80% of its total budgeted resources (US\$10bn) for the eight reactors.

Nevertheless, nuclear power is being reconsidered as a viable option to meet Brazil's growing energy needs. Given patterns of global consumption, ANEEL has forecasted that demand from residential (+7.0%), commercial (+6.0%), and industrial (+2.5%) consumers will continue the upward trend that began in the 1990's. Current energy demand per capita in Brazil (1.906 kilowatt hours, kWh) is below the world average (2.260 kWh) and is significantly less than levels consumed in industrialized countries like Germany (5.789 kWh). This rise in demand will place an added strain upon an already faltering supply of power (See Graph 2). Mr. Carvalho demonstrated through projections from Eletrobrás that investments in the sector (generation, transmission, distribution and generation installations) are expected to decline over the next four years from US\$4.69 bn in 2000 to US\$3.30 bn in 2004 as demand rises (Continued on pg. 6)

Table 3: Energy Sources, % Contribution for Distribution

	1999	2000	2009
Hydraulic	90.8	87.8	74.8
Thermal	8.2	9.3	22.1
Nuclear	1.0	2.9	3.1

Source: ANEEL 1999. From: Carvalho, Everton de Almeida. Presentation: *The Brazilian Sector and the Role of the Nuclear Power Plants. Energy and the Environment in Brazil Seminar. 25 April 2001. Washington, DC: WWICS.*

over the same period. It is within this gap that nuclear power could assume a positive role by ensuring that Brazil's current energy crisis is not a repeated event. While neither Mr. Carvalho's presentation nor the seminar fully completed a cost-benefit analysis for nuclear energy, it is certainly a topic that merits future discussion. As he noted, of all the competitive sources of energy, nuclear generation is a competitively-priced alternative to satisfy the expanding demand for power in Brazil. Currently, nuclear power generation is the least used source of energy (1.0% in 1999) although it has an attractive cost structure and is easily accessible (See Table 3). The natural gas supply of the country is limited and largely imported from Bolivia or Argentina while hydropower projects are increasingly located away from population centers and in environmentally sensitive areas in the Northern region of Brazil. The state-owned generation facilities (Angra 1 - 657 MW (operating); Angra 2 - 1309 MW (trial operation); and Angra 3 - 1309 MW (feasibility studies)) are only 17% more costly to operate than hydroelectric facilities (US\$20-US\$25 MWh) but are significantly less expensive than thermal generators (US\$32-US\$40 MWh). Given Brazil has the sixth largest supply of uranium in the world, there exists a plentiful and inexpensive supply of its primary input.

An Environmental Balance

The use of nuclear power and other alternative sources to meet the rise in demand for energy has led to a re-evaluation of sector policies and their impact on the environment. Current energy exploration and production practices have resulted in increased pollution and an excessive release of harmful emissions. The eight largest economies of the world, amongst them Brazil, continue to be the main air polluters. Alone they account for 80% of the carbon dioxide (CO₂) emissions released into the atmosphere annually. **Israel Klabin**, President of the *Fundação Brasileira para o Desenvolvimento Sustentável* (Brazilian Foundation for Sustainable Development), posed some questions related to these concerns during his presentation at the seminar. He reflected upon the dilemma from two complimentary viewpoints. **First**, is there a feasible timeframe for the abatement of pollution by moving from fossil fuels into other forms of "clean" energy? **Second**, what is the medium-term solution for the current energy

problem that will minimize any negative impacts to the environment (i.e. carbon sinks, conservation, and the accelerated exploration of renewable and alternative sources)? The use of cost-benefit analysis and the ability to access international financing will condition the projects that can be implemented but any viable solution also must be tailored to the local realities of Brazil. Unfortunately, decisions made during moments of crisis, as Brazil is currently experiencing, tend to bypass these considerations. It is important to review the existing energy matrix and attempt to dissuade new projects that in the long-term may prove inadequate and detrimental to the environment.

Brazil could gain substantially from exploiting existing synergies in the sector by moving towards sustainable energy sources and promoting more effective social policies. In the case of carbon dioxide, the ability to control deforestation, limit forest fires, and modernize its basic system of transportation would allow Brazil to reduce its emissions of CO₂ to almost zero. Mr. Klabin noted that simply by having policies that effectively control the slash and burning of forests, Brazil would move from 7th to 20th place in the list of countries with the highest carbon dioxide emissions. In fact, Brazil is one of the few countries where the potential of developing "clean" power is limitless given its access to biomass, aeolic (wind), thermal, and solar energy sources. Their development and exploitation could help satiate the growing demand for energy as well as alleviate some of the negative environmental externalities currently generated by Brazil's principle energy sources (See Table 4). For example, the country's dependency on hydroelectric power has created a negative and direct impact on the environment through the flooding of adjacent areas and the relocation of local peoples. Indirectly, it has generated problems from the chaotic pace of colonization that follows. The country is also experiencing several problems because of the deteriorated infrastructure used in the exploration, refinement, and distribution of fossil fuels. The state oil company *Petróleo Brasileiro S.A. Petrobrás*, has suffered a series of oil spills and gas leaks over the past two years. During 2000, there were five major spills including the release of 1.1 million gallons of oil into the Iguaçu River in July. In February of this year, a ruptured line spilled 13,2000 gallons of diesel fuel into the Atlantic Ocean near

Table 4: Main Sources of Energy, Brazil vs. World

SOURCE	WORLD		BRAZIL	
	Primary Energy (10 ⁹ TOE)	% Total	Primary Energy (10 ⁹ TOE)	% Total
Fossil Fuel	7.63	78.0	0.102	41.0
Renewable	1.53	15.6	0.145	58.0
Nuclear	0.63	6.4	0.002	1.0
Total	9.79	100	0.250	100

The World & Brazil - 1998
TOE = tonne oil equivalent

Source: Klabin, Israel. Presentation: *Energy Production Environmental Concerns -Brazil Case Study. Fundação Brasileira para o Desenvolvimento Sustentável. Energy and the Environment in Brazil. 25 April 2001. Washington, DC. WWICS.*

the city of Curitiba in the Southeast of Brazil. The slick, stretching seven miles, contaminated a natural reserve (*Mata Atlântica*) and five rivers. The latest and most serious accident occurred on March 20, 2001 when Petrobrás' extensive P-36 offshore platform at the Campos Basin site sank. Three explosions rocked the platform before it collapsed into the ocean, spilling an undetermined amount of oil. At the time of the accident, the rig was producing 83,000 billion barrels of oil a day (bbl/d). The environmental impact from these events underscores the importance of finding alternative and "clean" sources of energy in Brazil, an urgency that has been heightened by the government's program of energy rationing.



Governor of Acre Discusses Vision for Amazon

On 25 September 2001, Brazil @ The Wilson Center hosted a discussion on prospects for the sustainable development of the Amazon. The Governor of Acre, Jorge Viana, and National Congressional Senator Marina da Silva offered their visions on the topic and highlighted current policies being implemented towards these ends.

Jorge Viana (Worker's Party- PT) has become well known in Brazil not only for being the youngest state governor in the country but for challenging politics as usual in the Amazon region of Brazil. Governor Viana has also gained the attention of international NGOs that are concerned with environmental protection of the areas of the Amazon that are located within his state. He has pursued policies for the sustainable development of Acre while promoting the protection of the Amazon's sensitive ecosystem. Governor Viana emphasized the importance of designing projects for economic development that respect the biodiversity of the Amazon region. He noted that the model used for economic development in the region during the 1980's was based on the misconception that natural resources were inexhaustible. He conceded the inherent flaw in this assumption and explained, "We are currently in an era of limits...we have been forced to accept that we need rationing, control, and (the) recycling of natural resources."

A strong proponent of creating a "government of the forest," Viana has coined the term "florestania" (citizenship of the forest). This concept attempts to extend to the people that live in the Amazon (indigenous tribes and small agriculturists) full access to and participation in the economic, political, and civic life of the state. He acknowledges that the Brazilian Federal Government has recently renewed its focus on the Amazon region, as evident in the completion of a joint federal/state development strategy (Economic-Ecological Zoning Plan). As a part of this plan, Viana's administration has designed two large-scale programs: one to



The Governor of Acre, Jorge Viana, during his visit to Brazil @ The Wilson Center

restore state infrastructure, and another for the creation of environmentally-protected areas to develop a viable "forest economy." Once these projects are implemented, 70% of the state's land area will be included in various programs that promote economic development while respecting the fragile balance between biodiversity and natural resource exploitation. Viana expects that these projects, in addition to the areas currently designated as "legally defined forest reserves," will extend environmental protection in one form or another to 80% of the Amazon lands in Acre.

During the meeting, Governor Viana emphasized the importance of promoting sustainable development projects apart from their positive environmental implications. According to Governor Viana, these new projects will provide a social outlet for the state's youth as well as employment opportunities that previously did not exist. He sees a positive cycle being created where young individuals now will be disswayed from criminal pursuits and will enter into more productive activities. He contrasted the current state of affairs in Acre with the conditions that existed prior to his administration. As he commented, "the state was dominated by organized crime and was a basis for drug trafficking."

Nevertheless, many obstacles still remain for the complete implemtation of sustainable development strategies in Acre and Brazil. Senator Marina da Silva focused on the congressional debate over environmental protection legislation. She explained that although Brazil has a relatively sophisticated legal framework to protect designated areas, it still lacks regulations on many issues, such as timber extraction.



Examining Brazil's Image

The source and management of a nation's image in today's changing international system formed the basis for a conference entitled "Moving Forward: Brazil's Image in the United States" held on 8 June 2001 at the Wilson Center. The meeting was sponsored by the Brazil Project, the Brazilian Ministry of Foreign Relations, and the Inter-American Development Bank. It engaged the participation of various experts from the private and public sectors and included top scholars, policy-makers, marketing experts, and representatives from private sector, media, and non-governmental organizations.

These participants gathered to discuss recent surveys, including a 1999-2000 poll, that showed Brazil is largely unknown to the American public. However, Brazilian Ambassador Rubens Barbosa cited a more recent Gallup Poll that showed an improved perception of Brazil over the last two years. He mentioned several existing programs and focused on raising the profile of Brazil in U.S. schools, the Congress, and among prospective U.S. investors.

Different participants provided their own insights into the topic. Media representatives, including Eugene Robinson of The Washington Post, stressed that a country interested in presenting and maintaining a good image internationally should concentrate on achieving appropriate social, political, and economic results domestically. Other speakers explored the growing responsibility of NGOs in shaping Brazil's image, particularly in sensitive areas as the environment and human rights. Steven Schwartzman of Environmental Defense and Thomas Lovejoy of the World Bank described the implications from having NGO's active in Brazil but that are headquartered in Washington, D.C. Participants from the private sector concluded that the government lacks an articulated strategy that engages them to promote Brazil's image abroad.

The workshop concluded with some insightful observations for

the future of Brazil's image in the U.S. Meeting participant Michael Deaver from Edelman Public Relations signaled that the lack of pre-conceived notions about Brazil will allow the country to construct its own identity. It will be necessary to design a strategy that engages both the public and private sectors. It was also suggested that all sectors facilitate increased access to information on Brazil. Finally, the importance of coordination and organization in these efforts was stressed in order to maintain consistency in image.



News from Brazil @ The Wilson Center

PUBLIC POLICY SCHOLARS VISIT THE BRAZIL PROJECT

Three Public Policy Scholars were recently in Washington, DC as part of a continuing research program between Brazil @ The Wilson Center and the Brazilian Ministry of Culture. Two Junior (Thais Batibugli and Francisco Rogido Fins) and one Senior (João Paulo M. Peixoto) Public Policy Scholar came to examine various topics of debate related to the changing role of the state and its implications for democracy and political culture. As a result of their endeavors, two working papers will be forthcoming (please see below). These recent scholars bring the total to six Brazilian researchers who have been hosted by this unique program. Later this month, another scholar is expected at the WWC, noted University of São Paulo professor, Amâncio Jorge N.S. de Oliveira who will be investigating comparative business-state affairs in the U.S. and Brazil.

UPCOMING PUBLICATIONS

Working Paper: Washington Disensus?: In Search for the Proper Role of the State in Brazil After a Decade of Structural Reforms. João Paulo M. Peixoto, Universidade de Brasília.

Working Paper: Analysis of Brazilian Cogeneration Regulatory Framework, in Light of International Experience. Mauricio T. Tolmasquim and Alexandre S. Szklo, Federal University - Rio de Janeiro.

Working Paper: Deregulation of the Energy Sector in Brazil: A Comparison Between Electric Power, Oil and Natural Gas. Luiz Pinguelli Rosa, Federal University - Rio de Janeiro.

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