vantages, and that, unlike nuclear energy or even oil imports, it requires no foreign exchange. This is a powerful argument in Brazil, which has a total foreign debt of \$40 billion and a staggering yearly debt service burden of \$9 billion, to the point that even nuclear energy's supporters find themselves agreeing that the backwards "gasohol" program can contribute to meeting the nation's energy needs. The far more rational solution, of favorably renegotiating Brazil's debt in order to eliminate the foreign exchange obstacle to capitalintensive programs, is all too rarely discussed in public.

The institutions that hold most of Brazil's \$40 billion in foreign debt - the World Bank, the International Monetary Fund, and City of London and Wall street commercial banks - are united in their insistence that Brazil forget its industrialization plans, and concentrate instead on repaying its enormous debt. Brazil, they insist, must become a giant agro-exporter, turning the bulk of its 120 million population into low-skilled peasant laborers producing coffee, soy, sorghum, and sugar cane for export to the world market.

These agencies have their allies and spokesmen within Brazilian politics, who at the moment hold sway over the incoming Figueiredo administration.

The key figure for the coming six-year term will not be President Figueiredo, but rather the eminence grise of his candidacy, the aging General Golbery do Couto e Silva. Golbery, himself a protege of the anglophile ex-Deputy Director of the CIA, Vernon Walters - U.S. military attache in Brazil in the 1960's - has to date been identified with a "geopolitical" interpretation of "grandeza brasileira" that is modeled on British neo-colonial expansionism. Golbery, however, is also widely considered to be one of the wiliest politicians in Brazil, who may well shift his "geopolitical" alignments in view of the growing ascendancy of the prodevelopment European Monetary System over the failing IMF and World Bank.

Persistent rumors in the Brazilian press indicate that Golbery will select for himself the position of Planning Minister in the Figueiredo Administration, a post he will mold into that of a virtual Prime Minister, and from which he will dictate the economic and foreign policies of the nation. Golbery is reported to favor Brazil's current Ambassador to London, Roberto Campos, for the Foreign Ministry, and wants to put the notorious Delfim Neto - a self-proclaimed Fabian socialist and Finance Minister during the 1967-74 period of labor destruction - into the crucial position of Agricultural Minister, from whence he would oversee the conversion of Brazil into a "Maoist" plantation.

Under such circumstances, it would only be a matter of time before the West German-Brazilian nuclear accord is jettisoned, and Brazil, the largest nation in Latin America, reduced to a third-rate economic and political power. No one in the Carter Administration is saying how they expect Brazil to continue its current process of "democratization" under such conditions.

- Dennis Small

Petrobras's Araken de on the energy future

The President of Petrobras, General Araken de Oliveira [ret.], talked with Executive Intelligence Review's Dennis Small and Joao Carlos de Almeida on Dec. 7 at the Brazilian oil company's New York City offices. Here is the text of their discussion.

EIR: What are Brazil's present energy problems? In particular, what difficulties does Brazil face, especially

EXCLUSIVE INTERVIEW

since the beginning of the oil crisis, and which energy sources is Brazil studying?

de Oliveira: After the 1973 Middle East crisis, Brazil faced a balance of payments problem because oil prices increased practically tenfold between 1968 and 1974. The last increases in late 1973 and early 1974 were the biggest. These had a direct effect on the country's balance of payments - 25 percent of our foreign exchange was spent on oil payments. As a result, within our energy balance, a greater national effort was needed to liberate ourselves as much as possible from dependency on oil imports in particular, but more generally on the energy we must import to fill out our energy needs.

Brazil's energy balance has some unique characteristics. Around 30 percent of our energy comes from hydroelectric power, 40 percent from oil, and 22 percent from firewood, charcoal, and sugar cane bagasse. Since the country is a major sugar producer, the sugar mills use the cane fibers for fuel. While other countries don't even compute wood and cane in their energy balance, Brazil has to, because they are a significant portion -22 percent. The remainder of our energy comes from coal, part of which is imported. Brazilian coal supplies 10 to 20 percent of the coking coal needed by our steel industry.

Thus, starting in 1973, what did we seek? To decrease this external dependency which, discounting the 17 percent of oil needs produced in Brazil and the 3 percent of coal needs supplied locally, left us in 1976 with the need to import 40 percent of our energy.

On the other hand, the country does not want to stop its development. Since this development lies, above all, in industrialization, the country needs more energy. And this development - given the needs of transport and industry - has to have petroleum.

To reduce external dependency and permit greater energy consumption to sustain development, we are

Oliveira of Brazil

making a real oil exploration effort. We set up a program to satisfy, within four years, Brazil's need to know what its petroleum potential is. This \$1.2 billion program will be implemented by Petrobras itself. Beyond government this. the authorized Petrobras to grant risk contracts to maximize investment in oil exploration.

Petrobras itself has 32

exploration rigs operating today off-shore on our continental shelf. Some of these rigs are totally operated by Petrobas personnel, except for key technicians who are contracted from the company chartering the rig.

COLOMBIA

We also have 17 risk contracts with international oil companies. From the time of their signing, mostly in 1976, these companies have three years for exploration, that is to reach a conclusion whether the area they selected does or does not have commercial oil possibilities. Of these 17 companies, five have already made drillings.

The issue of nuclear power

EIR: You have said that Brazil's policy is to continue developing the country, which will therefore require more energy and not less. One of the most disputed and most internationally debated aspects of Brazil's energy policy is the nuclear agreement between Brazil and the German Federal Republic. Some political observers have seen an attempt by the United States and other countries to stop this agreement in an effort to keep Brazil from developing without increases in energy production. Would you comment on the Brazilian nuclear agreement and how it fits within your nation's overall energy program?

de Oliveira: How do we plan to increase energy production? On the one hand there is the oil exploration program, to be achieved with massive investments over a four-year term. On the other hand, we are going to develop other sources of energy, one of which has to be nuclear energy, because we have sufficient uranium reserves and because energy based on our hydroelectric potential is located very far from our consumption centers.

We have two ways of developing electric energy: either through coal-burning thermoelectric plants, or through our hydroelectric potential. Our coal is found in Rio Grande do Sul, Santa Catarina and Parana, and our energy consumption is in the Rio de Janeiro-Sao Paulo



axis. We would thus have to transport inert material for great distances which makes this alternative nonviable. We now use 20 percent of our total hydroelectric potential. But most of our hyrdoelectric potential, 80 percent of it, is located in the Amazon. Transmitting electricity from the Amazon to consumption centers is uneconomical because it is a distance of almost 3,000 kilometers, and the cost of transmission lines and energy loss makes it too expensive.

The third alternative is using uranium — using uranium for developing our energy supplies. We have no other purpose than this. Since we have adequate quantities of uranium and we lack technology, we searched for someone who wanted to give us technology, and we searched in several countries. The best offer came from West Germany, so we made a deal with them. There is only one objective: to develop our energy sources. We do not have other objectives.

EIR: West German Chancellor Schmidt will visit Brazil at the beginning of next year. What topics will be discussed? de Oliveira: I don't know what is on the agenda, but I believe that it will include general economic questions of

interest to both countries, since that was the content of discussions during the visit of our President Geisel to West Germany. It will surely be matters of economic development which affect both countries. Of course, nuclear technology has costs, and we are also interested in minimizing the effects on our balance of payments. Thus it will be an exchange of ideas and opinions of an economic character.

EIR: The European Monetary Fund was set up in Europe just two days ago. This is an agreement of — up to now — six European countries to form a European monetary and political union based on the political and economic concepts of its creators, Helmut Schmidt and Giscard d'Estaing. One of the greatest problems for Brazilian development is obtaining sufficient credit to be able to develop high-technology processes in hydroelectricity, nuclear and petroleum energy. Does the government of Brazil have a position or an interpretation regarding the European Monetary Fund, and do you foresee possibilities of it serving as a positive source of financial agreements? How do you see the broader question of diversification of markets, not only for exports and imports, but also the market of finance capital?

de Oliveira: Our country lacks capital. An enterprise like Petrobras has had, up to now, the capacity to raise the capital needed for its programs, for its own exploration program and the exploration by the companies. And beyond this, we have programs set by the government. We have a development program to make us self-sufficient in nitrogenous fertilizers, and for this Petrobras opened up credit lines with the World Bank, the Interamerican Development Bank, French cooperative banks, and so on. You can see that the government has the right image to obtain credit, since Petrobras — an element of the government — has credit-worthiness.

Naturally we need such capital because we are interested in developing technology inside the country, in being able to create our own technology. We are interested in road, railroad, and urban mass transit plans because we lost a lot of time when oil was cheap and abundant. And when this was the case no projects were presented at any level that didn't use a petroleum product as its energy source. Petrochemical industries, of course, had to use petroleum, but other industries, such as capital goods, were designed to burn fuel oil and diesel oil.

Nuclear energy is not the only energy source we are developing. We are working on using Rio Grande do Sul coal at the mine head, so we don't have to transport the 35 percent cinder content. We are constructing coal gasification plants on site and using the gas for petrochemical products like ammonia and urea. In Santa Catalina, depending on capitalization decisions, we will probably have an iron ore reduction plant using coal gas to produce pellets or sponge iron for us to export instead of just plain ore. Further north, in Parana, we have a large shale oil belt which runs all the way south from Sao Paulo to Rio Grande do Sul. Petrobras is developing technology to extract oil from the shale. Even though the cost (\$17

per barrel) is slightly higher than that of imported oil, it wouldn't waste foreign exchange; and I think that by the time this unit is on stream at the end of 1982 or beginning of 1983, oil will already be at that price.

In addition, another energy source being put into production is alcohol, from sugar cane and from manioc.

All this has one purpose — to rectify our energy balance and decide what we will use of hydroelectric, coal, oil, et cetera, so that our energy balance becomes less dependent on imports. The goal of doing all this is so that four years from now, we can move to a model of energy balance which is more desirable for the economy of our country.

On Mexico's oil discoveries

EIR: Mexico has just discovered enormous oil reserves. I understand that you passed through Caracas, Mexico City, and Houston on your way to New York, and I believe that you spoke with your colleagues, General Alfonso Ravard in Venezuela and Jorge Diaz Serrano in Mexico. I would like you to comment on the Mexican discoveries, on what they imply for Latin American energy policy, and if there are plans for Brazilian pur-

Petrobras of Brazil—

Petroleo Brasileiro S.A., or Petrobras, the Brazilian national oil company, is the cornerstone of the nation-building tendency in Latin America's biggest country. It is the 21st biggest corporation outside the United States, with assets of \$9 billion and annual sales of the same magnitude.

The early history of Petrobras reflects the vicissitudes of Brazilian politics.

Getulio Vargas won the presidency of Brazil in 1951 with the help of his nationalist slogan, "O petroleo e nosso" (The oil is ours). The idea of national control over petroleum took root, even with the opposition party, and Petrobras was created as the national monopoly over domestic oil production in 1953. There have been several efforts during the last quartercentury to weaken or even break up Petrobras, but the trend has been for it to take on ever-increasing, responsibility for national development.

President Joao Goulart nationalized private oil refineries and handed them over to Petrobras at a mass rally only three weeks before he was overthrown in March 1964. While the armed forces, which took over the government in 1964, sharply shifted attitudes toward foreign investment in other sectors, most officers consider national control over petroleum a strategic imperative.

General Ernesto Geisel, now completing his term as President of Brazil, served as president of Petrobras from 1969 to 1974. Under his leadership, Petrobras changed from being a rather passive company, imchases or cooperation with Mexico. Could you also comment on Mexico's plans to use its energy resources to import capital goods so that, as stated by President Lopez Portillo, Mexico will become an advanced country in the 21st century.

de Oliveira: The data shown us really give Mexico a very great potential to develop her reserves. They export about 470,000 barrels per day today, and as a result of those exports are very rapidly building nitrogenous fertilizer plants; they also have a great plan to use the fertilizer to develop agriculture. They have two plants going and three 1,500-ton ammonia plants being built simultaneously. They are building ammonia pipelines to distribute this fertilizer. This is a very far-reaching program for the development of the country. They are also building natural-gas-fed petrochemical complexes, which is really the best raw material, the cheapest one for petrochemical production.

As far as Brazilian-Mexican commercial unity is concerned, we have bought some ammonia from them; we have a petrochemical agreement to exchange surpluses of specific chemicals, since we already have two

cornerstone of nation-building

porting oil from the multinational oil giants while pumping out a few fields in Northeast Brazil, into the dynamic giant of today. An example of the way Geisel broke the old rules was Petrobras's direct purchase arrangement with the Iraqi state oil company, concluded in 1969, when the Seven Sisters had an effective international boycott against Iraq in reprisal for its oil nationalization. The Brazilian deal smashed the embargo.

Geisel followed up what turned out to be a lucrative deal from the Brazilian standpoint with similar agreements with other OPEC members. In 1972, Geisel launched Braspetro, a Petrobras subsidiary which has made major oil strikes in Colombia, Algeria, and Iraq and is also prospecting in Libya and Iran.

The Geisel Administration has made closer relations with the oil-producing nations, and with the Third World in general, a primary objective. General Araken de Oliveira, who has headed Petrobras during the Geisel presidency, has taken important initiatives of his own. Rather than accept depressionary cutbacks in oil imports to meet balance of payments problems, Petrobras spun off a trading company, Interbras, whose role has been to place Brazilian exports in new markets, especially through two-way deals with oilsupplying nations and the socialist countries. Petrobras is also busy producing petrochemicals and fertilizer to help raise Brazilian agricultural production levels.

petrochemical poles in Brazil and are building a third. And we have already signed a contract to buy Mexican oil starting in 1980.

Right now, the problem is with one of the products we could place in Mexico and which would be very useful for us - iron ore pellets. They need it for their steel program, since they still import iron ore. However, the (Mexican) ports are still too small. There is no way at the moment to send ships of iron ore there and have them return filled with oil. We can bring oil from Mexico on ships of 150,000 tons since they have set up floating oil buoys just outside the port where you can operate efficiently. But what we want, to minimize shipping costs, is to fill the ships both ways, and they are constructing a new terminal which will make this possible, at a location called Dos Bocas.

With Venezuela we have signed a contract to buy around 30,000 barrels (of crude oil per day - ed.), which will be increased to 50,000 barrels when the increment becomes available in March of 1979. All of our efforts are within the goal of interchange, of helping each other and minimizing the effects of buying because we are also selling.

EIR: And your Houston stop?

de Oliveira: During my recent stay in Houston, Texas, I had the opportunity to talk with a number of American businessmen. All of them were very interested in the development of Brazil, and were willing to do whatever is necessary for that to happen.

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