

# Power play

**Prepa's planned renewable-energy projects will supply more than 20% of local demand by 2015; other projects ahead of schedule, but no break in electric bill till next year**

By Frances Ryan  
Pages 16-21



## TOP STORY

**Fonalledas' \$500 million Monte Rey mixed-use development to begin in Vega Alta**  
page 2

## INSIDE

**Port of the Americas begins \$105.5 million in infrastructure improvements** page 4

**Walgreens takes over 10-plus El Amal stores** page 4

**Local Merrill Lynch office in expansion mode** page 8

**Dive in construction permits hits seven-year low: number of approved permits drops 12.1% in first 10 months of FY '08; housing units sank 8.7%; cement down 10.4%** page 30

## SPECIAL REPORT





# Change is in the wind

**As the world moves aggressively toward wind, solar and other renewable sources of energy, Puerto Rico has stood idly by. Until now.**

BY FRANCES RYAN  
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**T**he Puerto Rico Electric Power Authority (Prepa) has finally decided to go with the wind.

After years fighting the biggest trend in global energy—the aggressive move toward renewable energy sources by dozens of U.S. states and cities and many countries around the world—the Puerto Rico Electric Power Authority is expected to announce later this month a historic shift away from nonrenewable fossil fuels (oil, gas and carbon) and toward wind, solar, waste-to-energy, ocean thermal, biomass, hydroelectric and other renewable sources.

And that's only one of the stories uncovered by CARIBBEAN BUSINESS in this exclusive look at Prepa at mid-year.

The dramatic rise in the price of oil has led to unexpected conservation and reduced demand, providing Prepa excess capacity this summer and therefore zero expectation of blackouts or power outages (story on page 19).

Prepa is ahead of schedule on its public works while spending less money on the improvements, the first reduction in year-over-year investment in recent memory (story on page 19).

The excess capacity is also allowing Prepa to accelerate its capital improvement pipeline, including a bigger-than-expected shift to natural gas and coal, which in turn has reduced Puerto Rico's dependence on oil to 67% of the total electricity consumed in Puerto Rico. Earlier this decade, following the completion of the EcoEléctrica natural gas plant in Peñuelas and the AES carbon plant in Guayama, oil dependency stood at 73%.

"This reduction validates our efforts to reduce oil dependency," said Juan Alicea, Prepa's director of Planning & Environmental Protection. "We should see our oil dependency steadily continue to drop as the conversion plan to combined-cycle turbines is completed and as we factor in the efficiencies of renewable technologies."

The diversification of Prepa's fossil-fuel sources of energy, therefore, is yielding big dividends and will accelerate in the coming years (story on page 20).

Continued on next page





Continued from previous page

### RENEWED PROJECTIONS

But the biggest story to come out of this special coverage is the diversification towards renewable sources of energy. The agency now expects renewable energy to supply more than 20% of total electricity consumed in Puerto Rico within the next several years. As recently as last year, in several stories published by this newspaper and in official government presentations, Prepa executives spoke of a 2% share of total supply by renewable energy in 2015, with oil, gas and carbon projected to split the rest nearly even—33% oil, 33% gas and 32% carbon.

But the dramatic hike in oil prices, coupled with sharp rises in the cost of gas and carbon, forced Prepa back to the drawing board, along with equally dramatic developments in finance and innovation that have made renewable sources less expensive and more accessible.

It remains unclear what the impact is likely to be in the cost of electricity on the island, but Prepa executives expect the diversification away from oil and toward gas, carbon and renewable sources to favor consumers and businesses.

“The only realistic way to reduce Puerto Rico’s electricity costs is through a combination of energy conservation and fuel diversification, including clean fossil-fuel technology and renewable sources,” confirmed Prepa Executive Director Jorge Rodríguez.

“In our case [Prepa], we will use natural gas, clean-coal technology, low-sulfur oil, wind, biomass, waste-to-energy, ocean thermal, landfill gas, solar power and other sources as our portfolio for power generation.”

Currently, there are six major renewable-energy projects either underway or under advanced evaluation. Once completed, the combined generation of 2,000 megawatts (MW) will supply roughly one-third of Prepa’s current power capacity.

“We are very excited about Prepa’s new energy diversification,” said Fortaleza Chief of Staff Jorge Silva Puras. “We already have two wind-energy farms under development, and a third mega-wind project is in the pipeline that could generate an additional 1,000 MW. Prepa is rescuing the OTEC (ocean thermal energy conversion) technology initiative considered more than 20 years ago, with a project to be located in the southeastern part of the island.”

Silva Puras told CARIBBEAN BUSINESS that the viability study on the OTEC initiative is near final and will soon move into the pilot phase, and he revealed advanced plans to bring solar power to Puerto Rico in a big way.

“A major initiative in partnership with California-based Sun Edison will bring solar energy to the forefront of Prepa’s diversification initiative,” said Silva Puras. The Sun Edison project is expected to generate 135 MW.

Solar is also expected to receive a significant boost with the adoption of net-metering on the island. This will allow a home and business to sell to Prepa whatever electricity is generated by solar panels but not consumed. The net-metering



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—Jorge Rodríguez  
Prepa executive director

law was enacted earlier this year and only awaits the drafting of the regulation and certain technical adjustments.

“Prepa is in conversations with several stateside companies that specialize in photovoltaic panels,” added Silva Puras.

“What’s interesting about this opportunity,” he said, “is not the technology itself, but rather the way Prepa goes about it. In the case of Sun Edison, which handles similar projects, including California’s Department of Corrections, the process could go one of two ways. They could put up the capital investment and sell the electricity to Prepa, or go with a long-term contract, a flat rate—what’s known as hedging in the industry. What hedging does is enable you to protect your production costs as oil or other fuel sources increase in price.”

As CARIBBEAN BUSINESS reported last week (CB July 17), waste-to-energy plants will also be part of the mix. Two plants are currently in the early stages of development: a \$216 million plant

slated for the northwest in 2012, and a \$246 million for the northeast a year later. CARIBBEAN BUSINESS has learned that a waste-to-energy project proposed by Washington, D.C.-based Solena is being certified by the Solid Waste Management Authority (SWMA), so it can become part of Prepa’s fuel portfolio, but it’s not clear if it is one of these two plants.

Nothing is off the table. Even hydroelectric power—Prepa’s original and principal source of power when the agency was called Autoridad de Fuentes Fluviales—is being considered.

Prepa’s hydroelectric plants remain in mint condition, with a small generation capacity of 100 MW today. The environmental impact of hydroelectric power is minimal and production costs a fraction compared to other sources. Conversations are underway between Prepa and the Puerto Rico Aqueduct & Sewer Authority (Prasa) to increase the use of hydroelectric energy on the island.

### PUSHED BY PRICE, CONSERVATION, LAWS

“The skyrocketing cost of oil is making it possible for renewable energy sources that were not cost-effective a couple of years ago to become more accessible,” said Prepa’s Alicea. “Also, the global energy market has seen a fundamental shift in how big investors are betting heavily on new technologies, making solar, wind, biomass and even OTEC more realistic alternatives than we ever thought possible.”

With the meteoric rise in demand around the world, renewable energy has become the darling of the global venture capital industry, as billions of dollars are invested in the development of cutting-edge technologies.

An unexpected spike in conservation by consumers is also behind the push. “They are becoming not only more savvy about matters of energy and environmental conservation, but are proactively taking steps to reduce their consumption as a means to save money, in light of the dramatic rise in oil prices,” added Alicea.

Others attribute Prepa’s sudden transformation to two recent pieces of legislation that marked the beginning of the end for the utility’s power monopoly: “For starters, net-metering, which gives consumers credit for choosing solar energy credit to produce their own electricity; and wheeling, the clause included in the new Puerto Rico Economic Incentives Law that provides commercial, industrial and institutional clients the opportunity to produce their own electricity and sell it back to Prepa,” noted Senate President Kenneth McClintock.

Barely weeks after the new incentives law was enacted, already 14 institutional and industrial clients await to benefit from the new wheeling energy-saving opportunity.

### NEW SUBSIDIARIES

To better navigate the new energy landscape and become more competitive, Prepa is making changes in how it operates. The public corporation

Continued on page 18



Continued from page 17

recently established three new subsidiaries to this end: Prepa Renewable, Prepa Oil & Gas and Prepa Utilities.

“Through these subsidiaries, Prepa can participate in new ventures and diversify its income generation. Both Oil & Gas as well as Prepa Renewable are having their business plans written up. Most of the new gas projects could be handled through Oil & Gas, while renewable projects can be developed through Prepa Renewable,” explained Alicea, adding that Prepa Renewable could even participate in projects as a supplier.

#### OCEAN AND WIND

Prepa has three wind projects in its renewable-energy portfolio.

“In partnership with Canada-based TROC International, the first wind park to generate 50 MW will be located in Arecibo. The company was acquired by Vientos de Puerto Rico, and we’re in conversations to modify some aspects of the original contract,” said Alicea, adding the contract for Prepa to purchase TROC’s wind-generated electricity could be signed within the next three months. The project should be operational by August 2012.

Windmar, by local entrepreneur Víctor González, is moving full speed ahead with construction of a wind park with a 40 MW capacity located at Punta Verraco in Guayanilla.

“The contract with Prepa was signed June 4 of this year, and the commercial operation is slated to begin operation by August of 2012,” said an enthusiastic Jorge Rodríguez, Prepa’s executive director, adding the third wind park under consideration could be the largest of the three.

“The third wind farm project is being evaluated as a potential public-private partnership, through Prepa Renewable. It could generate a substantial 1,000 MW. Once the viability study is concluded, we’ll know better,” said Silva Puras.

Yet another exciting initiative underway is OTEC, ocean thermal energy conversion, a way to generate electricity using the temperature difference from the surface to different depths.

“The method involves building a floating platform to pump cold water from the ocean depths to the surface and extracting energy from the flow of heat between the cold water and warm surface water. OTEC utilizes the temperature difference to run an ammonia turbo generator,” explained renowned environmental scientist and project consultant Dr. Michael Szendrey.

“Prepa signed a letter of intent with a project proponent to develop an OTEC initiative with a 75 MW capacity,” said Alicea. “We’ve just received the results of the viability study.”

“There are only a handful of places in the world in which these ideal conditions can be found. Puerto Rico is one of those places,” added Silva Puras. “Successfully developing OTEC technology will not only diversify our fuel production, but will also put us on the map at the cutting edge of this important technology development.” ■



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—Juan Alicea, director  
Prepa Planning & Environmental Protection



“Net-metering gives credit for choosing solar energy to produce electricity. Wheeling provides the opportunity to produce electricity and sell it back to Prepa.”

—Sen. Kenneth McClintock





# Demand for electricity down 4.9% in FY '08

Recession and oil-price hikes lead to unexpected stall in consumer and business demand, leading to excess capacity; investments continue

BY FRANCES RYAN  
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Continuing capital improvement projects by the Puerto Rico Electric Power Authority (Prepa), along with lower-than-expected demand as a result of the recession and steep rise in oil prices, have led to excess capacity in the island's electricity system this summer.

Result: no blackouts or outages expected, as occurred following the recent fire and shutdown of the Palo Seco power plant in San Juan.

"We're definitely prepared for the summer peak season and expect no brownouts or blackouts. Most of the Palo Seco plant repairs have been completed," said Jorge Rodríguez, Prepa's executive director.

As part of Prepa's ongoing energy demand forecast, the agency has adjusted Puerto Rico's projected demand in the short- and mid-term based on reduced consumer consumption and the other efficiencies it plans to achieve throughout the system.

In 2003, the projected demand of electricity was expected to double over the next 25 years, from 3,625 MW to 6,857 MW per year by 2030. Today's projections are dramatically different.

"Historically," said Juan Alicea of Prepa's Planning Division, "our forecast has been very accurate. Since Fiscal Year 2005, peak demand and energy sales have decelerated due to the increased oil prices and the recession. The recent April 2008 forecast, based on actual economic

data, shows no increase in the peak demand for the next five-year period and approximately 300 MW in the next 10 years."

Alicea cautions that "these are long-term projections subject to annual revision, especially during difficult economic times when market changes are constant." But thus far this fiscal year (July 2007 to May 2008), demand is down 4.9%.

But should the flattening of demand materialize, it will give Prepa significant elbow room to continue its planned improvements.



Among the major improvements currently adding capacity to the system are two combined-cycle units of 232 MW each commissioned for the San Juan Station, and two combustion turbines of 55 MW each that replaced old units in Mayagüez.

"These projects bring around 500 MW of new

power to our electrical system," said Alicea. Next year, he added, "two additional combustion units, totaling 110 MW, will be installed in Mayagüez, replacing the remaining two old units."

## PUTTING PALO SECO BEHIND US

Memories of Palo Seco's fiery images still linger. Barely a year ago, the utility had to shift its attention from diversification to repair the badly damaged, 602-megawatt (MW) Palo Seco plant, which accounts for 11% of Prepa's total energy production.

Rodríguez said that \$106 million in repairs and improvement programs have replaced the control system of the four units ruined by the fire, and the turbine and generators in units 1 and 2 have also been replaced.

"Palo Seco units 3 & 4, which will also have their turbines and generators replaced, were scheduled for major maintenance," explained Alicea. "So we decided to complete the repairs and the maintenance process at once by bringing Palo Seco 100% into service within the next week or so. Improvements made to the Palo Seco plant will keep the plant running at optimum capacity for the next six years."

"Interestingly," added Rodríguez, "most people think July is our peak summer period, but it isn't. Most people are away on vacation or spending a lot of time outdoors. August, on the other hand, with high temperatures and the back-to-school season, tends to be a more hectic month for us." ■

## Ahead of schedule, with less money

BY FRANCES RYAN  
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The Puerto Rico Electric Power Authority (Prepa) is ahead of schedule on its capital improvement projects—mainly the move to diversify sources of energy—and it is making these investments under budget CARIBBEAN BUSINESS has learned.

Prepa has reduced its budget for the agency's five-year capital improvements plan (CIP) from \$2.285 billion to \$1.845 billion over the next five years.

Cuts to its CIP plan will not impact current power generation capacity or its fuel diversification efforts; these have been applied against future projects designed to bring additional power capacity generation to the system, capacity that is currently not needed.

Taking on priority status are existing conversion projects, primarily from oil to natural gas and renewable energy initiatives, expected to

yield greater production efficiencies.

Prepa boasts a comprehensive pipeline of pending projects that consists of hundreds of maintenance, repair and new-development projects. The core of this project pipeline can be summarized in the following top initiatives.

- Construction of two generating units of 232 megawatts each (San Juan power plant). The addition of two combined cycle units will provide 464 MW of additional capacity. "The new units provide increased efficiency and reliability to the system. The generation provided by the new units is located near the load, thus reducing losses and increasing the system's stability," explained Juan Alicea of Prepa's planning division.

- Replacement of 20 MW turbines in Mayagüez with four new ones of 50 MW each. "Prepa's updated capacity expansion plan includes the replacement of four 21 MW combustion turbines at Mayagüez with four 55 MW dual-fuel aero-derivative combustion turbines. The replacement of the first two units, which are already installed

and under testing, is scheduled for commercial operation in early Fiscal 2009. The replacement of the other two units is expected to be completed by mid-Fiscal Year 2009," explained Prepa Executive Director Jorge Rodríguez. Replacement of the existing combustion turbines with newer technology will significantly improve the overall efficiency of the facility and add approximately 136 MW of new capacity.

- South coast gas pipeline from EcoEléctrica to Aguirre. "This is one of the most exciting projects in our pipeline—no pun intended. It is the construction of a \$74 million, 42-mile gas pipeline from the LNG facility in Guayanilla to the two existing combined cycle units at Aguirre. This project is scheduled to be completed during fiscal year 2009," confirmed Rodríguez.

- Gas pipeline from the EcoEléctrica terminal in Peñuelas to the new plant site in Mayagüez. "The final route for the North Coast Gas Pipeline



# Full steam ahead on diversification of fossil sources

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**T**he decision by the Puerto Rico Electric Power Authority (Prepa) to diversify into renewable energy is rather recent. The move to diversify the island's nonrenewable fossil-fuel sources is several years old.

And according to agency executives, it's going according to plan.

The Fiscal Year 2009 allocation for the fossil-fuel diversification program is \$446 million, down from last year's \$460 million. But the decline in the investment hides an increase in the pace of improvements.

The first phase of Prepa's fuel diversification strategy to promote the use of natural gas includes the conversion of the two existing 296 MW combined cycle units at the Aguirre plant to dual fuel capability and the construction of a pipeline from the LNG facility in Guayanilla to Aguirre combined cycle.

"This phase is scheduled to be completed during Fiscal Year 2009. The second phase of Prepa's fuel diversification strategy to promote the use of natural gas includes the construction of a pipeline from EcoEléctrica to other power-plant sites in Cambalache, San Juan, and Mayagüez," said Prepa Executive Director Jorge Rodríguez.

Prepa plans to use natural gas in the new 464 MW San Juan combined-cycle station, and in Cambalache's three existing 83 MW combustion turbines. This phase is expected to be completed in Fiscal Year 2011. The new combined-cycle project, scheduled to be in service in Fiscal '14, will use natural gas and light distillate as a backup fuel and will be located in Mayagüez.

"A natural gas pipeline will bring natural gas to this project and to the four new 55 MW combustion turbines that are being constructed as replacements for existing 21 MW units in Prepa's Mayagüez power plant. We expect that the conversion of some of its units to use natural gas will result in lower energy costs, since the cost of natural gas has been consistently and considerably lower than that of the distillate fuel oil currently used in those units. Also, maintenance costs are expected to be reduced and availability increased, since units burning natural gas require shorter maintenance periods," continued Rodríguez.

## COMBINED CYCLE MORE EFFICIENT

Puerto Rico, which currently imports its liquid natural gas (LNG) from Trinidad & Tobago to power cogeneration plant EcoEléctrica, is considering new bids to purchase its LNG from various sources, CARIBBEAN BUSINESS has learned.

Trinidad & Tobago's suppliers have participated in the bid, but there are interested suppliers from the United States, the Middle East, Mexico and Australia. Bidding results are expected next week.

Also, an agreement with EcoEléctrica's LNG terminal facilities to receive, store and gasify liquefied natural gas from Grupo Gas Natural de España has been in place since April 19, 2007.

Environmental benefits are also expected due to cleaner combustion when using natural gas. The strategy to achieve fuel diversification includes a clean-coal technology project to satisfy the capacity needed beyond Fiscal '16, explained Juan Alicea, Prepa's director of Planning & Environmental Protection.



Making the case for natural gas savings is the cost per million BTU at approximately \$13.50, compared with \$29 million BTU using light distillate (oil) and \$3.50 per million BTU using coal.

"By increasing the use of natural gas to generate electricity, Prepa is moving from one fossil fuel to another. In doing so, replacing obsolete infrastructure will also increase the system's overall capacity, and that for the time being is a move in the right direction," said former Natural & Environmental Resources Secretary Pedro Gelabert.

"Combined-cycle gas turbines," he added, "are presently the most efficient method of generating electricity, where steam from two gas turbines moves a third turbine at very little cost. In terms of the environment, this is also good news, as natural gas is by far less harmful to the environment than oil." Natural gas cuts down

on the carbon dioxide emission of burning coal and petroleum.

On the coal front, Prepa is evaluating the construction of yet another plant on the eastern region of the island.

"We're looking at clean-coal technology to keep environmental impact to a minimum," explained Alicea. "If all goes as planned, the new plant could come into place after 2017. We are constantly reviewing the need for this project based on the system's overall production capacity and changing market demand. The viability study will ultimately determine where such a plant would be located."

Gelabert stated that a coal plant in Ceiba, rumored to go on the former Roosevelt Roads area,

would be an ecological disaster for El Yunque and the island's northwestern region, given that winds would come from the northeast carrying emissions.

"The AES plant in Guayama emits 500 tons of carbon dioxide annually, which would require replanting all of Puerto Rico to mitigate this contamination. Unfortunately, carbon dioxide is not regulated by either the federal or Puerto Rico governments, but has been the cheaper fossil fuel in recent years."

"There are talks in Washington, D.C. to regulate coal generation. That information will be taken into account at the time of evaluating the new plant for the east," concluded Alicea, adding it's too early to tell whether the east-coast plant will end up in the Ceiba area. "Wherever it may end up, it must have access to port facilities for the shipping and receiving of coal." ■



# Transmission system overhaul to be completed by 2012

Prepa allocates \$500 million toward expansion and rehab of transmission system;  
FEMA approves \$75 million for underground systems in metro areas

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Part of the Puerto Rico Electric Power Authority's (Prepa) ongoing commitment goes toward the maintenance, expansion and rehabilitation of its complicated transmission system.

The Authority is planning to spend \$334.6 million for expansion projects and another \$156.2 million for rehabilitation works on its transmission system for the five fiscal years ending June 30, 2012.

"The Authority is expanding its 230 kilovolt ("kV") transmission lines to add to the stability of the electrical system, improve reliability of service to clients, and reduce transmission losses. After completing construction of the transmission loop on the eastern part of Puerto Rico in Fiscal '06, the Authority is now building a new 56-mile-long 230 kV transmission line between its south coast steam plant and the transmission center in Aguas Buenas," explained Juan Alicea of Prepa's planning division. Construction is expected to be completed during Fiscal '10.

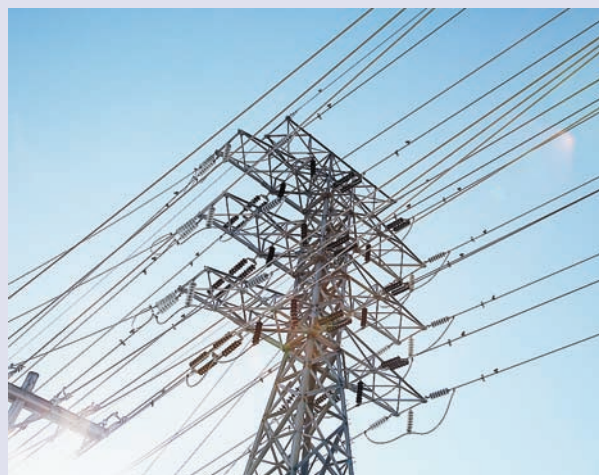
"Once in operation, this infrastructure project will enhance the reliability of the transmission system and will permit the increase of power transfers from the south coast of Puerto Rico to the northern and central regions. To increase the system's security margins, the Authority also plans the construction of a new 230 kV circuit to interconnect Costa Sur steam plant with Cambalache gas plant. This new 230 kV transmission line is expected to be in service during Fiscal '13," continued Alicea.

Prepa is also in the process of commissioning an underground 115 kV transmission circuit line around the San Juan metropolitan area to reduce incidents of loss of power in the aftermath of hurricanes and other major storms. The estimated

cost of this project is \$135 million.

"The Federal Emergency Management Agency (FEMA) has committed itself to provide \$75 million for the investment in construction of this project through grants," revealed Alicea. To this end, Prepa is currently designing and building major underground systems located in high-density metropolitan areas.

These underground systems will permit the replacement of overhead subtransmission and distribution lines, thereby improving reliability and assisting municipalities undertaking urban renewal projects by removing unsightly poles, lines and transformers.



## SWITCHYARDS

In keeping with Mayagüez's capacity improvements, an initiative to improve the 38 kV subtransmission system is in effect, including construction of underground 38 kV lines in the cities of Mayagüez, Carolina and San Juan.

"We continue the replacement of the 38 kV lines in the central and western part of the island," he added. "These projects will improve the reliability of the subtransmission system."

Two new air-insulated 115/38 kV transmission

centers in the cities of Juana Díaz and Hatillo, as well as a major expansion project to add 150 MVA of 115/38 kV transforming capacity in the transmission center of Juncos, were completed and energized in Fiscal Years 2006 and 2007.

Martin Peña GIS, a new gas-insulated 115/38 kV transmission center with a 300 MVA installed transforming capacity, as well as a new gas-insulated 38 kV switchyard in the Luis Muñoz Marín International Airport, were energized during Fiscal '08 just ended.

"Palo Seco GIS, one of Prepa's major gas-insulated 115/38 kV switchyards with direct interconnection to 600 MW of generating capability, will be completed by the beginning of Fiscal '09," said Alicea.

A new air-insulated 38 kV switchyard in Cidra was energized at the end of Fiscal '08. Besides improving the efficiency and reliability of the system, these switchyards increase the power transfer capability of the transmission system and improve the voltage regulation of the subtransmission system under normal conditions and contingency situations.

Prepa's capital improvement program (CIP) also calls for the rehabilitation of 230 kV, 115 kV, and 38 kV lines, and the increased capacity of transmission breakers. The CIP also includes new 115 kV/38 kV transmission centers (TC) in the Hato Tejas sector of Bayamón, Las Cruces in Cidra and Bairoa in Caguas.

In addition, the construction of new 115 kV and 38 kV switchyards and the extension of existing switchyards to integrate new components is part of the 2008-2012 CIP.

"To supply the forecasted energy, the CIP includes the increased transformation capacity in existing switchyards in Victoria TC in Aguadilla, Mora TC in Isabela, Palmer TC in Rio Grande, Humacao TC and Canóvanas TC," concluded the Prepa executive. ■

## Ahead of schedule, with less money

Continued from page 19

is yet to be determined. We just received the viability study with several route recommendations. As soon as the final decision is made, we'll move forward with construction," said Alicea, who declined to comment about the possibility of running the gas pipeline from Peñuelas through Utuado to Cambalache in Arecibo. "It would be irresponsible to answer that before taking a look at the viability study."

• Additional phases of the North Coast gas pipeline—from Arecibo to Puerto Nuevo/San Juan power plants.

• Conversion of Aguirre to combined-cycle plant using oil and natural gas. Two 296 MW combined cycle units at Aguirre, which include a total of eight 50 MW combustion turbines, are in the process of being upgraded and converted to the capability of burning natural gas or distillate fuel oil. This work is scheduled for completion in Fiscal Year 2009.

• Conversion of Cambalache to combined-cycle plant. "The updated plan includes the conversion of three simple-cycle 83 MW combustion turbines at Cambalache to a combined-cycle operation. The Authority estimates the conversion will considerably improve the efficiency of the facility, add approximately 100 MW of new capacity and be completed in Fiscal 2015," noted

Alicea, adding the conversion of Cambalache to combined cycle consists of the installation of three heat-recovery steam generators (one for each of the combustion turbines) and a steam turbine.

• Prepa's generation capacity expansion plan includes a combined cycle unit of approximately 400 MW in Fiscal 2014. This plant is to be located at a green site in the western part of the island and will use natural gas as primary fuel. It is expected that with the inclusion of this project, the fuel diversification goal regarding natural gas will be achieved.

• Conservation and maintenance plans for Costa Sur Power Plant (Unit Nos. 5 and 6) and Aguirre (Unit Nos. 1 and 2) ■