

Features



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ROTH AND RAMBERG

LEFT: BOB SEVERI/GETTY IMAGES ASSIGNMENT, RIGHT: TERRY LOWENTHAL/BECHTEL

Rising in the shadow of an ancient pine forest, the new Araucária power plant symbolizes future economic prosperity for Brazil.



Seeds *of* Change

LEGEND HAS IT THAT a gralha-azul, sleeping in the branches of an araucária pine, was awakened by the sound of the tree's woeful moans as an ax chopped it down. Frightened, the bird took flight, and as it neared the clouds, a voice told it to fly back to the pine forest and become the trees' benefactor. The gralha-azul returned to the forest, dressed in bright blue like the sky, and began to sow the pinhão, the seed of the majestic araucária pine.

The pinhão is the main winter food source for the endangered gralha-azul, or azure jay. True to their mission, after each meal, gralha-azuls bury a few pinhões, thereby

enabling the araucária seed to sprout and the forest to thrive.

The araucária pine is native to Brazil, Argentina, and Chile, and is the official tree of the State of Paraná, in southern Brazil. In the shadow of these majestic trees, Bechtel Power is completing the state's first natural gas-burning power plant, aptly named Araucária.

In honor of the legend of the gralha-azul, every visitor sows a pinhão in the greenbelt around the plant, symbolizing the symbiotic relationship between the araucária pine and the gralha-azul. Planting pinhão seeds also has come to symbolize the relationship between the power

BY SYBIL HATCH

PHOTOGRAPHS BY PAULO FRIDMAN/GETTY IMAGES ASSIGNMENT

PROJECT PROFILE



LOCATION

Curitiba, Brazil

CUSTOMER

Usina Elétrica a Gás de Araucária

DESCRIPTION

469-megawatt combined cycle power plant

SCOPE OF WORK

Project management, engineering, procurement, construction, and commissioning

VALUE

Total project value \$330 million

SCHEDULE

2000 - 2002

plant and the region's future economic prosperity.

The region has traditionally relied on hydropower for its energy needs. A recent prolonged drought, coupled with ever-increasing demand on limited water supplies, convinced Brazil's National Agency of Electric Energy to approve the construction of a 469-megawatt plant near the village of Gralha Azul, a suburb of Curitiba. Bechtel is providing project management, engineering, procurement, construction, and commissioning on a lump-sum turnkey basis.

The city of Curitiba is renowned for its museums, parks, and quality of life. With the pines swaying in the warm breeze, children running through verdant parks, sophisticated dining at world-class restaurants, and charming smiles gracing warm faces, Curitiba is a tropical par-

adise. But it is also a major industrial area serving a broad agricultural empire that stretches south to Uruguay and Argentina, and west to Paraguay. Its automotive industry has grown large and now includes Volvo, Volkswagen, and Audi plants. Stable economic growth is highly dependent on a reliable and economical source of energy.

As Brazil moves to diversify its energy system, production from

Araucária Power Plant



New Opportunities for a Poor Village

For the village of Gralha Azul, one of the poorest in the region, unemployment was a hard reality, and lack of workers' skills and access to transportation severely limited the opportunities for meaningful work.

Now, not only will the new Araucária power plant supply energy to the region's growing industrial base, but construction of the plant has supplied many local residents with the skills necessary to thrive in a growing economy.

When Bechtel began hiring and training for the project in October 2000, it gave priority to the men and women of the village who were unemployed, generally unskilled but willing workers. At peak construction, more than 600 people were working at the plant.

Now that the project is near completion, Bechtel and customer Usina Elétrica a Gás de Araucária (UEG) are working closely with Brazil's Serviço Integrado Nacional de Emprego (National Employment System) to re-employ these workers at nearby refineries, paper mills, and in other local industries.

"Former Bechtel workers are sought out because of the extensive safety and skills training they received at Araucária," says Osmar Simoes, who is responsible for coordinating Bechtel's outplacement services. In all, Bechtel and UEG estimate that roughly 150 previously unemployed people will find meaningful jobs in other industries, or stay on with Bechtel to build other projects.

gas-powered plants is expected to increase over the next decade—and Araucária is an important part of the strategy. The new power plant is a combined cycle, natural gas-fired system in which two combustion turbine generators and one steam turbine generator produce power. Gas is supplied by pipeline from Bolivia. The owner of the plant is Usina Elétrica a Gás de Araucária, a company formed by El Paso Energy International; Companhia Paranaense de Energia Generation, the local utility and plant operator; and Gas Petro, which will supply natural gas to the plant.

Bechtel is experienced at designing and building plants such as Araucária and delivering them in timely, cost-efficient fashion. “It can be done,” says Bechtel Project Manager Richard “Andy” Wheeler. He should know, having brought in a similar power project in Selkirk, New York, ahead of schedule.

Originally scheduled for delivery in December 2002, Araucária also is ahead of schedule. The project also is under budget, and it boasts one of the finest safety records in the industry.

The stellar performance is the result of experienced people directing the project; well-trained, dedicated, and hardworking local employees; and a great customer. “It’s a fantastic group of people,” says Wheeler. “Araucária is the most enjoyable project I’ve worked on in my entire 29-year career with Bechtel.”

Bechtel assembled a seasoned, experienced team to build Araucária. Wheeler and Deputy Project Manager Arshad Nawaz first worked together on a Bechtel power project in Venezuela over 20 years ago, and they have worked together in other assignments. Araucária Project Engineer Ven Mahadevan and Startup Manager Bill Ross also have worked closely with Wheeler on previous power projects. Another key figure at Araucária is Construction Manager Ricardo Cobianchi, a Bechtel veteran in Brazil whose knowledge of the labor market and local business practices have been instrumental to the success of the project.

“I’d gladly work with every one of these people on a future project,” says Wheeler.

In building its business in Brazil, Bechtel has hired and trained many talented Brazilian engineers and administrators. Elza Maria Arrighi, for example, worked for many years with Bechtel business development in Rio de Janeiro. She came to Bechtel’s Frederick, Maryland, office to learn the latest automation and document control techniques and has set up a first-class operation in the field at Araucária.

Wheeler says that the people he’s worked with in Curitiba have been some of the most talented, friendliest, and most accepting he’s ever met. “The Brazilian people

are what have made this project great,” he says, and the relationships Bechtel has developed in Brazil will serve as fertile fields in which to grow the energy base for Brazil’s growing economy. 🇧🇷



In the Eyes of Children

Shortly before Christmas last year, Bechtel construction personnel went to the village school in Gralha Azul to paint it, inside and out. Bechtel presented the newly refurbished facility to the community at a gala party, with live music, food, and gifts for the 260 children who attend the school. “We truly appreciated the opportunity to get to know our neighbors,” says Bechtel Project Manager Richard “Andy” Wheeler.

But it was the orphanage in nearby Araucária that really captured the hearts of Bechtel workers. Early in the Araucária power plant project, Wheeler noticed Amalia Cobianchi, a Bechtel subcontract manager and daughter of Ricardo Cobianchi, Bechtel’s construction manager, loading bulk food and supplies into her trunk.

“To the orphanage,” she said when asked where she was taking the goods. “It’s my way of helping.” Wheeler and other managers readily agreed to offer their support. With out-of-pocket contributions from employees, Bechtel has been able to provide a year’s worth of food and clothing to the nine boys and four girls who live at the orphanage.

Last Christmas, Wheeler dressed up as Papai Noel and distributed four presents and four sets of clothing to each of the 13 children. “Words cannot describe the look in one boy’s eyes when he opened his very own soccer ball,” says Wheeler. “It was as if he couldn’t imagine what he’d done to deserve such a wonderful gift.”