

#18

Mexico's Laguna Verde: a progress report

Mexico's first nuclear station – Central Laguna Verde (CLV) on the Gulf of Mexico near Veracruz – continues to operate with a high level of performance by both reactor units.

Together, the two GE-supplied BWRs (each 654 MWe) are saving the nation some 13 million barrels of oil annually through their electricity production.

Laguna Verde-1 entered commercial operation in July 1990; unit 2 in April 1995.

Unit 1 gained global attention with uninterrupted operation for 250 days in its first fuel cycle: a world record for BWRs. It has just completed its fifth cycle with a continuous CLV run record of 353 days.

When Mexico's Comision Federal de Electricidad (CFE), the national utility, launched the Laguna Verde project in the early 1970s, it recognized a need to diversify its power production capability.

The project was also viewed as a major impetus to stimulate the nation's technical and supply-side infrastructure.

Laguna Verde has enabled Mexico to significantly boost its capability in supplying vital equipment for major civil engineering work.

by
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NPP

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GE

Its professional and technical manpower was strengthened as the nation mobilized its resources to meet home supply requirements including the creation of the whole new infrastructure needed to design, construct, and operate this major national project.

Power uprate and advances

The CFE technical staff is working with GE Nuclear Energy engineers on a program to uprate the power level of both Laguna Verde units by potentially 5%.

That's approximately the boost already achieved by several US utilities using the program.

The program increases the rate of nuclear fission by boosting the enrichment level of the fuel and/or increasing the amount of new fuel added to the core at refueling.

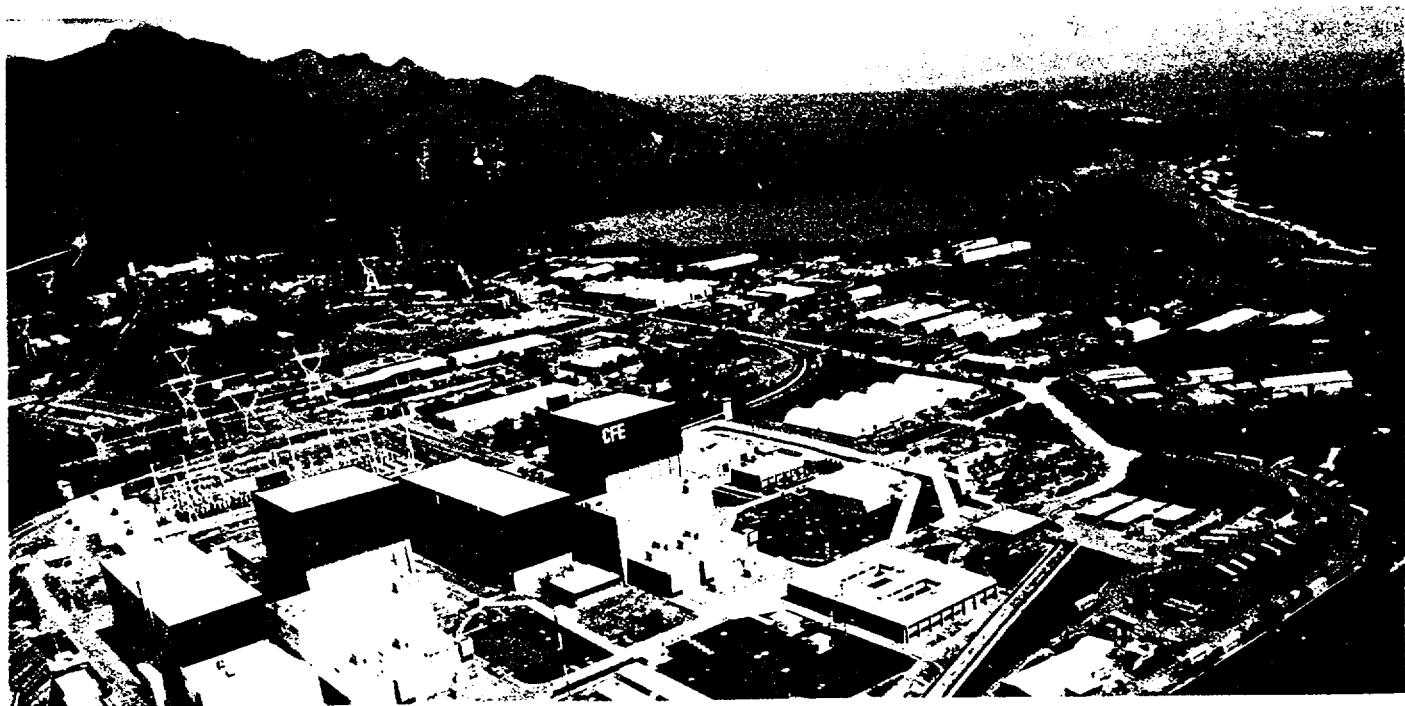
The BWR nuclear steam supply system used by CFE at Laguna Verde, a GE BWR model 5 with Mark II containment, incorporates important design advances.

These include recirculation-flow improvement for the control of the reactor power and steam flow, reactor safeguard requirements, emergency core-cooling advances and improvements in the structural design for enhanced seismic stability.

Today, Laguna Verde accounts for about 5% of Mexico's total installed generating capacity.

Now that Laguna Verde-2 is in full production, Mexico's first nuclear power station, with its high capacity factor, is actually generating about 7% of the country's electricity.

And the plant is proving to be a "good neighbor" to the Veracruz local economy. ■



Laguna Verde NPP (GE twin boiling water reactors) operated by Mexico's Comision Federal de Electricidad

1/28