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Mexican Government, Congress Support Nuclear Power to Varying Degrees; Detractors Want Laguna Verde Power Plant Closed

By Carlos Navarro

The threat of a nuclear mishap in Mexico, similar to the disaster that hit the Fukushima Daiichi Nuclear Power Plant in Japan in March, has ignited a debate on whether the Mexican government should proceed with plans to expand the capacity of the Laguna Verde nuclear power plant in Veracruz state. The plant, property of the state-run electric utility Comisión Federal de Electricidad (CFE), operates two boiling-water reactors fueled with enriched uranium and provides 3% to 4% of Mexico’s total electricity needs. The plant has an installed capacity of nearly 1,400 megawatts.

The Japan disaster has prompted a group of environmental organizations, led by Greenpeace México, to demand that the government abandon nuclear power altogether. Opinions in the Mexican Congress are mixed, with the chair of the Senate energy committee reiterating that nuclear power is safe and a senator for the governing party calling for constructing more nuclear power plants. Other legislators are asking for further studies on the safety of nuclear power and a moratorium on expanding the country’s nuclear power program, but they stopped short of calling for an end to the use of nuclear power.

The Mexican government is fully confident in the Laguna Verde facility because it has been certified by Mexico’s Comisión Nacional de Seguridad Nuclear y Salvaguardas (CNSNS). The CNSNS awarded operating licenses to the first reactor in 1990 and to the second in 1995.

Energy Secretary José Antonio Meade, who led an inspection of the Laguna Verde facility shortly after the Fukushima accident, insisted that the dangers are minimal because the plant meets international safety standards.

Veracruz Gov. Javier Duarte, who accompanied Meade and CFE director Antonio Vivanco Casamadrid on the inspection, said he was taking the federal government at its word. "We have guarantees from the federal government, the Secretaría de Energía, and the Comisión Federal de Electricidad that conditions are optimum at Laguna Verde," said Duarte.

Meade insisted that nuclear power has a future in Mexico, even though there are no immediate plans to construct any new facilities. "The technology works well in Mexico, and it will have a place in our future," said the energy secretary.

Experts see a remote chance of an emergency similar to the one in Fukushima, where the facility sustained extensive damage as the result of a major earthquake and an ensuing tsunami.
Julio Herrera, a specialist in nuclear science at the Universidad Nacional Autónoma de México (UNAM), said the Laguna Verde plant—located along a federal coastal highway in the community of Alto Lucero de Gutiérrez Barrios—is in a relatively low-risk area, compared with the Daiichi plant in Fukushima. While Mexico has a history of serious earthquakes, most tend to affect the central and Pacific states. Still, Veracruz is not immune to earthquakes, as the state was shaken by a magnitude 5.7 temblor in February of this year.

The plant in Veracruz does face the risk of hurricanes, which would bring high winds and flooding. But Ricardo Córdoba, director of nuclear safety at the CFE, said contingency plans are in place to protect the facility and evacuate nearby residents in the event of a hurricane. He said he is not worried that a hurricane would cause structural damage to the facility. “Natural disasters affected the conditions of the reactors, not their basic design,” said Córdoba.

Hurricanes have not threatened Laguna Verde directly in the past few years, although Hurricane Karl hit land about 200 km from the plant in 2010.

The CNSNS readily admits that operators of the Laguna Verde facility had to suspend operations 37 times between 2000 and 2007 because of minor emergencies at the facility. The CNSNS implemented stricter inspection and training requirements after the World Association of Nuclear Operators (WANO) released an audit in 1999 that discovered a high number of safe shutdowns of the reactor that weakened the operating systems. The review also cited inadequate personnel training, poor management practices, and obsolete equipment.

But critics say the nuclear agency and the federal government are downplaying the seriousness of the incidents that have occurred since 2000. In particular, Bernardo Salas Mar, a physics expert at the UNAM, pointed out that an electrical fault created a situation where Reactor Number 2 was at risk of a meltdown.

Salas was fired from Laguna Verde for reporting irregularities at the plant. He said he found traces of the radioactive elements cesium-137 and cobalt-60 while conducting a radiological analysis of samples from coastal areas in the Gulf of Mexico between 2007 and 2009. The samples he used came from three locations adjacent to the facility.

The UNAM physicist said he worries that, even without an accident, the nearby population is being exposed to excessive radioactivity.

Leaders in other communities in Veracruz are also worried. “What sense of security can we have, when we see what’s happening in Japan?” mayor Leticia Rodríguez of the nearby community of Vega de Alatorre told Inter Press Service. “We have no idea what will happen tomorrow.”

Rodríguez raised concern that residents in her community as well as other parts of Mexico could face health hazards if radiation leaks contaminate local agriculture. Vega de Alatorre's principal activities are cultivating corn, beans, chiles, and watermelons, and raising livestock.

International observers see greater repercussions from a leak. A simulation study in 2008 by the Inter-Agency Committee for Response to Nuclear Accidents said a nuclear accident at Laguna Verde could affect 80% of Mexican territory.

"Authorities are hypocritical in their assessment that Laguna Verde is safe," said Nicolás Domínguez Vergara, a researcher at the Universidad Autónoma Metropolitana (UAM). Vergara
pointed out that Mexico has a 40% surplus of electricity, so the Laguna Verde output is not needed. He said the facility should be shut down, at least until its safety is fully confirmed.

But other scientists see the new opposition to Laguna Verde as an overreaction to the Fukushima accident. "The question is whether we are willing to abandon a certain type of technology because of a single incident," said UNAM’s Herrera. "In reality, we can solve [the problems with nuclear power] from a technical standpoint. But the situation is totally different from a political perspective."

**Politicians versus nongovernmental organizations (NGOs)**

There seems to be very little resistance to nuclear power among politicians in Mexico. And even those who want greater oversight of Laguna Verde, including the environmentally oriented Partido Verde Ecologista México (PVEM), only seek a greater commitment to safety and a moratorium on new facilities, not a complete dismantling of the current structure.

In the aftermath of the Fukushima accident, one of the strongest statements of support for nuclear power came from the chair of the Senate energy committee (Comisión de Energía), Sen. Francisco Labastida. The senator, a member of the Partido Revolucionario Institucional (PRI), pointed out that Laguna Verde has received international recognition.

Labastida said nuclear power can be safe if plants are not in unsafe locations. "What is dangerous is to build a nuclear facility in a seismic zone, especially one that is exposed to the risk of tsunamis," said the PRI senator. "If the [Fukushima] facilities had been placed on the other side of Japan, the side facing China instead of the Pacific Ocean, there would have been only minor problems from the earthquake."

Sen. Rubén Velázquez López of the Partido de la Revolución Democrática (PRD), a member of the special committee on climate change (Comisión Especial de Cambio Climático), toured Laguna Verde in the aftermath of the accident in Japan. He said the visit proved to the committee that the facility is safe. "We saw all the measures that have been implemented at the plant, and, in my personal opinion, all the security protocols are being followed," said Velázquez.

Sen. Carlos Navarrete, who leads the PRD delegation in the upper house, offered a more cautious opinion. "This plant has been safe until now, but it is time to conduct a thorough safety review in light of the [Fukushima] emergency," said Navarrete. "Japan is conducting a review, as is Germany, and Mexico must do the same."

Sen. Alberto Cárdenas Jiménez, a member of the governing Partido Acción Nacional (PAN), offered the strongest support for nuclear power, suggesting that Mexico needs more facilities like Laguna Verde. The reason, he said, is that Mexico should use all means necessary to reverse global climate change by reducing carbon emissions.

Cardenas' statements are in strong conflict with the position of the PVEM, which has urged the government to scrap its long-term plans to build 10 additional nuclear plants in Mexico. The PVEM has issued statements opposing nuclear power, which it says is not environmentally friendly because of the dangerous nuclear waste generated by nuclear facilities. In addition, the green party contends that nuclear power is expensive and dangerous. To back its position, PVEM Deputy Eduardo Ledesma Romo introduced a resolution in the Chamber of Deputies on behalf of his party demanding that Energy Secretary Meade present a detailed list of all the risks that
additional nuclear facilities would bring to the Mexican population. The resolution pointed out that Japan, one of the world’s most technologically advanced countries, was unable to take the measures necessary to prevent damage to the Fukushima Daiichi nuclear plant.

Still, despite its general opposition to expanding nuclear power, the PVEM did not demand that Laguna Verde be scrapped. That position falls short of the demands of environmental groups like Greenpeace México, which have made no secret of their opposition to the plant. Using the Fukushima accident, Greenpeace México organized a series of protests in Mexico City and Veracruz to demand that the plant be shut down. In a high-profile action, the environmental organization unfurled a huge banner on the side of the new federal Senate building with the message "¿Nuclear?, no gracias" (Nuclear? No thanks).

Greenpeace México had a specific message to the Senate, urging that senators remove nuclear power from consideration in Mexico’s long-term energy policy (Estrategia Nacional de Energía, ENE 2011-2025). The environmental organization also urged the special committee on climate change to eliminate dangerous technologies like nuclear energy from government measures to address climate change.

"There is talk about constructing two more reactors at Laguna Verde," said Gustavo Ampugnani, campaigns director at Greenpeace México. "In response, we are urging Mexican authorities to halt these plans."

"We want to underscore our concern that nuclear energy is not manageable, and as an example we cite the recent case in Japan," Ampugnani added.

A group of local organizations--including Grupo Antinuclear de Madres Veracruzanas and La Asamblea Veracruzana de Iniciativas y Defensa Ambiental (LAVIDA)--joined Greenpeace México at a protest in the Veracruz capital city of Xalapa. LAVIDA representative Guillermo Rodríguez Curiel said Mexico already produces more electricity than it needs through sources other than nuclear power, and therefore the plant is expendable. "We do not need the production that comes from nuclear power," said Rodríguez Curiel. "That’s why we demand the closure of Laguna Verde."