State-Oil run company PEMEX attempts to reduce carbon footprint

SourceMex writers

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The Mexican government is working hard to reduce the carbon footprint of the state-run oil company PEMEX, but the results thus far have been uneven at best. PEMEX has placed a high priority on actions that will help protect the environment, such as steps to greatly reduce emissions at some processing plants and introducing ethanol into the mix for gasoline in the three largest cities. But critics say these steps are very small when compared with the overall damage that the company has continued causing to the air, soil, and water in Mexico in recent years. Even some solutions, such as using more ethanol, have raised concerns that demand for raw materials will raise food prices in Mexico.

**Compliance with Kyoto agreement a priority**

President Felipe Calderon has made environmental protection and compliance with the Kyoto Agreement on global climate change a high priority of his administration (see [SourceMex](#), 2006-10-11). The president's challenge, in particular, is to cut down on the high level of harmful emissions from PEMEX operations around the country. A government report published in October 2008 indicated that the petroleum and petrochemical sector generated 35.3 million tons of dangerous substances in 2005, more than any other industry in Mexico. The data was collected as part of the Registro de Emisiones y Transferencias de Contaminantes (RETC), created under the auspices of the North American Free Trade Agreement (NAFTA).

The report said the PEMEX facilities that produced the most carbon dioxide in Mexico were refineries in Tula, Hidalgo state, and Salamanca, Guanajuato state; the Nuevo Pemex gas processing facility in Tabasco state; the Kua energy complex in Campeche state; the maritime terminal in Dos Bocas, Tabasco state; and the Laredo natural-gas facility, which is part of the Burgos project in Tamaulipas state.

The need to make PEMEX and other energy-generating facilities more environmentally friendly takes on greater urgency because of expected growth in demand for fuel and electricity. At an energy, water, and environment conference sponsored by the Universidad Nacional Autonoma de Mexico (UNAM) in late October, Sergio Palafox, an executive with the Comision Federal de Electricidad, predicted that electricity consumption in Mexico would increase by 110% in the next several years, potentially resulting in a 50% increase in net carbon-dioxide emissions. "The world tendencies point to greater utilization, especially for electricity and transport," said Palafox.

**Procurements policy announced**

The Calderon administration is taking great pains to emphasize its commitment to reducing the impact of PEMEX and related activities on global climate change. For example, in October 2008, PEMEX announced plans to deal only with suppliers that have made a concerted effort to reduce emissions of greenhouse gases. "Companies like PEMEX can now make purchase decisions based on the concept of the carbon footprint by ensuring that fewer emissions of greenhouse gases are used in the elaboration of purchased products," Carlos de Regules Ruiz-Funes, director of environmental policy at PEMEX, told participants at a conference organized by the Comision Nacional para el Ahorro de Energia (CONAE).

De Regules cautioned, however, that the changeover would be gradual. "We do not pretend to reach this goal in the short term because the law governing government purchases does not allow it," said the PEMEX official.

De Regules said PEMEX has targeted a 30% reduction of its harmful emissions by 2012. In late
2008, PEMEX subsidiary Pemex Explores y Produccion (PEP) signed a preliminary agreement with CO2 Global Solutions International to help the company develop a strategy to reduce greenhouse emissions at major seaports where crude oil is exported. An initial goal of the campaign is to reduce emissions of harmful gases by 93,000 tons annually at the port of Dos Bocas, primarily through the reconversion of turbogenerators.

The project is funded through carbon bonds issued by PEMEX, a tool that allows private companies to invest in clean technologies in developing countries.

**Guadalajara first to receive clean fuel**

PEMEX has also announced plans to move forward with its project to reduce emissions in Mexico City, Monterrey, and Guadalajara by adding small amounts of ethanol to gasoline sold in the three largest metropolitan areas of the country (see SourceMex, 2008-09-17). Using a small amount of ethanol would oxygenate the gasoline, thus reducing emissions. Supporters say a major advantage is that engines do not need to be modified to use the reformulated gasoline. PEMEX officials plan to begin the program in the Guadalajara metropolitan area. In late August, Energy Secretary Georgina Kessel said the Mexican government would put out bids sometime in September to acquire 176 million liters of ethanol annually for use in reformulating gasoline sold in Guadalajara and surrounding areas. PEMEX has already prepared infrastructure for ethanol storage and distribution in Mexico's second-largest metropolitan area. "We hope to announce the winning bidder sometime in December," said the energy secretary. Mexican sugar mills are expected to participate in the process, but they face some competition from ethanol importers.

PEMEX is planning to take similar steps in Mexico City and Monterrey, although the date is not certain. The Mexican capital would require 494 million tons of ethanol per year, while Monterrey would need 133 million tons annually. The oil company carried out a pilot program in Monterrey, where it mixed 152,000 tons of ethanol from sugar cane with locally distributed gasoline. And potential long-term suppliers are lining up for future opportunities. Plans are under way in communities like Tierra Blanca in Veracruz state to construct a plant to process sugar cane into ethanol and alcohol precisely to meet the increased demand for ethanol from PEMEX. "This project will create jobs and reactivate the regional economy," said Tierra Blanca Mayor Alfredo Osorio Medina.

But the move to increase ethanol to fuel motor vehicles has its share of detractors. In comments to reporters, representatives of Oxfam Mexico warned that the strong demand for materials to produce ethanol to supply PEMEX could have a major inflationary effect on basic foodstuffs in Mexico, including corn, sugar, soybeans, and sorghum. "Even though some of these products, such as sorghum, are used for forage, the consumer is still going to have to pay higher costs for items like chicken and eggs," said Oxfam Mexico Director Raul Benet. Furthermore, Benet pointed out that the use of ethanol has little impact on fossil-fuel usage, as has been proven in countries like Brazil.

**PEMEX continues other damaging environmental practices**

Despite PEMEX's commitment to reduce emissions, critics are questioning the company's inability to prevent other types of pollution. PEMEX continues to have problems with leaky pipelines and other obsolete infrastructure, which are contaminating soil and water in many parts of the country (2005-01-05, 2008-04-02 and 2009-04-22).

In addition, there is major concern about company practices, including burning excess gasoline. "It is unacceptable that PEMEX continues to cause environmental damage of a large
magnitude through such practices as burning gas," said oil-industry analyst David Shields, who is based in Mexico City. "This contradicts pronouncements by the Secretaria de Energia that it is using all tools at its disposal to reduce global warming."

There are also complaints that PEMEX is damaging green areas in Mexico through its drilling practices. In Puebla state, for example, residents of lowland areas like Venustiano Carranza, Francisco Z Mena, and Metaltuyoca are complaining that PEMEX has destroyed some area forests to drill wells to extract petroleum. The company is planning to develop 500 wells in the area as part of its Chicontepec project.

Residents also blamed the Secretaria del Medio Ambiente y Recursos Naturales (SEMARNAT) and the environmental-protection agency (Procuraduria de Proteccion al Medio Ambiente, PROFEPAl for failing to conduct an environmental-impact study for the Chicontepec project.

[Sources: La Cronica de Hoy, 10/25/08; Reuters, Spanish news service EFE, 10/26/08; El Economista, 10/27/08; El Universal, 10/26/08, 08/25/09; Excelsior, PeriodicoDigital.com.mx, 08/27/09; Reforma, 10/26/08, 10/27/08, 10/30/08, 04/07/09, 08/24/09, 08/25/09, 09/02/09; La Jornada de Oriente, Argus news service, CNN-Expansion, 09/07/09; Notimex, 10/05/08, 10/27/08, 01/27/09, 05/25/09, 08/25/09, 08/29/09, 09/12/09; La Jornada, 08/26/09, 09/19/09]