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Panama has signed accords that will make the country home to two new oil refineries. A consortium composed of US-based DuTemp, ControlSud of Luxemburg, and Ecosel of Colombia has signed a deal that creates the Panamanian company EDC. The company will invest US$6.5 billion in a plant that will produce an estimated 250,000 barrels per day (bpd) of gasoline. The ink was hardly dry on that deal when officials signed another with Occidental Petroleum and the country of Qatar to build a 350,000-bpd refinery at a cost of US$8 billion, as President Martin Torrijos looked on. The price tag on each of these plants is more than the US$5.25 billion to be spent on the Panama Canal expansion. The EDC plant is to be something of a gem, a state-of-the-art exercise that will incorporate plasma arc technology to make it, say the promoters, nearly pollution free. Said Alberto Grosso, president of ControlSud International, "The construction of this refinery will bring Panama to great3est importance in Central America and in the world as an energy hub." Sergio Barreto, architect of the plant, said, "It is an ecological refinery with a design that allows us to achieve 100% full conversion, without waste or emissions."

The plasma arc innovation operates on principles similar to those for an arc-welding machine, where an electrical arc is struck between two electrodes. The arc creates a high-temperature, highly ionized gas. Plasma, because it is composed of ions rather than molecules, is frequently referred to as the fourth state of matter, after solids, liquids, and gases. The arc is enclosed in a chamber into which waste material is fed. Oil and solvent molecules are broken down to their elemental atoms, which then recombine into relatively harmless gases like carbon dioxide (CO2). There is no burning or incineration and no formation of ash. Combustible gas is cleaned and oxidized to CO2 and water (H20).

Heating in the absence of free oxygen keeps the potential for air pollution low. Inorganic waste is retained as a leach-resistant slag. Although nontoxic, CO2 is a greenhouse gas. DuTemp will supply the plasma arc technology, along with US$3.5 billion. ControlSud will kick in a like amount, and Ecosel will be responsible for the business aspects of the operation, relying on its experience in this business. Construction is scheduled to begin within six months. Grosso said the plant would produce very high-quality, high-octane fuel for export and for use in derivative consumer products. A supply of 60,000 bpd will flow to local consumption. The project is to be located in the province of Colon, about 70 km northeast of Panama City. He said his company and the other partners chose Panama because of the country's policy decision "to become an energy hub or international-oil-company center that will accommodate many projects." The Occidental-Qatar plant will be in Puerto Armuelles, on the site of an abandoned banana plantation. Puerto Armuelles is a deep-water port, and the Trans-Istmico oil pipeline is close by. The agreement signed by Panamanian Minister of Commerce and Industry Alejandro Ferrer Trade, Qatari Vice Prime Minister Abdullah Bin Hamad al-Attiyah, and Occidental Petroleum president John Morgan will finance a US$20 million feasibility study. High hopes for pulling Panama out of poverty Banana-company pullouts have left the Puerto Armuelles area deep in poverty, and Torrijos has said the project would transform it. He said that the refinery, together with the canal expansion and a free-trade agreement with the US, are the three motors that could pull Panama out of the third world.

However, banana work does not translate into the skilled labor needed to build and run a refinery, and the country as a whole may not be able to come up with enough skilled personnel to build the refinery and the canal expansion. Skilled workers from other countries may be needed, said observers. Still, for Panamanian officials, too much is better than too little. Minister Ferrer has worked long on this project. He visited Qatar in April and on his return told reporters, "It was a really important meeting for this project, which represents not just one of Panama's most important infrastructure plans but also a key scheme in Panama's social and economic development." Ferrer went to Qatar with the refinery proposal knowing the country has the world's third-largest natural-gas reserves, large crude-oil reserves, and is expected to become one of the world's top energy producers by the end of the decade with crude-oil production of 4 million bpd.

Guatemala challenged, but still in the running As if Panama's energy cup were not already running over, the country is said to continue to have its sights set on a third refinery, this the Plan Puebla-Panama (PPP) project widely thought to have gone to Guatemala (see NotiCen, 2007-04-19). That project was thought in jeopardy after Mexico's President Felipe Calderon announced a cutback in the amount of crude oil his country would commit to the plant from 230,000 bpd to just 80,000 bpd (see NotiCen, 2007-05-10). Prior to Calderon's disappointing announcement, Reliance Industries Limited (RIL) was seen as a front-runner in pre-selection bidding for the 360,000-bpd plant. Since it was first proposed, the deal has been sweetened with the addition of a 750-megawatt thermoelectric power project that would run on coke produced by the refinery. The US$1 billion add-on would be added to the expected US$6.73 billion cost of the refinery project.

The plan calls for the refinery buying back some of the electricity output for its operation. RIL is an Indian company. It is a Fortune Global 500 company, the largest private-sector enterprise in India. Its refinery at Jamnagar is the third-largest refinery at a single location in the world. RIL had already held detailed discussions with the Guatemalan government about the project, and Chevron was rumored to be interested in joint partnering. The March talks were reported to be stalling over Reliance's insisting on guarantees for its investment from the government and the involved financial institutions. One of those guarantees was the 230,000 bpd of oil from Mexican state-run oil company PEMEX. When that failed, doubts about the future of the project spread. But on May 10, it was reported that RIL was prepared to go ahead and that Chevron and Dow would join them. The future, however, remains uncertain.

On May 18, Guatemala's Ambassador to Mexico Manuel Soto said that Calderon would doom the project if he reduced the PEMEX commitment. "That decision practically kills the project, when he tells us that the deal is changed and the amount of supply to Central America is reduced to 80,000 barrels a day, he takes away the principal stimulus to the investor, reduces its viability, interest, and profitability." Guatemala has since said the project could be scaled back to accommodate the reduced supply offer and then scaled back up. "Mexico could come out benefiting," said Soto. "The money it would invest in a refinery [of its own] could be invested in exploration, and we could make a kind of crude-oil maquila. At present, they export with nothing coming back, and they import enormous quantities of refined products at high prices. Transport, because of proximity, would also be cheaper." The logic impresses some analysts who point to Mexico's twin problems of insufficient refining capacity and dwindling reserves.

With the new plants in Panama and with a Venezuela-built and financed refinery scheduled for Nicaragua (see NotiCen, 2007-05-10), the Guatemala facility could supply more gasoline to Mexico than the original plan called for. Originally, the Guatemala refinery was to supply reduced-cost fuels to Central America, but now, with that burden lifted by the other plants, Mexico could repatriate more, perhaps most, of the refined product. The argument that the plant would create a "development corridor" from Mexico to Panama would likely have to be abandoned, but the new logic may be sufficient incentive for continued Guatemalan hopes. The new logic could also help explain the redundancy of the Puerto Arguelles and Guatemalan plants. The Puerto Arguelles venture fits the specifications of the one planned for Puerto Quetzal, Guatemala, because the two locations were vying to be chosen for the PPP-PEMEX operation. A 2005 feasibility study of possible locations throughout the isthmus found these two best. "From KBC's study, Guatemala and Panama present themselves as the countries with the better strategic location and would provide the best economic return on the US$6.7 billion investment," said a US Commercial Service report. Repositioning the Guatemala operation as a supplier to Mexico and leaving the electricity project intact might make room for all these refineries. It will take time for the plants, whichever and wherever, to be built and begin to produce. When they do produce, the region can look forward to reduced prices both from deals to supply crude on favorable terms, which is the case in the Venezuela-Nicaragua accord, and which might be the case if the arrangement in the PPP deal holds.

But even without favorable pricing or financing, Central America stands to benefit from increased refining capacity. Oil analysts in the US have said that lack of this capacity is what high gasoline prices is mostly about. They say that current gasoline prices would be the equivalent of crude-oil prices of US$87 a barrel without the refining bottleneck, which causes huge speculative swings and amplified price distortions even when supplies are adequate. The current crude price is in the mid-60s. Seeking short-term relief from prices that have reached a crippling US$4.14 a US gallon (3.8 liters), Nicaragua is considering amending its hydrocarbon law to allow the state to control prices, now subject only to the market and the discretion of suppliers.

A congressional committee has said that profit margins have gone far beyond international norms and that the time to consider regulation has come. President of the Comision de Infraestructura y Servicios Publicos Eliseo Nunez said, after meeting with representatives of the companies Esso, Texaco, and Shell, that profits have "gone beyond a normal margin." The consultation is a required step in reforming the law. According to Nunez, the price should be US$3.38, meaning that the companies are adding US$0.76 of pure, unjustified profit. He said consultations would continue with the state owned Petroleo de Nicaragua. (Petronic).