Brazil: $64 Billion in Infrastructure Concessions

Originally unveiled in Brazil on June 9, the Government of Brazil’s new $64 billion infrastructure concessions program aims to draw investment over the next three years and beyond to upgrade and operate nearly 4,350 miles of highways ($22 billion), six railways ($28.8 billion), four large airports and various regional airports ($3 billion), as well as numerous ports ($12.3 billion) across 20 states in Brazil. Part of that value reflects planned investment in already existing infrastructure, but the bulk of it is for new projects. Nearly half of the investment in railways would come from a transcontinental railroad through Brazil and Peru. Chinese Premier Li Keqiang promoted this project in his May 2015 visit, during which China agreed to fund feasibility studies for the project.

During her visit to the United States, President Rousseff, along with six of her cabinet members and dozens of officials spanning nine ministries, highlighted Brazil’s infrastructure concessions program for financial investors in New York City on June 29.

Minister of Planning, Budget, and Management Nelson Barbosa opened the New York event by outlining the Government of Brazil’s (GOB) fiscal adjustment measures, including changes to relative prices (fuel and transportation fees), fiscal subsidies (Brazilian National Development Bank interest rates), student loan programs, and tax breaks, as well as a monetary policy that aims to lower inflation to within a target rate (4.5 percent with a 2 percent tolerance band) by next year. Barbosa said these efforts would lay the foundation for a new growth phase in Brazil, and that this growth would be sustained by increasing investment and improving productivity.

Barbosa highlighted infrastructure projects executed over the past four years and emphasized the brownfield nature of the new projects. He said the $64 billion in anticipated investment will cover the next three years (continued on page 4)

Mexico: Pipeline and Electricity Tenders

On June 22, Mexico’s Federal Electricity Commission (CFE) announced the bidding process for 24 CFE energy infrastructure project tenders worth a combined investment of 150 billion pesos (US$9.79 billion). The project tenders include natural gas pipeline projects worth an estimated combined investment of over US$6.7 billion. These will expand Mexico’s natural gas interconnection with the United States, while also supplying natural gas to CFE’s power generation plants in the eastern, central and western regions of the country. Also included are nine electricity distribution and transmission projects, valued at US$851 million, and an additional US$91 million in tenders for substation enhancements. CFE also announced tenders for four power generation projects, including wind, combined-cycle natural gas, geothermal, and dual fuel thermal generation plants.

CFE’s announced tenders will add over 2,385 km to the national gas pipeline system, 1,442 MW of installed capacity to the national grid and 125 kilometers of circuit to the national transmission and distribution system.
Mexico (continued)

Through the tendered pipelines, and 11 others which are already under construction, CFE, along with Pemex and SENER, aim to meet the goals set out in the National Infrastructure Program to increase national gas pipeline capacity by 75 percent by 2018.

Natural Gas Pipelines

The natural gas pipeline project tenders will enable Mexico to import more natural gas from the United States via onshore and offshore pipelines. Mexico’s current natural gas production is 6.6 billion cubic feet per day (bcf/d), while imports from the United States in 2015 averaged approximately 1.2 bcf/d.

The largest pipeline project is the Sur de Texas-Tuxpan (Marino) gas pipeline that will transport natural gas from an underwater route in the Gulf of Mexico in southern Texas, to Tuxpan in the state of Veracruz, with an additional branch in Altamira in the state of Tamaulipas. It will supply natural gas to CFE’s power generation plants located in Tamaulipas and Veracruz, and augment the capacity flowing to the eastern, central and western regions of the country. The pipeline, with an investment tender of US$3.1 billion, will have a transport capacity of 2.6 bcf/d. The pipeline will have a length of 800 kilometers and a 42-inch diameter, with an estimated project implementation time of 30 months; commercial operations are expected to begin in June 2018. This project will be interconnected to two other pipelines: the Nueces-Brownsville gas pipeline (referenced below), which was also announced in this tender round, and the Tuxpan-Tula gas pipeline, which has already begun the bidding process. Together, these pipelines will supply natural gas to new power generation plants, as well as those currently operating with fuel oil, which will be converted to use natural gas as their base fuel. International NGO Transparencia Mexicana has been tasked by SENER to oversee the bidding processes.

The Nueces-Brownsville pipeline will transport natural gas through Southern Texas, and interconnect with the Sur de Texas-Tuxpan pipeline in southern Texas. This pipeline is entirely within the state of Texas, so it will be tendered in accordance with U.S. rules through an additional Request for Proposal (RFP). The approximate length of this project is 250 km and will match the Sur de Texas-Tuxpan with a 2.6 bcf/d capacity. In order to dovetail with additional interconnecting pipelines, the estimated project implementation time is also 30 months, with an expected project completion in June 2018.

Other natural gas projects that were tendered include the La Laguna-Aguascalientes pipeline (600 km long with a capacity of 1.5 bcf/d); the Villa de Reyes-Aguascalientes-Guadalajara (355 km long with a capacity of 1 bcf/d); and the Tula-Villa de Reyes pipeline (280 km long with a capacity of 550 million cubic feet per day). Additionally, CFE announced tenders for three pipeline branch routes, including the Junction branch, the Hermosillo branch, and the Topolobampo branch.

All told, the CFE pipeline tenders are worth an estimated combined investment of over US$6.7 billion.

Electricity Distribution

CFE announced US$851 million in tenders to address distribution and reduction losses, as well as an additional US$91 million in tenders for substation enhancements. Expanding and modernizing transmission and distribution grids will reduce technical and non-technical electricity losses, especially in conjunction with CFE’s smart grid implementation plans. These tenders will add 125 km of circuit to the national transmission and distribution system, with the goal of providing higher quality and lower cost electricity supply.

Power Generation Tenders

CFE also tendered four power generation plants with an expected investment of US$2.1 billion. The largest tender, a combined cycle power plant in San Luis Potosí scheduled for commercial operation in April 2019, has a capacity of 790 MW and aims to address growing electricity demand in central Mexico. CFE also tendered the second and third phases of a wind power station in Oaxaca, which is expected to begin operations in December 2017. The capacity of the plant will be divided into two modules totaling 585 MW at an estimated investment of just over US$1 billion. CFE also tendered a dual fuel oil and natural gas thermal plant in Baja California Sur with a capacity of 42 MW. CFE will launch a geothermal project in Michoacan by tendering the second phase of the Los Azufres III project. The tender, worth US$63 million, will ultimately have a capacity of 25 MW with commercial operation scheduled for June 2018.
Canada: Quebec Carbon Trade With California

The California Air Resources Board and Quebec’s Ministry of Environment held a third joint auction for greenhouse gas (GHG) emission credits in May 2015. Ninety-seven entities participated in the auction, representing over 80 percent of Quebec’s GHG emissions. The auction sold 76 million 1-metric ton carbon dioxide emissions units for the current year at a new high of US$12.29 per unit. This is 8 cents higher than the second auction and 19 cents above the minimum price set for the auction. All of the nearly 10 million emissions units available for the year 2018 sold at a unit price of US$12.10. The number of permits available in these auctions will shrink until 2020. At that point, Quebec aims to have achieved a 15 percent reduction in GHG emissions compared to its 1990 levels, and California aims to reach the same level of emissions that it had in 1990.

To date, Quebec has amassed a total of US$445 million with its seven auctions, with this most recent auction generating US$175 million. California has participated in three of the seven auctions. The government of Quebec is contributing these revenues to its green fund, which was established in 2006. As a key source of financing for Quebec’s sustainable development programs, the green fund has become an essential part of the province’s 2013-2020 Climate Change Action Plan (CCAP). By 2020, the government of Quebec expects the carbon market to have generated over US$3 billion dollars in revenue, which will be used to fund projects and technologies to lower the province’s GHG emissions and help it adapt to the effects of climate change. Within that framework, Quebec plans to reinvest in its economy and spur the development of green technologies.

The CCAP aims to invest roughly half of the green fund in new technologies for the public transportation sector. One of the most cited projects is the E-Lion electric school bus, which received US$2 million from the green fund to demonstrate and validate a prototype. Reportedly, an E-Lion school bus is capable of saving over 2100 gallons of diesel per year, and has a daily range of 62 miles. Quebec officials have expressed hopes of using the province’s well-developed aerospace sector, as a supply chain for the electric transportation industry. Quebec also views the use of Liquefied Natural Gas engines in heavy transport such as trailer-trucks and boats as another approach toward a greener transportation sector.

Mexico: Innovative Border Infrastructure

A cross-border pedestrian bridge linking a passenger processing facility in San Diego with Tijuana’s International Airport is on track to open by the end of the year. The privately funded US$120 million project is a public-private partnership to create a port of entry limited to toll-paying airline passengers. The project is funded by Otay Tijuana Venture LLC, which will use proceeds from a direct facility use fee to pay U.S. Customs and Border Protection for expenses related to processing passengers using the facility.

This will be one of the first land crossings where a private company will fully reimburse CBP for the inspection services it provides. This will be administered under CBP’s existing Customs User Fee Authority (19 USC 58b), which allows certain reimbursements for CBP staffing and inspection services by eligible private entities.

The project, named Cross Border Xpress, consists of an enclosed 390-foot-long bridge with divided north/south corridors that will allow ticketed passengers to walk between the United States and Mexico. The bridge will connect Tijuana’s airport to a 65,000 square foot structure in Otay Mesa, San Diego, which will include airline ticketing services, retail shops, restaurants, and parking facilities. Passengers using the Cross Border Xpress facility will be able to save time and money when traveling from Tijuana’s airport to the U.S. side of the border.

According to official data, approximately 50% of the airport’s users are...
Mexico Infrastructure (continued)

crossing the U.S. - Mexico land border prior to departure or after landing at Tijuana’s airport. The facility will be the first in North America to handle cross-border traffic directly from one country’s airport terminal to a land border inspection facility on the other side of the border. The only other successful cross-border airport facility in the world is Switzerland’s Geneva International Airport, which borders France.

Currently, Tijuana airport has the second most destinations of any airport in Mexico, with flights to more than 30 cities in Mexico as well as to Shanghai and Tokyo. Tijuana’s airport currently has only one flight to the United States - a flight to Oakland. Some airlines have expressed interest in the project in that it potentially offers more access to Southern California’s large tourism market and ties to Mexico. (Shuttles will connect the U.S. facility to San Diego’s main airport.)

The Cross Border Xpress project has faced local opposition in Mexico. Last year, the city of Tijuana attempted to obtain an injunction on the project’s activities on the Mexican side of the border, purportedly for lack of payment of municipal taxes. The case was eventually dismissed as the bridge and Tijuana’s airport is located on federally-designated land, and thus not subject to municipal taxes.

On the U.S. side of the border, potential downstream beneficiaries of the project include the Otay Mesa area of California, and Brown Field Municipal Airport, located 1.5 miles from the new Cross Border Xpress bridge. According to public source information, one proposed development, known as Metropolitan Airpark, is a public-private partnership between the City of San Diego and Brown Field International Business Park LLC. The proposed development consists of 331 acres at the airport to include aviation facilities with new jet and helicopter fixed based operations, over 1.3 million square feet of industrial and commercial space, a 6-8 MW solar field, and hotels and restaurants.

Brazil Infrastructure (continued from page 1)

and beyond, but pointed out that all projects will commence before the end of Rousseff’s term. The Vice Ministers of Aviation and Ports and the Transport Secretary for Fostering Transport Actions each provided more details of the new projects within their sectors, including specific information on builder and operator roles for projects and cooperation between existing and new concessionaires.

Barbosa identified three ways for U.S. companies to participate in the new round of projects: equity financing (to fund project feasibility studies, project construction, etc.); debt financing (with incentives to combine public and market credit); and actual construction of projects.

Brazilian National Development Bank (BNDES) President Coutinho outlined Brazil’s new approach to infrastructure financing through providing incentives for bond issues. According to Coutinho, if a minimum of the financing for an infrastructure project is raised in bonds, BNDES will provide a higher percentage of its financing indexed to the cheaper, subsidized long-term interest rate. BNDES will still be allowed to finance as much as 70 percent of any project, as it did in the past; however, investors will have less access to loans at the subsidized Long Term Interest Rate, currently set at 6 percent, below the rate of inflation and substantially below market interest rates. For example, for highways, BNDES can provide 70 percent of project financing, but half of that amount would be at the TJLP rate, and the other half would be at a higher interest rate.

On the other hand, if concessions projects issue tax-incentivized infrastructure debentures (i.e. bonds), in order to supplement BNDES financing with market financing they would be given greater access to BNDES financing at the subsidized TJLP rate. (See table below for this example.) For railways projects, BNDES can use the subsidized rate for the entire loan if the project obtains 20 percent of its financing from infrastructure debentures.
Brazil (continued)

Some participants at the seminar raised the issue of risk, noting potential bottlenecks (licensing requirements, regulatory and legal impediments). GOB officials assured participants all players (including the GOB) would assume part of the risk for every project. Minister of Finance Joaquim Levy said that the GOB is considering new risk-mitigation measures. He said an important risk-mitigation instrument had been introduced in May 2015 that would allow issuers of local corporate bonds to hedge against any future problems.

The GOB has also promised to eliminate caps on investor rates of return. The government will use market-friendly procedures to calculate the return rate on projects such as highways, where concessions will go to bidders that offer the lowest toll rate. “The projects will have a rate of return that’s appropriate for the risk, the amount of construction, and financing conditions,” Levy announced.

When discussing project construction opportunities, Barbosa touched on the effects of the heavily publicized corruption scandal at state-owned oil company Petrobras, stating that this would not put the country’s investment program at risk. Barbosa asserted that Brazil’s economy was resilient based on its size alone, and that there were new opportunities for Brazil to collaborate with foreign investors as a result of the Petrobras scandal.