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FEATURED Q&A

Will Chile Lead the Region's Transition to Electromobility?

Chile seeks to transition to a 100 percent electric public transport fleet and a private vehicle fleet made up of 40 percent electric vehicles by 2050, Guy Edwards says below. An electric car at a charging station is pictured above. // File Photo: Chilean Government.

Q Italy-based utility Enel provided financing for the Chilean government to buy an electric bus fleet from Chinese manufacturer BYD, with 100 buses going into operation in December. The two companies are also in talks with the governments of Brazil, Peru and Colombia and private firms across the region about possibly replicating Chile's electric vehicle plans in the coming years. Will Chile succeed at its plan to increase its number of electric vehicles, including cars, taxis and trucks tenfold by 2022? What obstacles could stand in the way of that goal? How important is it for Latin American countries to increase the share of electric transit? What government policies in Chile and elsewhere are needed for that to happen?

A Guy Edwards, research fellow at Brown University: "The advances of electric vehicles (EVs) across Latin America is one of the most exciting examples of climate action and good development and transport policy last year. Cities from Santiago to São Paulo are leading the charge and demonstrating how electric buses can democratize electric mobility in a region where EVs remain out of the reach of most people. Cities are embracing EVs as a way to reduce transport emissions and dangerous air pollution and also to decrease fuel imports and improve public transport. Even when run on electricity generated partly from fossil fuels, EVs emit significantly less emissions than regular vehicles because of greater efficiency. Chile has one of the region's largest EV markets. Its National Electric Mobility Strategy aims to transition to a 100 percent electric public transport fleet and a private

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OIL & GAS

PDVSA Signs Deal With U.S.-Based Energy Company

The deal with Erepla, in which a prominent Florida billionaire owns a stake, aims to help boost Venezuela's oil production.

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OIL & GAS

Ecuador's Moreno to Probe Projects Under Correa

Ecuadorean President Lenín Moreno asked prosecutors to investigate nearly $5 billion spent on oil-related infrastructure projects during the administration of his predecessor, Rafael Correa.

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OIL & GAS

ExxonMobil Starts Drilling Well Off Guyana's Coast

The U.S.-based oil major has started drilling the Haimara-1 exploration well, the first of two planned this month. Steve Greenlee, president of ExxonMobil Exploration Company, said the firm would continue to prioritize areas in proximity to previous discoveries offshore Guyana.

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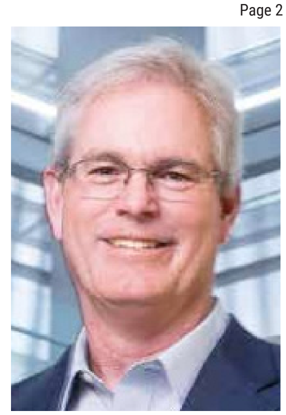

Greenlee // File Photo: ExxonMobil.

OIL AND GAS NEWS

ExxonMobil Begins Drilling New Well Off Guyana's Coast

ExxonMobil has begun drilling a new exploration well off Guyana's coastline, the company said Monday in a statement. The Haimara-1 exploration well, the first of two planned to be drilled in January, is located 19 miles east of the Pluma-1 discovery in the Stabroek block. "We continue to prioritize high-potential prospects in close proximity to previous discoveries in order to establish opportunities for material and efficient development," Steve Greenlee, president of ExxonMobil Exploration Company, said in the statement. The second well to be drilled this month, Tilapia-1, is located approximately three miles west of the Longtail-1 discovery in the Turbot area, which has been offering "significant development options that will maximize value for Guyana and our partners," Greenlee added. The U.S.-based oil company also said it is progressing with the drilling of development wells in the Liza field, with preparations for subsea equipment to be installed and for pipe-laying activities to begin this spring. There is potential for at least five floating, production, storage and offloading vessels, or FPSO vessels, on the Stabroek block to produce more than 750,000 barrels of oil per day by 2025, said ExxonMobil, which is headquartered in Irving, Tex. The company added that it is planning to resume conducting seismic surveys off Guyana's coast that were suspended last month after a Venezuelan navy ship intercepted two ExxonMobil vessels. Both Venezuela and Guyana say the incident happened in their territorial waters, The Wall Street Journal reported. [Editor's note: See related **Q&A** about Guyana's preparations to become a global oil producer in the Sept. 21 issue of the Energy Advisor.]

CORRECTION

The title of commentator Regina Ranieri was printed incorrectly in the Jan. 4 issue of the Energy Advisor. She is business development manager at UL Renewables in Argentina. Also, due to an editing error, her commentary incorrectly said "Latin America generates almost 200 gigawatts of renewable energy per year." In fact, it should have read that the region has almost 200 gigawatts of installed capacity.

López Obrador Calls for Calm Amid Fuel Shortages in Mexico

Mexican President Andrés Manuel López Obrador on Wednesday called on Mexicans to avoid panicking as gasoline shortages at service stations across the country continue, El Universal reported. López Obrador last week announced new measures to protect Mexico's oil pipeline network from fuel theft, deploying military troops to guard them and forcing the shutdown of some of state oil company Pemex's pipelines. This in turn caused fuel shortages in at least six states, including Mexico City and Guanajuato, prompting long lines at service stations as Mexicans rushed to purchase available gasoline. "We're going to resist the pressure ... How can you support us? By acting prudently and calmly, without panicking, without listening to alarmist and biased information," López Obrador said at his daily press conference, Agence France-Presse reported. "There is enough gasoline in the country ... We are in the process of returning to normal deliveries," he added.

PDVSA Signs Deal With U.S.-Based Energy Company

Venezuelan state oil company PDVSA has signed a deal with energy firm Erepla to help boost the South American country's crude oil production, the U.S.-based company said, Reuters reported Monday. Erepla said it will invest as much as $500 million to "revitalize oil production" at three Venezuelan oil fields,

NEWS BRIEFS

Head of Brazil's Environmental Protection Agency Resigns

The head of Ibama, Brazil's environmental protection agency, resigned Monday after new President Jair Bolsonaro criticized the agency over its budget, Reuters reported. Suely Araújo, who had led Ibama since 2016, stepped down after Bolsonaro tweeted suggestions that there were irregularities in the environmental agency's budget, which included $7.73 million to rent vehicles for use in tough terrains. Bolsonaro has frequently attacked the agency.

Ecuador's Moreno Seeks Investigation of Oil Projects Under Correa

Ecuadorean President Lenín Moreno on Jan. 3 asked prosecutors to probe nearly $5 billion the government spent on oil-related infrastructure projects under the tenure of his predecessor, Rafael Correa, Reuters reported. Moreno cited cost overruns and non-transparent bidding processes with five projects built during Correa's presidency, including a $2.2 billion upgrade to the Esmeraldas refinery. "This theft of public funds cannot go unpunished," Moreno said. Correa has denied allegations of corruption in his administration.

U.S. Accuses Peru of Violating Accord to Protect Amazon Rain Forest

The United States is seeking formal consultations with Peru, accusing the South American country of violating the 2007 United States-Peru Trade Promotion Agreement after the Peruvian government's recent decision to limit the authority of its forestry auditor, U.S. Trade Representative Robert Lighthizer said in statement Jan. 4, The New York Times reported. The forestry agency was established as part of the treaty with the aim of protecting the Amazon rain forest from deforestation.

the Tía Juana Lago and Rosa Mediano fields in the western Lake Maracaibo region and in the Ayacucho 5 bloc in the Orinoco Belt, in return for a share of the oil produced. As part of the arrangement, Erepla said it would have "enhanced managerial participation" in PDVSA oil projects and be responsible for procurement, a key difference from previous joint ventures between the state company and oil majors, in which PDVSA has full operational control, the wire service reported. The agreement would still need to obtain an exemption from the Trump administrations' sanctions against Venezuela, which prohibit U.S. companies from providing financing to the Venezuelan government and state firms. Erepla is partly owned by Florida-based billionaire Harry Sargeant III, who has ties to the Republican Party. Erepla was only registered in November, according to Delaware state records, Reuters reported. The oil-rich South American country closed 2018 with the lowest record of crude exports in 28 years amid declining production and political and economic crises, Bloomberg News reported last week. Venezuela exported 1.245 million barrels per day last year, the lowest level of exports since 1990. The OPEC member's crude output has dropped by more than half in the last five years to a daily average of 1.346 million barrels, according to OPEC data, Bloomberg News reported.

POWER SECTOR NEWS

ICE Proposes Raising Electricity Prices by 20% in Costa Rica

Costa Rica's government-run electricity and telecommunications services provider, Instituto Costarricense de Electricidad, or ICE, has asked the country's regulatory authority of public services, Aresep, for a 20 percent increase in electricity price rates, Teletica reported Jan. 4 The request comes roughly a month after Aresep approved an 8 percent raise in electricity prices that came into effect on Jan. 1. ICE said last month that revenue from the first

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vehicle fleet made up of 40 percent EVs by 2050, which is essential as transport sector emissions have increased rapidly in recent years. To help achieve this, Chile could build on successful policies by strengthening green vehicle taxes to further modernize its vehicle fleet and prioritize the electrification of corporate and public fleets. While each country has unique characteristics, several common barriers need addressing, including the steep upfront costs of EVs and a lack of strong vehicle fuel efficiency standards. To overcome them, governments could strengthen financial incentives and standards favoring clean technologies. While EVs will play a vital role in combating climate change, building more livable and cleaner cities must include improvements to public transport, stricter fuel efficiency standards and infrastructure improvements to improve walking, electric scooters and biking options. EVs are coming fast as the world's transportation systems teeters on the cusp of a transformation. Latin America is well-positioned to reap the benefits in 2019 and beyond."

A **Leni Berliner, president and CEO of Energy Farms International:** "There are steps to be taken to ensure that Chile meets its goals for electrifying its transport system. EVs exist in a range of sizes and applications. Local governments, large businesses and others who operate stand-alone transportation fleets are often the first to buy in large quantities, to take advantage of EVs' lower operating costs. The largest barrier has been the need to build out charging networks. It is not a surprise that Enel supports Chile's program and seeks to support electrification of transport in other countries. There can be challenges from grid operators, building owners and others to building charging networks, but evidence shows that distributed utility operations are the future. EVs are not just for urban areas. Agriculture, fishing, mining and forestry are great markets for EVs. The government could encourage, through guarantees, acquisition lending to producers in these industries, thereby creating demand. When loan guarantees—perhaps from the U.S. Export-Import Bank—for electric trucks and specialty vehicles are available, rural charging infrastructure will be built. The key component of EVs is the battery. Almost all EV batteries have lithium-ion chemistries, and while there are competing battery chemistries, Chile is in a position to become a lithium-ion battery production powerhouse. The government could offer to encourage private investment by sharing some of the costs of building battery manufacturing and recycling capacity through the tax system and grants."

> **"Chile is in a position to become a lithium-ion battery production powerhouse."**
>
> **—Leni Berliner**

A **Sergio Bitar, nonresident senior fellow at the Inter-American Dialogue and president of Consejo Chileno de Prospectiva y Estrategia:** "Chile can be a leader in electromobility in Latin America. To succeed, it will have to act on two fronts. The first is increasing its electric vehicle fleet, and the second is inserting itself into the production chain to manufacture pieces and parts of those vehicles. With regard to the former, in 2017, Chile's government announced a national strategy on electromobility. The aim is having 100 percent of public transportation buses and 40 percent of private cars as electric vehicles by 2050. The first step has been the arrival of the 100 Chinese electric buses. In coming years, the fleet of the Transantiago public transport program (approximately

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price hike would be used to replace spending on energy purchases from private generators, La Nación reported. If Aresep approves the proposal, electricity prices would increase by 20 percent starting in April. The new fees would affect more than 700,000 households in the country, with families paying 3,000 additional colones, roughly $5, for every 200 kilowatt hours, Teletica reported. [Editor's note: See related **Q&A** on Costa Rica's ICE in the Dec. 7 issue of the Energy Advisor.]

RENEWABLES NEWS

Share of Electricity From Solar Power in Chile to Increase

Solar photovoltaic power will replace natural gas as Chile's third most important source of electricity this year, according to an outlook report by Chilean nonprofit energy watchdog Coordinador Eléctrico Nacional, or CEN, Renewables Now reported Tuesday. Coal will continue to be the number-one source of electricity with a 40.4 percent share in the country's power mix in 2019, followed by hydropower at 30.2 percent of total electricity generated. Solar power will account for a 9.4 percent share, up from last year's 7 percent, due to 55 new plants that will begin operations this year. Natural gas will drop to 8.6 percent from 14.8 percent in 2018, the report said.

POLITICAL NEWS

Guatemala's High Court Blocks Expulsion of CICIG

Guatemala's Constitutional Court on Wednesday suspended President Jimmy Morales' decision to withdraw from and expel the United Nations-backed International Commission Against Impunity in Guatemala, or CICIG, EFE reported. Four of the justices voted to reverse Morales' decision, and one opposed the measure, which ordered Guatemalan authorities to "facilitate the proper functioning of CICIG." On Monday, Morales announced his government was ending the agreement it had struck with the United Nations to create CICIG and ordered the anti-corruption body's officials to leave Guatemala within 24 hours. It was Morales' latest move against CICIG, after announcing in August he would not be renewing the commission's mandate when it expires in September 2019 and later barring the agency's head, Iván Velásquez, from re-entering the country. CICIG had been investigating Morales' government for alleged violations of campaign finance laws. The president, who denies wrongdoing, has accused the commission of overstepping its bounds. Many politicians in Guatemala have also criticized CICIG, saying it violates the country's national sovereignty. However, anti-corruption activists have said the commission has produced positive results in fighting corruption. Foreign Minister Sandra Jovel announced the government's decision on Monday after meeting in New York with U.N. Secretary General António Guterres. In a statement, Guterres said he "strongly rejected" the decision, adding that he expected the Central American nation's government to meet its obligations until the expiration of CICIG's mandate in September and also protect the commission's staff. CICIG officials have reportedly started leaving Guatemala to ensure their security, two

SUBSCRIBER NOTICE

Jorge León Joins the Board of Advisors

Dr. Jorge León is an energy economist with BP Group Economics in London, leading the team's analysis of oil and natural gas supply and contributing to BP's highly regarded external products—the BP Energy Outlook and BP Statistical Review of World Energy.

He has more than a decade of experience in research and consulting in the sector, with significant expertise in monitoring, analyzing and forecasting world energy and oil developments.

Previously, he worked at the Organization of the Petroleum Exporting Countries (OPEC), where he was one of the main authors of OPEC's flagship publication, the World Oil Outlook. He also coordinated OPEC's internal medium-term oil market report and managed a number of research projects, particularly in the transportation sector and modeling enhancement. He led OPEC work streams with the International Monetary Fund, the G20, the European Union, the World Bank, the International Energy Forum and the International Energy Agency, as well as with the United States, India and China. Dr. León was also the chairman of OPEC's Academic Committee.

A native of Ecuador, Dr. León holds a Ph.D. in Economics from the University of Navarra and an M.Sc. degree in Economics and Finance from CEMFI. He has also taken professional training courses from the French Institute of Petroleum (IFP) and the British Energy Institute.

NEWS BRIEFS

Brazil Withdraws From U.N. Migration Pact

Brazil has officially withdrawn from the United Nations pact on global mass migration, an unnamed Brazilian diplomat told Reuters on Tuesday. Foreign Minister Ernesto Araújo said last month that the South American country would pull out of the initiative once President Jair Bolsonaro took office, but he has said that Brazil will continue to take in Venezuelan refugees. [Editor's note: See related **Q&A** in the Jan. 3 issue of the Latin America Advisor.]

Venezuelan Military Personnel Allegedly Tortured: Rights Group

Venezuelan security and intelligence forces have detained and tortured dozens of military personnel accused of plotting against the government in recent years, Human Rights Watch and Venezuelan nongovernmental group Foro Penal said in a report released Wednesday. In some cases, family members of military personnel have also been tortured in efforts to determine the whereabouts of suspects in alleged plots, the groups said. The report examined cases involving 32 people. Venezuela's Information Ministry did not respond to a request for comment by Reuters.

Chile's Copper Production May Increase 30 Percent Over Next Decade

Chile's copper production could increase by almost 30 percent over the next 10 years, according to a report released Monday by Chilean state copper agency Cochilco, Reuters reported. The report says output from the South American country, which is already the world's top producer of copper, could reach a record of 7.25 million metric tons as early as 2025. Several new projects and expansions that are planned in the coming years would drive the rise in output.

sources told Prensa Libre on Tuesday. Spokesman Matías Ponce said the anti-graft commission had put in motion a contingency plan to secure its staff and protect its documents, the newspaper reported. [Editor's note: See **Q&A** on CICIG in the Sept. 20 issue of the Advisor.]

Guyana's President, Opposition Leader Agree on Elections

Guyana's president and top opposition leader met on Wednesday for the first time since the country's parliament approved a no-confidence vote last month, with the two men agreeing to hold new elections, the Associated Press reported. President David Granger and opposition leader Bharrat Jagdeo met for more than an hour and agreed to the vote as soon as the elections commission can prepare for it, the wire service reported. Granger has almost two years left in his term and said after meeting with Jagdeo that he will work with election officials to set a date for the vote. "Public services have to be delivered and public order has to be maintained," said Granger. Jagdeo, who was the country's president from 1999 to 2011, said the elections must be held by April 30, Stabroek News reported. Jagdeo also warned Granger's coalition not to submit any new legislation before the vote, the AP reported.

Peru's Attorney General Tenders Resignation

Peruvian Attorney General Pedro Chávarry on Monday said he was tendering his resignation, following growing public outcry over his recent decisions in connection to the graft investigation involving Brazilian construction company Odebrecht, El Comercio reported. Chávarry said in a statement that he was stepping down out of "respect for my institution." His decision came a little more than week after he dismissed two of the corruption case's lead prosecutors, a move he reversed after President Martín Vizcarra threatened to suspend him amid widespread criticism, Reuters reported. Chávarry has denied accusations that he was trying to meddle in the case. The two well-known prosecutors, Rafael Vela and José Domingo Pérez, are seen as key figures of the Odebrecht investigation. Last month, they reached a deal with the Brazilian firm to provide evidence on roughly $30 million in bribes it paid Peruvian politicians, which could lead to more charges against prominent figures, including former presidents suspected of accepting illicit payments. Odebrecht has acknowledged it had paid millions of dollars in bribes to officials in a dozen Latin American countries in exchange for public work contracts.

ECONOMIC NEWS

Mexico Cutting Tax Rate on Initial Public Offerings

Mexico's government on Tuesday said it was cutting the tax rate for equity initial public offerings and expanding the range of instruments in which private pension funds can invest, the Financial Times reported. Finance Minister Carlos Urzúa, his deputy Arturo Herrera and central bank governor Alejandro Díaz de León announced the new measures, which cut the tax rate for new equity issues to 10 percent from 30 percent and offer the same tax breaks for foreign investors in corporate bonds. Private pension funds will also be able to diversify into a wider range of investments. The aim is to boost Mexico's annual economic growth rate, which has averaged just above 2 percent in the last three decades. The country's benchmark IPC stock index was trading 1.6 percent higher on Tuesday, nearly a two-month high, the newspaper reported. Mexican analysts applauded the announced measures. "Without doubt, our market will benefit. With more companies in the stock market, there are more benefits, because it generates greater marketability and attracts more companies," Sofía Robles, an analyst at Intercam Casa de Bolsa told El Economista. [Editor's note: See related **Q&A** in the Nov. 14 issue of the daily Advisor.]

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8,000 buses) will need to be renewed. The program includes infrastructure, charging networks, norms and laws. It has just begun and can advance rapidly. However, most important for the Chilean economy is to take a technological leap and enter the productive chain of electromobility. Chile has several exceptional advantages: it is the world's top copper producer and will soon be the number-one global lithium producer; it has the largest growth in solar energy plants; and it is creating a research center on solar mining. Global electricity demand means more copper and more batteries, a product in which lithium plays a key role. A car with an internal combustion motor consumes between 20 and 25 kilograms of copper, whereas an electric one consumes between 50 and 100 kilograms. Entering advanced technologies requires concentrating talent, higher-level research and an active state with public-private partnerships. It is a tremendous opportunity, but it's not just about using electric vehicles. The main challenge is to participate in their production and services."

A **Pedro Niembro, senior director at Monarch Global Strategies:** "There has been much excitement around the world over electric vehicles, with declining battery costs and government support making the electrification of transportation increasingly viable. In Latin America, where adequate mass transportation systems are lacking, the potential for widespread adoption of electric bus transportation in large cities is particularly high, and several companies are competing to gain the attention of national and local governments in the region. However, for the EV market to take off in Latin America, the industry must overcome the dual obstacles of grid reliability and adequate charging infrastructure. The push to modernize and adopt smart grids should take care of the former in the mid-term. Expanded charging infrastructure is a bigger challenge but can be overcome with government support. Mexico, driven by a desire to minimize the impact of pollution and climate change, is encouraging EV adoption by offering incentives to make private investment in the space more profitable. At the federal level, recently passed rules allow for EV charging stations in front of residences and businesses, and for these stations to charge for their services. Likewise, many cities and states are adopting policies of tax incentives and low-interest credit to encourage EV investment. And some, such as Mexico City Mayor Claudia Sheinbaum, are using the bully pulpit to push for cheaper options to make it easier for the public to purchase EVs. EV progress in Mexico, like Chile, should first manifest itself in the launch of electric bus fleets in large cities like Mexico City, Monterrey, Guadalajara and in the Bajío region, where the ability to charge at centralized stations improves the economics of the proposition. Longer-term, adoption would accelerate if the federal government consolidates state and local policies into a national plan, which we believe is possible in the AMLO administration."

"For the EV market to take off in Latin America, the industry must overcome the dual obstacles of grid reliability and adequate charging infrastructure."

— Pedro Niembro

The Advisor welcomes comments on its Q&A section. Readers can write editor Gene Kuleta at **gkuleta@thedialogue.org**.

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