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FEATURED Q&A

Are Latin America's Energy Firms Ready for Cyberthreats?

Cybersecurity experts are warning Latin American governments and energy companies of their increased vulnerability to cyberattacks. // File Image: U.S. Government.

Q **As Latin America and the Caribbean become increasingly connected to the Internet of Things and industries embrace technology, the region has become "particularly vulnerable" to cyberattacks, Cisco warns in its 2018 Annual Cybersecurity Report. In the United States, experiences with cyberattacks could foreshadow threats in Latin America. An analysis released in March by the FBI and Department of Homeland Security said hackers are conducting a broad assault on the U.S. electric grid and other critical infrastructure, with rolling cyberattacks occurring "thousands of times a day," U.S. Energy Secretary Rick Perry told lawmakers. Are the threats to Latin America's energy infrastructure from cyberattacks comparable to those facing the United States? How well prepared are electric grids and other critical energy infrastructure in Latin America and the Caribbean for such incidents? Which efforts in the energy sector stand out as most advanced in addressing the problem, and which gaps need to be addressed first? What role could cyberattack insurance have in helping mitigate losses from such attacks in the region?**

A **Greg Young, vice president of Cybersecurity at Trend Micro:** "The threats to Latin America's energy infrastructure from cyberattacks are the same as those facing the United States. Attacks on critical infrastructure have not been geographically limited. As energy infrastructure gets more advanced, the technology surface for attack increases. Like in the United States, electrical generators and distributors in Latin America and the Caribbean are overall only moderately prepared to deal with incidents. Most utilities have done

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TOP NEWS

OIL & GAS

Pemex Pushes for Deals Ahead of Elections

The Mexican state oil company is accelerating efforts to bring on new partners before Sunday's national elections.

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OIL & GAS

Brazil's Labor Court Rules Against Petrobras

The labor dispute, which concerns the state oil company's compensation policy since 2007, could amount to almost $4.5 billion in retroactive payments to some 51,000 employees. Petrobras plans to appeal the decision to Brazil's Supreme Court.

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OIL & GAS

India Extends Line of Credit for Suriname Solar

Indian President Ram Nath Kovind announced last week the line of credit will amount to $20 million for the construction of a solar plant in Suriname and an additional $27.5 million will go to power transmission projects.

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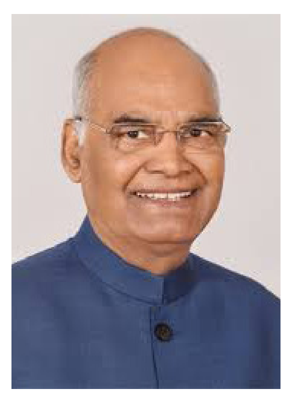

Kovind // File Photo: Government of India.

OIL AND GAS NEWS

Pemex Makes Push for Deals Ahead of Change in Gov't

Mexican state oil company Pemex has been accelerating efforts to bring on partners before Sunday's national elections, fearing the results could slow foreign investment in the country's recently liberalized oil sector, Bloomberg News reported Wednesday. Last week, the company's board named a new head of joint ventures to choose partners in at least seven onshore oil fields. Jorge Lomelín Delgadillo, a 15-year veteran with the company, faces a busy year, as Pemex seeks to secure as much investment as it can ahead of a new government taking office in December. Pemex expects to make an announcement late next month on three refinery joint-venture agreements, according to the report, and Mexico will auction 37 onshore areas and nine areas in the shale gas-rich

Andrés Manuel López Obrador is the front-runner in Mexico's July 1 presidential election. // López Obrador.

Burgos Basin on September 27. The presidential front-runner, Andrés Manuel López Obrador, or AMLO, has said he will dial back energy reforms that investors see as crucial to reversing years of declines in oil output. "The anxiety in the business community in Mexico and abroad is warranted," Amanda Mattingly, senior director at The Arkin Group in New York, told the Advisor earlier this month. "If elected, López Obrador will introduce a level of uncertainty into the Mexican economy, business climate, financial markets and NAFTA negotiations that will no doubt lead to slower economic growth, a cooling of foreign investment, higher inflation and a weaker peso," she added. Others see López Obrador as being less damaging. "AMLO is a pragmatist," James R. Jones, a former U.S. ambassador to Mexico and chairman of Monarch Global Strategies, told the Advisor. "He recognizes that in order for him to be able to help his constituency, the poor and disadvantaged, he must grow the economy. He knows that economic growth doesn't come from government." [Editor's note: See related **Q&A** in the June 13 issue of the Advisor.]

ExxonMobil Makes New Oil Discovery Offshore Guyana

ExxonMobil announced last week that it has made its eighth oil discovery offshore Guyana, finding almost 256 feet of oil-bearing sandstone reservoir at the Longtail-1 well in the Stabroek Block where it began drilling in late May, the Texas-based company said in a statement. It is located near Exxon's Turbot discovery and brings the combined estimated recoverable resources of the two wells to more than 500 million barrels of oil equivalent, said Steve Greenlee, president of ExxonMobil Exploration Company. The oil giant also said it will move to add its third drillship offshore the South American country with a second exploration basin parallel to its Stena Carron vessel. Exxon's discovery may drive Guyana's daily production up to 700,000 barrels of oil by 2027, according to research firm Wood Mackenzie, OilNow reported. Ruaraidh Montgomery, an analyst at Wood Mackenzie, said Exxon's finds will be "truly transformational for the country," and he expects more discoveries in the future. Montgomery added that he expects the company's main challenge to be finding alternative solutions for an increase in gas discoveries, which until now Exxon has "reinjected into reservoirs." They are considering a deal with the Guyana government to use the gas for the generation of low-cost electricity, according to the report. [Editor's note: See related **Q&A** on Guyana's emerging oil sector and economic development in the January 12 issue of the Energy Advisor.]

NEWS BRIEFS

Curaçao Refinery Looks to Replace PDVSA

Curaçao's Isla refinery, is looking for an operator to supplant Venezuelan oil company PDVSA's services in its processing plant, which refines some 335,000 barrels of oil per day, Reuters reported. Isla circulated a letter on Monday to oil companies and traders that offered both short-term and long-term partnerships, saying that the "financial and operational impediments to PDVSA's business activities" prompted the decision. PDVSA is struggling to export Venezuela's crude amid economic collapse at home.

India to Extend Line of Credit for Suriname Solar

The Indian government announced last week that it will extend a line of credit of $20 million to Suriname for the construction of a solar plant and an additional $27.5 million for power transmission projects centered in the Pikin Saron area, The Economic Times reported. The solar project aims to generate enough clean energy to supply 49 villages in the South American country of a half-million inhabitants, the newspaper reported.

Brazil's CADE Approves Energimp-Cemig Unbundling

Brazil's antitrust regulator, the Administrative Council for Economic Defense, or CADE, last week approved the unbundling of assets held by wind power company Energimp and power distributor Cemig, according to an order published in Brazil's official gazette last Friday, Istoé reported. Three wind farms currently co-owned by the two electricity firms—Morgado, Volta do Rio and Parajuru—in Ceará State will be divided among them, with Energimp retaining Morgado and Cemig keeping the other two, Istoé reported.

Brazilian Labor Court Sides With Workers in Petrobras Dispute

Brazil's Superior Labor Court last week ruled against Petrobras in the largest action in the state oil company's history, Folha de S.Paulo reported. The decision could cost the company some 17 billion reais, or $4.5 billion, in retroactive payments to around 51,000 current and former employees. The labor dispute is over the oil giant's compensation policy since 2007, known as the Minimum Level and Regime Remuneration (RMNR), which was negotiated with unions and aimed to equalize wages across the industry, the Brazilian newspaper reported. Workers claim that payments for special arrangements, such as hazardous or night work, should not be incorporated in the calculation base for RMNR compensation, while the company—alongside the federal attorney general's office—argues for their inclusion, Reuters reported. The head of the labor court, Brito Pereira, cast the tiebreaking vote, bringing the decision to 12 in favor of Petrobras and 13 for the employees. Pereira noted that the court did not take into account the economic implications their decision could bring for the state, saying that "the economic issues are discussed in another forum, not in labor justice." Petrobras plans to appeal the ruling to Brazil's Supreme Court. "Petrobras is absolutely confident that it will reverse the decision," said Taísa Maciel, the head of Petrobras' legal department. "There is no immediate economic or financial effect on the company nor on the remunereation policy," she added, Folha de S.Paulo reported.

The legal action is the largest in Petrobras' history and may amount to almost 17 billion reais, or $4.5 billion, in retroactive payments.

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some preparation but a very bad effect is in play: because utilities have in the past been isolated from the internet they have had a false sense of security, and because the most advanced threats are internet-based, utilities are generally not prepared for an advanced, targeted attack. The best overall efforts to address the problem are the industry vertical ones. For example, the work from organizations like NERC (North American Electrical Reliability Corporation) around critical infrastructure protection is a good model to follow. However, at the end of the day, each organization is ultimately responsible for protecting themselves and recognizing that the level of acceptable risk in critical infrastructure is very low, so exceptional measures must be taken. The greatest immediate gap is one of communication between IT and OT (operational technology) teams: OT cannot be run like IT; however, the threats and some skillsets on how to counter them will come from IT. Attackers will target the weak link, and neither IT nor OT can be less protected than the other, nor can places where the two environments connect be vulnerable. OT is increasingly utilizing wireless, so wireless security is critical. Cyber insurance has some foundational challenges, and it is likely a poor fit for critical infrastructure. For providers, the scope of potential outages could mean sky-high premiums. For customers of critical infrastructure, power outages etc. are already a considered risk covered by or excluded from coverage by non-cyber insurance."

A Sergio F. Oehninger, counsel in the insurance coverage group, and Katherine Miller, associate, both at Hunton Andrews Kurth LLP: "Global energy companies face unprecedented cybersecurity threats to business and critical infrastructure. Hackers recently targeted energy companies in the United States, Europe and the Middle East and have likely already set their sights on Latin America. Due to the energy sector's increased digitalization, cybersecurity threats can have severe consequences, including crippling business interruption, massive liability exposure and catastrophic loss of life and property. To mitigate such risks, energy companies in Latin America must strive to implement up-to-date cybersecurity requirements and ensure that any residual cyber risk is insured or otherwise managed. For instance, the Panama Canal Industrial Control Systems has worked with the Instituto de Acueductos y Alcantarillados Nacionales to develop an IT security policy to protect its energy units from cyberattacks. To complement such efforts, cyber insurance should be considered as part of any comprehensive risk management approach. Cyber insurance policies are designed to cover losses and liability arising out of a cyber breach, including business interruption, data loss, investigation and notification costs, defense and settlements of third party claims and regulatory actions, and other exposures. However, most cyber policies exclude coverage for property damage or bodily injury. And many general liability and property policies exclude cyber losses. Thus, if a breach causes an explosion or power outage resulting in property damage or bodily injury, there may be a gap in coverage. Energy companies must seek to avoid these exclusions or seek to add such coverages to their cyber policies. Further, companies doing business across borders must ensure that cyber exposures are adequately covered in each jurisdiction in which they conduct business."

"Due to the energy sector's increased digitalization, cybersecurity threats can have severe consequences..."
— Sergio F. Oehninger and Katherine Miller

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POLITICAL NEWS

U.S. Has Stopped Prosecuting Migrants at Border: Official

U.S. President Donald Trump's executive order to stop the separation of migrant families after a national outcry has brought changes to the zero-tolerance immigration policy enacted at the U.S.-Mexico border, the Associated Press reported. Customs and Border Protection Commissioner Kevin McAleenan said on Monday that authorities have stopped prosecuting parents and guardians for illegally entering the United States, unless they have criminal records or the children's safety is in question. He said he is working on a plan to resume prosecutions that do not entail family separations. "We can work on a plan where adults who bring kids across, who violate our laws, (…) could be prosecuted without an extended separation from their children," McAleenan said, according to the AP. His remarks followed a speech by Attorney General Jeff Sessions in Nevada, where he claimed 80 percent of children crossing the border do so alone or with a smuggler, and that the international MS-13 gang recruits them to "replenish the gang," the AP reported. The comments came as Guatemala's president, Jimmy Morales, formally petitioned the United States to grant temporary protected status to migrants seeking to enter the country after eruptions of Guatemala's Volcán de Fuego, or Volcano of Fire, left dozens of people dead and hundreds displaced earlier this month, Reuters reported.

Colombia's Coca Cultivation Rises to Record High

Coca cultivation in Colombia increased by 11 percent last year, reaching 516,450 acres, according to an official report by the U.S. Office of National Drug Control Policy (ONDCP) published on Monday. The figure marked the fourth consecutive annual increase and a new record high. Potential pure cocaine production rose by 19 percent. Colombian cocaine production has a direct correlation with U.S. consumption and overdose deaths, ONDCP Deputy Director Jim Carroll said in a statement. The production increase may bring additional pressure on the Colombian government from the Trump administration, according to The Wall Street Journal. The two governments in March agreed to

ADVISOR Q&A

Will Temer's Decree Boost Brazil's Mining Industry?

Q Brazilian President Michel Temer on June 12 signed a decree overhauling the country's half-century-old mining code, effectively bypassing Congress after it failed to approve similar changes last year. The new rules direct a share of royalties to municipalities that do not have mines but are affected by the transport or presence of industrial facilities related to mining. It also allows mining licenses to be used as guarantees for loans, generating credit lines and drawing investment to the sector, among other changes. To what extent will the changes benefit Brazil's economy and its mining sector? What stakeholders stand to gain or lose the most, and what is missing from the code that should be there? What kept Brazil's Congress from making changes to the mining code?

A Victor Brandão, government affairs consultant at Barral M Jorge: "The fall in the price of iron ore in the international market, a decrease in Brazilian consumption of mineral goods in general and the biggest environmental accident in history have caused the last two years to be the worst ever for Brazilian mining. In this sense, the Mining Code update was crucial for the industry to get a glimpse of a new future. The rule will end a long period of legal and regulatory uncertainties. However, in order for it to actually enter into force, it is necessary to assure the National Mining Agency of the material and human resources required to carry out its new institutional functions described in the code. In this way, the creation of the agency, the modernization of the code and the updating of the royalties collection were fundamental steps to establish a new paradigm for the investor. Currently, mining contributes 4 percent of Brazil's GDP, and the government expects it to reach 6 percent.

> **"The rule will end a long period of legal and regulatory uncertainties."**
> — Victor Brandão

One of the most positive changes is the need to comply with international standards for the calculation of resources and reserves. As a point of improvement, there is no prediction in the published text on the application and form of the auction, although the new decree makes the forecast of a prior public offer to evaluate the potential of the area for electronic auction. Finally, at the time the bill was being processed, there were dozens of proposals in Congress, and the mining code was considered among the least important."

EDITOR'S NOTE: More commentary on this topic appears in the Q&A of the June 22 issue of the Latin America Advisor.

NEWS BRIEFS

Grupo Copetrol Buys Paraguay Fuel Station Network for $384 Million

Brazilian state oil company Petrobras said on Wednesday that it has signed an agreement to sell its network of 197 fuel stations in Paraguay to Grupo Copetrol for about $384 million, Reuters reported. The Paraguay-based gas station operator will pay Petrobras an initial deposit of $49 million for the assets, followed by an additional $334 million when the deal is closed. Earlier this week, Petrobras named Rafael Salvador Grisolia to serve as chief financial officer, replacing now-CEO Ivan Monteiro.

E.U. Imposes Sanctions on 11 Top Venezuelan Officials

The European Union announced on Monday that it will impose economic sanctions on 11 senior Venezuelan senior officials in response to President Nicolás Maduro's re-election in May, which E.U. officials have called neither free nor fair, Reuters reported. The new measures, in the form of travel bans and asset freezes, add to the European bloc's arms embargo and sanctions on seven other Venezuelan officials. The European Union is seeking to pressure officials surrounding Maduro before directly targeting him.

Colombia Nearly Certain Bodies Are Those of Ecuadorean Journalists

The Colombian defense ministry last Friday said it is 99 percent sure it has identified the bodies of three Ecuadorean journalists kidnapped and killed near the Colombian-Ecuador border in March, the Associated Press reported. The defense ministry said it will still test the bodies for DNA. The journalistic team, which worked for Ecuador's El Comercio, was investigating drug violence in the area when they disappeared, the AP reported.

develop a strategy to sharply reduce cultivation and production of the coca plant over the next five years. On Friday, U.S. Vice President Mike Pence spoke on the phone with Colombian President-elect Iván Duque and highlighted "the necessity of moving decisively to cut drug production and trafficking," according to U.S. officials.

ECONOMIC NEWS

Argentine Drought Cuts Deep Into April Growth Rate

A 30 percent decline in agricultural output due to a severe drought caused Argentina's economy in April to shrink for the first time in more than a year, Reuters reported Tuesday. New data from INDEC, the state statistics agency, showed the economy contracted nearly 1 percent in April, as compared to the same month a year before. The economy shrank 2.7 percent in April from March. The drought, which shriveled corn and soy crops, both key exports, erased 3.78 percentage points from total GDP growth, Goldman Sachs analyst Alberto Ramos told clients in a research note. While the retail, manufacturing and real estate sectors each grew relatively strongly in April, the current account balance posted a large and wider-than-anticipated $9.6 billion deficit during the first quarter of 2018, according to INDEC figures. "We expect the economy to remain soft in coming quarters," Ramos said, noting an overall tightening of both domestic and external financial conditions. In related news, Argentina's central bank on Tuesday held its policy rate steady at 40 percent, marking the first rate decision since a shake-up in its leadership earlier this month when Luis Caputo took over as bank governor, replacing academic Federico Sturzenegger. Central bank officials said Tuesday the hawkish stance on interest rates will continue until they are certain their target of 17 percent inflation in 2019 is on track to be met. The administration of conservative President Mauricio Macri has put in place a series of pro-market economic measures, backed by a $50 billion International Monetary Fund stand-by agreement, which has proven to be unpopular domestically. A general strike led by Argentina's largest labor union confederation shut down trains, subways, flights and buses on Monday, Clarín reported. The General Confederation of Workers, or CGT, called only for workers to strike, but more radical groups blocked access to Buenos Aires in a series of demonstrations, Agence France-Presse reported.

Mexico's May Trade Balance Deteriorates

Mexico's trade deficit worsened in May, growing to $1.59 billion as higher oil prices pushed up the value of petroleum imports, The Wall Street Journal reported Wednesday, citing data from the national statistics institute, INEGI. Exports last month grew by 10.9 percent from a year before to $39.18 billion, while imports were up 11.5 percent at $40.76 billion. Higher oil prices increased the cost of energy imports, including gasoline and diesel, which rose 51.3 percent to $4.46 billion. A $40 million surplus in nonpetroleum goods only partly compensated for the $1.63 billion deficit in petroleum trade. Exports of steel products rose nearly 40 percent from a year earlier. May was the last month before the U.S. began applying tariffs on steel and aluminum imports from Mexico, Canada and the European Union. As the trade spat escalates and talks continue over the North American Free Trade Agreement, officials are wary of changes in the terms and conditions under which Mexican exporters have access to the U.S. market. Officials in Mexico have also been watching U.S. policy shifts that might affect the increasingly massive flows of remittances that have come into the country since the election of U.S. President Donald Trump, who has pledged to crack down on migrants in the United States without proper documentation.

Exports grew 10.9 percent while imports were up 11.5 percent in May.

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A Wally Swain, managing editor at Hydrocarbons Colombia in Bogotá: "So far (touch wood), Latin America has not been the target of global terrorism. The region has had problems with local guerrillas (as in Colombia) and problems with organized crime (many countries), but it has not been a target by global players wishing to make a statement. Latin America will always have fewer threats than the United States because of its profile and the kind of resources required to penetrate deeply into operational systems. A terrorist group with the resources to do that kind of cyberattack would invest them in a higher profile target. That said, the risk remains high, as Cisco points out. Riskier precisely because the region has not been a target and so pays less attention to these kinds of threats. Latin American companies are typically a few years behind their peers in IT, and security is no exception. For years now, companies in the region have said there were 'no problems' even when the evidence from security companies said the opposite. Admitting you have a problem is the first step. The issue may not be the CIO—although a pervasive 'no bad news' culture does not help—but rather the board, which may not understand where money needs to be spent. Financial institutions can see tangible losses; I am not so sure that utility companies feel the same pressure. Indeed, they may protect their ERP and HR systems more than their operational ones."

> **"Critical infrastructures are first-level targets for hackers due to the potential impact on entire nations."**
> **— Boaz Landsberger**

A Boaz Landsberger, deputy manager of the cyber security department at the Israel Electric Corporation: "Cyber threats are rising constantly. Cyber incidents around the world emphasize the danger to organizations. Critical infrastructures are first-level targets for hackers due to the potential impact on entire nations. Damages from such attacks might have vast effects on processes in critical infrastructures—the supply chain of the business, the ability of customers to pay their bill and up to the financial stability of the organization. Electricity providers need to display operational data to managers and to supply continuous data to customers and to business partners. Therefore, organizations must connect their critical networks to the IT network and to have a continuous connection to the Internet. This connectivity raises the level of risk to cyber events for organizations around the world and in Latin America. In order to hedge against these risks, Israel Electric has developed and implemented unique methodologies, including the following aspects: 1) Working in a risk-management methodology that includes the definition of critical business and operational processes of the organization and mapping the cyber gaps; 2) Building a hierarchical security operation center that will enable management to manage cyber from one single point; 3) Securing connection between IT networks and critical infrastructures; and 4) Securing remote access to critical infrastructures. During meetings that we have conducted with more than 150 critical organizations from around the world, we are under the impression that the implementation of such solutions is partial. Therefore, we believe that the risk level for critical infrastructures around the world and in Latin America is relatively high."

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

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