FEATURED Q&A

Will El Niño Cripple South America’s Energy Grid in 2016?

The El Niño weather pattern, which causes variations in ocean temperatures in the Equatorial Pacific Ocean, has the potential to cause severe storms and flooding in the southernmost countries of South America, as well as droughts in the northern part, according to the National Oceanic and Atmospheric Administration. The current El Niño is said to be the strongest since the 1997-98 El Niño, and has already caused extreme drought in nine of Colombia’s 32 provinces, leading to a decline in hydropower generation. Will El Niño end up causing a power crisis for Colombia and other northern South American nations? How can the affected countries mitigate the effects of a decline in hydropower during the coming summer months? What energy sources can the affected countries turn to during the water shortage? Are power companies in the region better prepared to deal with El Niño patterns and climate extremes than in the past?

Bernerd Da Santos, senior vice president and chief operating officer of The AES Corporation: “Extreme changes in weather parameters can have an impact on the operations of the power sector, not only for the generation of electricity that uses renewables natural resources, but also for the distribution businesses that have to supply electricity to its clients. In the past two years, some countries in the region along the Eastern Pacific Rim from California to Chile have faced the worst drought in decades, which is evidence that having an energy matrix with a predominant fuel source is not good for a healthy sector. A diversified energy matrix is always the best option. Given the drought experiment in the recent years, some countries might

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Venezuela’s Assembly Approves New High Court Justices

Venezuela’s lame-duck National Assembly on Wednesday gave final approval to the naming of 13 new Supreme Court justices in what opponents of President Nicolás Maduro’s government say is a move to stack the high court with supporters less than two weeks before the assembly comes under opposition control, the Associated Press reported. Lawmakers approved the new justices on a simple majority vote after three previous efforts to muster a two-thirds majority failed, the wire service reported. Members of the opposition called the justices’ appointment without a two-thirds majority vote a “legislative coup,” while National Assembly President Diosdado Cabello said the move was constitutional. The justices were appointed to 12-year terms and replace magistrates who had requested early retirement in October, a year before their terms were scheduled to end, The Wall Street Journal reported. Sixteen justices were appointed last year, and with the 13 who were appointed Wednesday, experts say supporters of Maduro’s administration now dominate the 32-seat court. “This government is using maneuvers on the margin of the law to get these magistrates named, and they’ve done it without even following the constitution,” Antonio Canova, a law professor at Andres Bello Catholic University, told The Wall Street Journal. However, the National Assembly’s president told the incoming justices that their appointments were constitutional. “You were all elected not just legally but legitimately, totally and absolutely,” he told them as they were being sworn in. The opposition, which totally and absolutely,” he told them as they

Chilean Lawmakers Approve Free College Education Measure

Chile’s Congress on Wednesday approved a law to provide free university education to many students in the country, the Associated Press reported. The legislation is a cornerstone of President Michelle Bachelet’s agenda for reforms. In recent years, students have taken to the streets in protest to demand free university education, and some students have said they want more than what Bachelet has proposed. The legislation that won approval Wednesday is expected to add 200,000 students to public universities. [Editor’s note: See Q&A about Bachelet’s proposed reforms in the Nov. 10 issue of the Advisor.]

Mitsui, Chile’s ENAP Sign Deal for Two New Power Projects

ENAP, Chile’s state oil company, said Wednesday it had signed an agreement with Japan’s Mitsui & Co. for two new power generation projects, EFE reported. The combined-cycle gas turbine power plants, Luz Minera, in the northern port city of Mejillones, and Nueva ERA, in the central city of Concón, will supply electricity to tariff-regulated customers between 2016

Brazilian Health Ministry Declares Emergency Due to Microcephaly Virus

Brazil’s Ministry of Health has declared an emergency to address the fast-spreading microcephaly virus, according to U.S. News, and women in the northeast section of the country have been urged not to become pregnant. The congenital condition is associated with incomplete brain development. There have been more than 2,400 cases this year nationwide compared with 147 cases in 2014.
be better prepared to face the effects of El Niño. Nevertheless, the energy sector is capital intensive, and electricity requires time for project development. The current interconnection of energy markets can play an important role to help mitigate the effects of El Niño in some countries. Interconnected power systems allow for more power exchanges among countries with varying climate and seasonal needs."

Amanda Maxwell, Latin America project director at the Natural Resources Defense Council: “The unusually strong El Niño is demonstrating the effects that extreme weather—exacerbated by climate change—can have on communities, economies, agriculture and the environment. Droughts caused by El Niño may have serious consequences for the region’s energy sectors, since hydropower is a major component of the electric grids in most countries there. The historical response to declining hydropower has been to burn more fossil fuels. Yet, in our ‘post-Paris’ world, where countries have pledged to reduce carbon emissions, these types of responses are no longer good options. Countries can take advantage of their abundant natural resources for solar, wind and geothermal energy to power their grids and meet consumer demand. The cost of these technologies has dropped drastically in recent years, and companies are eager to invest in the region—four of the 10 most attractive countries for renewable energy investment are in Latin America: Brazil, Chile, Mexico and Uruguay. In addition, increasing energy efficiency measures is the fastest and least expensive way to quickly meet energy needs without actually having to produce additional megawatts. And in the future, newer solutions like energy storage technologies and ocean power can also help replace conventional generation plants. The fact is that countries in the region need to start taking steps to adapt to climate change—including changing hydrology. These clean solutions can simultaneously strengthen countries’ grids in the face of extreme weather events and allow what water flows through the area’s rivers to be left for other needs like agriculture, drinking and hygiene.”

Walter Vergara, senior fellow at the World Resources Institute: “The current El Niño has the potential to cause severe power and water shortages, forest fires and impacts on agriculture production in Colombia and Venezuela. It may end up affecting Ecuador as well. El Niño comes at a time of already increased vulnerability as consistently high temperatures (not linked to El Niño Southern Oscillation, or ENSO, but to overall warming) have placed long-term stress on water supplies, agriculture production and ecosystem integrity. This additional environmental stress increases the demand for power, water and agricultural production. For example, power demand is now growing in Colombia at a rate of about 3-4 percent per year. Winds in northern Colombia have been shown to be more intense and prevalent during dry periods. An analysis documented in fact that during El Niño periods, higher-than-normal wind regimes are experienced across the northern plains of Colombia. Therefore, wind energy offers a logical insurance to the effects of dry periods in the hydropower systems in the region. Coupled hydro-wind systems are thus likely to have a relatively high firm capacity. In addition, northern Colombia and Venezuela also share the Guajira region, a vast area of high solar irradiance; it’s a good candidate for large-scale deployment of concentrated solar power. The vast solar reservoir of the Guajira region should also be tapped. Regrettably, diversification into wind and solar have not made the progress required for these countries, even with record-low capital costs. Regulatory reform to allow coupled systems and credit firm capacities for intermittent sources are among the priorities in and 2018. The total combined investment outlay for the two projects is expected to be nearly $1.3 billion. Mitsui beat out 15 other consortia that bid on the contract. Before the partnership can take effect, however, a law must be passed that clears the way for ENAP to enter the power generation market. ENAP owns all of the refining capacity of the country, meeting approximately 61 percent of the internal demand, and representing around 40 percent of the country’s energy matrix, Fitch Ratings said in a report this week.

ICA Sells Stake in Proactiva for $70 Mn

Mexico’s ICA has sold its stake in environmental waste firm Proactiva Medio Ambiente México for around $70 million, Reuters reported Wednesday, citing two people close to the negotiations. The construction company has been scrambling for cash after defaulting on its debt recently. ICA sold its 49 percent stake in the company to a trust run by prominent Mexican magnate Fernando Chico Pardo, the wire service reported. Last week, ICA missed a $31 million interest payment, saying it would draw up a plan to restructure. ICA, which describes itself as Mexico’s largest infrastructure company, has lost nearly a third of its market value since the end of last week, EFE reported Tuesday. ICA said it decided to restructure its debt “in order to preserve liquidity, prioritize ongoing operations and fund projects currently under development.” The company also announced Monday that Standard & Poor’s had downgraded its long-term corporate credit rating, as well as some senior unsecured notes. Six of Mexico’s seven largest banks have a total of about $726 million of exposure to ICA, including direct loans and indirect exposures, Fitch Ratings said in a statement Wednesday, describing the damage as “significant, but manageable” for the banks. The company has signaled that it does not plan to declare bankruptcy. Mexico’s government is willing to speed some payments it owes to ICA, although a bailout is not on the table, according to Fitch.

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Colombia to allow these energy endowments to play a role in mitigating the net impacts of strong ENSOs.”

Natalie Unterstell, Louis Bacon Environmental Leadership Fellow at Harvard’s Center for Public Leadership: “The only absolute consensus on El Niño’s effects is that it is very hard to predict what will happen as a consequence of the phenomenon. In general terms, strong El Niño years like the one observed in 1998 means increased rain in the Pacific and drier weather on the Caribbean side of Colombia and adjacent neighboring countries. In the past, Colombia has had to implement energy rationing to get through prolonged drought periods. The Colombian energy and mining minister, Tomás González, has been affirming since September that with reservoir levels above 70 percent, Colombia would face no problem getting through El Niño this year. The greatest foreseeable risk is the extension of the strong El Niño and the drought that it causes. In Brazil, for instance, after two years of below-average rain patterns in the Brazilian southeast, and the official denial of a potential energy crisis, the government had to turn on its backup oil-powered thermic power plants, and taxpayers paid the additional costs. Oil-powered thermal power is usually the easiest energy source to be deployed and tends to be the business-as-usual move in times of water shortage. It is even more tempting to turn to oil when it is cheap, especially for oil-exporting countries like Colombia. But this is an absolute paradox, as fossil fuels are one of the main causes of climate change. Therefore, burning oil actually contributes to even stronger El Niños in the future. If, on the other hand, countries drive investment to other renewables like wind and solar, it would be possible to improve the options on the national energy matrix and lower carbon emissions.”

Dino Barajas, partner at Akin Gump Strauss Hauer & Feld: “Given the build-out, in the late 1990s and early 2000s, of numerous natural gas-fueled power plants throughout South America, including in Colombia and Brazil, central energy planners within these jurisdictions will be in a better position to react to drastic weather changes than they were during the 1997-98 El Niño. There may even be an opportunity to attract new power developers to the region in an effort to further diversify the power generation portfolios of countries experiencing radical swings in their hydrology patterns as they adapt to the ‘new normal’ of climate change. A further diversification of power generation assets would not only assist these countries in addressing their own energy needs in the near term. Diversification would also position them to become energy exporters to neighboring countries during periods of over supply of electricity, once the rains return. If the region wants to attract private sector developers, South American countries will need to inspire investor confidence despite its history of central planners in Colombia and Brazil having promoted new generation projects during the region’s last severe drought, only to have projects canceled or power purchase agreements renegotiated once the rains returned and hydropower again became more plentiful and cost-effective. Lessons learned from past mistakes should help guide a more thoughtful power plant build-out program which considers long-term market dynamics rather than just solving today’s issue with an expedient political solution, only to have policies reversed once political winds change.”

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