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## FEATURED Q&A

# Can Natural Gas Bridge the Region's Power Needs?



Natural gas has become an increasingly popular fuel in the Americas as more countries in the region look to energy independence. // Image: Pexels.com

**Q** As Latin America works to meet its Paris climate agreement commitments, it must also contend with a rising demand for electricity, which is expected to nearly double by 2040. In order to fill the gaps left by the at times inconsistent nature of wind power and solar power, the region has looked to natural gas as one solution. However, although it is abundant and does not emit as much carbon as oil or coal, it is not a zero-carbon energy source. Should natural gas be used as a "bridge fuel" as the region works to reach a zero-carbon power sector, or should efforts be focused solely on developing and improving upon renewable energy sources, energy storage and energy efficiency? What are the main barriers to more widespread use of renewable energy in the region? What is the future of natural gas in Latin America and the Caribbean's sources of electricity?

**A** Walter Vergara, senior fellow at the World Resources Institute: "Latin America is fortunate to have a very significant endowment of renewable energy resources, sized at around 100 petawatt-hours (PWh) and consisting of significant potential for solar, wind, marine, geothermal and hydro. In fact, the region is host to world-class solar, wind and marine energy fields. In addition, the technologies linked to these resources as well as to energy storage continue to evolve at a quick pace, with major gains in efficiency and cost effectiveness. In parallel, already developed hydropower resources provide about 90 GW of storage capacity in multi-annual reservoirs that, if linked, could serve as a sizable regional energy storage facility. In a re-

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## TODAY'S NEWS

### POLITICAL

## Two Killed as Gov't Opponents Attack Venezuelan Military Base

A group of former army officers and civilians attacked the Paramacay military base in the Venezuelan city of Valencia. The army said it regained control of the base and arrested seven, though some of the attackers escaped with weapons.

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### ECONOMIC

## Panamanian Delegation to Visit China

The visit will mark the first such mission between the two countries since they established diplomatic ties in June.

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### POLITICAL

## Peru's Humala, Wife Must Remain Held: Court

A court ordered that former Peruvian President Ollanta Humala and his wife remain jailed, pending trial on charges of receiving illegal campaign contributions.

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Humala // File Photo: Peruvian Government.

## POLITICAL NEWS

## Two Killed in ‘Paramilitary’ Attack on Venezuela Base

Two people were killed Sunday in what Venezuela’s government called a “paramilitary” attack on a military base in the city of Valencia, The Wall Street Journal reported. Venezuela’s army said it quickly regained control of the Paramacay base after the attack. However, several members of the group of former army officers and civilians that attacked the base escaped and had stolen weapons, the army added. A manhunt was underway, said officials, who added that seven people had been arrested. “The scoundrels have been defeated,” army chief Gen. Jesús Suárez said in a video. At least one of the people in the group that attacked the base and an opposition activist who was demonstrating at the scene were killed. The attack on the base happened just hours after a group of armed men wearing military gear released a video claiming they were inside the

base. In the video, they called for a rebellion against the government of President Nicolás Maduro. “We don’t recognize the tyranny of assassin Nicolás Maduro,” Juan Caguaripano, a National Guard captain who deserted in 2014, said in the video, The Wall Street Journal reported. The attack was a move to defend democracy, he said. The attack came two days after Maduro’s government swore in the new powerful constituent assembly, which will be tasked with rewriting the country’s Constitution and also has the ability to overrule other state institutions including the courts and the elected opposition-controlled National Assembly. The new constituent assembly, selected from a list of candidates handpicked by Maduro’s government, removed Attorney General Luisa Ortega from office. Ortega had emerged as a vocal critic of Maduro’s government and sought to halt the powerful new assembly’s election and installation. Also on Saturday, opposition leader Leopoldo López, whom government agents had seized in an overnight raid, was released from prison and returned to house arrest. In addition, the Mercosur trade bloc on Saturday suspended Venezuela for “a rupture of the democratic order.”

## NEWS BRIEFS

## Peruvian Appeals Court Orders Humala, Wife to Remain Jailed

A Peruvian appeals court ruled Friday that former President Ollanta Humala and his wife, Nadine Heredia, remain jailed for as long as 18 months while authorities investigate allegations that they received illegal campaign contributions from Brazilian conglomerate Odebrecht as well as from late Venezuelan President Hugo Chávez. Humala and Heredia deny wrongdoing.

## Panama Sending Delegation to China

The Panamanian government will send a delegation of security and trade officials to China for talks set to begin on Tuesday, marking the first such diplomatic mission between the two countries since they established relations in June, Reuters reported Sunday. Panama’s envoys will meet with China’s public security minister as well as other top officials, the Panamanian government said in a statement Sunday. The talks are aimed at boosting bilateral trade and “promoting Panama as a regional headquarters for Chinese banks [and] companies,” the Panamanian government said.

## Cuba Orders Closure of Accounting Cooperative

Cuban authorities have ordered that one of the country’s fastest-growing cooperatives, Scenius, which offers accounting and business consulting services, be closed down, days after the government announced it would cease issuing new permits for some private businesses, the Associated Press reported Saturday. Company founder and director Luis Dueñas said the Ministry of Finances and Prices told him the decision to close down the cooperative was “based on an analysis of our social purpose, or of the activities that we have approved.”

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cent analysis, the levelized cost of electricity of solar PV and on-shore wind sources in the region were compared with combined cycle natural gas systems and found to be the best options for power generation. Given the sizable resources and the momentum on technology and economics, solar and wind are clearly the immediate options of choice; there is no need for a transition source. On the other hand, natural gas, while indeed plentiful, will not generate as many jobs as renewables will. Also, just a small fraction of fugitive emissions (estimated at around 3 percent by volume) throughout the extraction and distribution system would render natural gas more carbon-intensive than coal. To move forward with renewables, a number of barriers need to be addressed, including the lack of regulations for distributive power, a poorly linked regional transmission grid, the level of subsidies still being allotted to fossil

fuel resources in the region and the lack of a carbon market.”

**A** **Samantha Gross, fellow at the Energy Security and Climate Initiative at Brookings Institution:**

“The first question that comes to mind when I’m asked whether natural gas is appropriate for power generation is ‘compared to what?’ Natural gas can be much better than coal in terms of greenhouse gas emissions and local air pollution. But methane, the primary component of natural gas, is a much more potent greenhouse gas than carbon dioxide if it is released into the atmosphere. The production, distribution and use of natural gas must prevent methane releases if gas is to realize its promise as a lower-carbon fuel. Areas of new development, like Argentina’s Vaca Muerta field, provide an opportunity for Latin America

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## Brazilian Soldiers Move Into Rio Favelas to Curb Violence

More than 3,500 Brazilian soldiers are occupying favelas, or slums, in northern Rio de Janeiro as the government aims to curb a spike in violence in the communities, The Wall Street Journal reported Saturday. The troops are occupying the Complexo do Lins and neighboring Camarista Méier favelas. The occupation follows last week's deployment of 8,500 soldiers who were tasked with fighting organized crime gangs in the communities. On Saturday morning at 4 a.m. local time, police raided five favelas in a crack-down on gang violence, Al Jazeera reported. Officials said the goal of the crackdown was mainly to stop the surge in robberies of commercial trucks. Defense Minister Raul Jungmann said the occupying troops would stay in the favelas for as long as necessary to clamp down on violence, The Wall Street Journal reported. Rising violence in recent weeks has led authorities to acknowledge that many parts of Rio de Janeiro are out of their control. In the first half of this year, there were more than 3,450 homicides in the city, Al Jazeera reported. Brazilian television last week showed armed soldiers on tanks patrolling the communities, The Wall Street Journal reported. In late June, authorities arrested nearly 100 police officers in Rio de Janeiro under suspicion that they allowed gangs to traffic drugs into the favelas in exchange for bribes.

### BUSINESS NEWS

## Eldorado Brasil Takeover Talks Collapse Over Price

Talks for Chilean pulpmaker Arauco, a unit of energy and forestry company Empresas Copec, to purchase its Brazilian rival Eldorado Brasil Celulose from its parent company J&F Investimentos have fallen through after the two

## THE DIALOGUE CONTINUES

### Is Venezuela Becoming a Dictatorship?

**Q** The 545 delegates of Venezuela's powerful "constituent assembly," which will have the ability not only to rewrite the country's Constitution, but also to overrule other government institutions, began receiving their credentials on Wednesday. The opposition and several foreign governments widely denounced Sunday's vote to elect the body, which President Nicolás Maduro says is needed to solve the country's political and economic crises, but opponents see as an effort by Maduro to increase his power. **Has Venezuela become a dictatorship that is sliding into civil war, as some analysts have asserted? What will result from U.S. sanctions against Maduro? What should be the response from international actors such as the OAS and the United Nations? What will the constituent assembly use its power to do? What can be done to stabilize the country and its economy?**

**A** Beatrice Rangel, member of the Advisor board and director of AMLA Consulting in Miami Beach: "A dictatorship sliding into civil war is too optimistic a forecast. Truth be told, Venezuela today is undergoing a brisk process of somalization as it is

engulfed in enduring violence, economic mayhem, social disintegration, political fragmentation and the fracturing of territorial integrity by organized crime. This results from a very toxic mix, including negative effects of globalization as a facilitating agent for illicit trade, a rent-seeking economic culture and corporatist political institutions. Under such circumstances, democracy and individual initiative seldom survive. As a collapsing state, Venezuela is unable to deliver basic political goods to its citizens, such as security, health care and even a food supply. The cause for this failure is found in the legacy of patronage politics, especially when rulers monopolize economic opportunities as a way of controlling people. Under such conditions, the intervention of the international community on humanitarian grounds is essential, given that the alternative is bloodshed that seems to be looming on Venezuela's horizon. It can only be prevented through multilateral means."

**EDITOR'S NOTE: The comment above is a continuation of the Q&A published in the Aug. 3 issue of the Advisor.**

sides failed to agree on a price, four people with direct knowledge of the matter said Friday, Reuters reported. Arauco remains interested in Eldorado, according to two of the people, but it lost its exclusivity status early Friday when the company failed to win improved terms and a lower purchase price for Eldorado. Arauco will now face competition as other bidders look to purchase the pulpmaker. Eldorado's enterprise value, which includes cash, market capitalization, debt and minority interests, is slightly more than 10 billion reais, or \$3.2 billion. According to one of the people, an unnamed Asian company and Brazilian rival Fibria are also targeting the company. Arauco has declined to comment on the matter, and

the other companies did not have an immediate comment. Brazil's billionaire Batista family owns 81 percent of Eldorado through

**Brazil's Batista family owns 81 percent of Eldorado.**

J&F, which also controls the Batistas' stake in meatpacking company JBS and other companies in the home cleaning, banking and energy industries. Eldorado has some 8 billion reais in debt, and J&F's lenders are pushing for the company's sale.

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to get gas right. Latin America is blessed with abundant hydroelectric resources, which can be an ideal partner to intermittent renewables like wind and solar. The water stored behind a dam is a form of energy storage that can be accessed when other sources of power aren't available. A more integrated electric grid across Latin America could allow greater access to the balancing benefits of hydro while also smoothing out the variance in wind and solar, since wind and sun conditions will differ across geography. Natural gas might be a good choice to meet growing power demand in areas where hydroelectric resources are insufficient to balance wind and solar in meeting demand. Natural gas generation can be efficient, built relatively quickly, and is also very flexible in adjusting to changes in demand. New natural gas generation could be designed and located in a way that makes the addition of carbon capture and storage possible, when technology improves and costs come down."

**A Carlos Boj, professional energy markets analyst at the National Commission of Electric Power in Guatemala:** "Renewable energy sources like wind and solar cannot currently offer a steady supply of energy that would provide energy security and meet the demands of the region, while natural gas-generating plants are indeed able to offer that today. Among the primary obstacles is a lack of regulatory frameworks in most countries for the use of this fuel for the generation of electricity, which must comply with the creation and adaptation process, which implies a transition period. Likewise and in parallel, Latin America will have to incentivize, first, energy efficiency from the demand side and second, it will have to gradually implement the technologies that will allow for the storage of energies from clean sources. The future of natural gas is viewed as very prosperous, and for this reason, we already see plans for the construction of storage terminals for natural gas (for example in Panama because of its geostrategic

location) as well as the current process of constructing power plants for biogas in El Salvador and Panama that have more than 100 megawatts in capacity. In addition, the free market is like a large country, and Mexico can find an important ally in the United States and Canada in buying this fuel."

**A Alvaro Rios, partner-director at Gas Energy Latin America:** "Latin America and the Caribbean have vast access to hydro, solar and wind resources. These sources of energy, even though they are becoming more competitive with fossil fuels, are still intermittent and of relatively small scale for increased demand. Thus Latin America and the Caribbean will rely on natural gas to support their power growth. Natural gas-combined cycle power plants are quite efficient, and thus are preferred economically and environmentally over more inefficient and dirtier coal or oil products that are being replaced. Central America and the Caribbean are seeing multiple consolidated and study projects for large and small LNG for power generation and industrial uses. Mexico will have abundant supplies of natural gas from the United States, and increased local production and 'combustoleo' will disappear in the years to come, as growth is met with natural gas and renewable solar and wind. In South America, natural gas production is expected to grow (mainly in Argentina and Brazil), and gas imports in competition with these indigenous natural gas resources will serve as a backup for hydropower and yearly advances with more solar and wind. In summary, natural gas growth in Latin America and the Caribbean for power generation will be strong for base and back-up supply, and it is a crucial long-term bridge for renewable and disruptive (i.e. storage and power grids) sources."

*The Advisor welcomes comments on its Q&A section. Readers can write editor Gene Kuleta at [gkuleta@thedialogue.org](mailto:gkuleta@thedialogue.org).*

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