

US-LATIN AMERICA ENERGY INVESTMENT

Proposals for Policy Engagement

Lisa Viscidi and Rebecca O'Connor

Energy is a critical component of the United States' relationships with Latin American and Caribbean countries. Latin America holds some of the world's largest oil and gas reserves and has abundant renewable energy potential. The region faces rapidly growing oil consumption and soaring demand for electricity. With strong economic growth and a growing middle class, the region is expected to see primary energy demand increase by 110 percent between 2000 and 2040, including a 183 percent rise in electricity demand and a 52 percent rise in oil demand.¹

US investors and companies are key partners in developing energy resources and supplying markets in the region. The United States is the largest source of foreign direct investment (FDI) for Latin America and the Caribbean, representing 25.7 percent of FDI flows in 2015² and 52 percent in Mexico alone.³ US companies play an important role in bringing capital and expertise to produce oil and gas, generate power and build related infrastructure in the region. In Brazil, the United States' direct investment in oil and gas extraction reached \$3.4 billion in 2015 and in Mexico, the figure was \$420 million.⁴

Now is, in many ways, an opportune moment for US investment in Latin America's energy sectors. [Natural resources investment in the region has decreased in recent](#)

[years, largely as a result of the decline in commodity prices.](#)

After a surge in investment amid the commodities boom at the start of the millennium, between 2014 and 2015, overall FDI in the region fell 9.1 percent, and investment in natural resources (excluding renewable energy) fell in both absolute terms and as a share of total FDI.⁵ [However, many countries have recently become more open to energy investments,](#) enacting market-friendly policies and regulatory reforms to attract private capital and international expertise. As oil prices have rebounded since early 2016, oil majors are also looking to acquire new assets.⁶

US companies play an important role in bringing capital and expertise to produce oil and gas, generate power and build related infrastructure in the region.

Foreword

I am pleased to present “US-Latin America Energy Investment: Proposals for Policy Engagement,” a report by Lisa Viscidi, director of the Dialogue’s Energy, Climate Change and Extractive Industries Program, and program associate Rebecca O’Connor at the Inter-American Dialogue.

This report examines US investment in the energy sector in Latin America and the Caribbean, the role it plays in enabling energy trade and broader bilateral cooperation and how the current administration’s policy agenda – which includes changes to trade terms, energy regulations and funding for energy-related programs – is likely to affect investment. The report identifies key considerations for the US-Latin America energy relationship and provides recommendations that call for continued cooperation on energy as part of a larger regional agenda as well as support for market access and regulatory reforms.

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MICHAEL SHIFTER
President

This report examines US investment in the energy sector in Latin America and the Caribbean, the role it plays in enabling energy trade and broader bilateral cooperation and how the current administration’s policy agenda is likely to affect investment.

Renewable energy is a particular bright spot for the region. Investments in the services sector, including in renewable energy, have increased in recent years. In fact, renewable energy investment in Latin America is growing much more quickly than in the rest of the world. From 2004 to 2015, renewables investment in the region increased 11-fold – almost twice the rate of the worldwide 6-fold increase⁷ – totaling \$25.4 billion in 2015.⁸

US investment in energy brings multiple benefits to both the United States and Latin America. For Latin American governments, [oil exports to the US market provide a critical source of revenue](#), and the development of energy resources is an economic driver for prosperity in the region. For the United States, energy investment in Latin America also has the potential to generate investment revenue and employment within the country. Foreign investment facilitates energy trade integration within the Americas, particularly between the United States, the world's largest energy consumer and producer, and Mexico, its second largest energy trading partner (after Canada). Despite the shale boom, which led to a 75 percent increase in US oil production over the past ten years and a drop in imports, the United States still relies on Latin America for more than 30 percent of crude oil imports.⁹ In addition, [Latin America is the top market for US refined products](#) like gasoline and a growing importer of natural gas.¹⁰

While most US investment in Latin America's energy sectors has been market-driven, policy has also played a role in promoting energy integration and cross-border investment. Various administrations have developed initiatives to promote US-Latin America energy cooperation. Collaboration on energy issues in turn helps bolster broader economic, political and security relations with Latin American countries, many of which serve as key allies for the United States, and cooperate on a range of issues from immigration to counter-narcotics.

The new US administration, under President Donald Trump, has signaled a major shift in economic, energy and foreign policy. He has vowed to ease energy regulations, overhaul trade agreements and slash the federal budget – all of which will likely have implications for US investment in Latin American energy sectors. While Trump's "America first" policies are aimed at giving higher priority to the United States' economic growth and national security, the White House's approach will have impacts on the rest of the hemisphere that the administration must consider.

This paper seeks to identify the most critical effects of US policy on energy investment in Latin America and the Caribbean and identifies areas with potential for expanded cooperation under the Trump administration.

US energy investment in Latin America and the Caribbean

Investment from US companies in the oil and power sectors in Latin America has evolved over the last few decades. The discovery of new oil and gas resources, from the pre-salt in Brazil to shale in Argentina, as well as legislative reforms opening some countries to foreign investment, most notably in Mexico, have led to increased investment from companies all over the world. US companies, which benefit from the expertise and resources of one of the fastest growing oil industries in the world as well as proximity to other countries in the hemisphere, have been at the forefront of this investment wave. US companies are by no means the only players; China is also a leading investor in oil and gas in many countries. In the power sector in Latin America and the Caribbean, increasing electricity consumption, a growing consensus that countries must reduce reliance on hydroelectric dams and oil for power generation and rapidly falling costs for solar and wind energy have created new investment opportunities in renewable energy and natural gas. There is also abundant potential for renewable energy. The region has an estimated 430GW of unexploited hydropower potential. Like in the oil sector, US companies are among the leading investors, alongside competitors from China, Japan and Europe.

Mexico

Mexico's energy sector has only recently fully opened up to foreign investment, providing a wealth of new opportunities for US investors. The country's constitution prohibited foreign involvement in most activities in the oil and power sectors until 2013 when President Enrique Peña Nieto successfully garnered a majority in Congress to enact a sweeping energy reform that ended state oil company Pemex's monopoly over oil exploration and production and control by state-owned utility, the Federal Electricity Commission (CFE) over electricity generation.

In the oil and gas sector, US companies have provided oil services, built pipeline infrastructure and, more recently, committed to invest in exploration and production (see Table 1). Shortly after the energy reform was enacted, international oil prices collapsed and Mexico's oil regulator, the National Hydrocarbons Commission (CNH), was forced to improve contract terms in order to attract investment. Modifications such as lowering corporate and security guarantees for bidding companies and publishing the minimum bid

threshold for each block in advance proved successful: in the later tenders, many of the winning companies submitted bids that were significantly higher than what the government had requested. US companies formed part of winning bids in each of the CNH’s oil and gas tenders and represent 13 percent – or \$6.5 billion – of the \$49 billion in pledged upstream investments in Mexico since the reform (see Figure 1).¹¹

US oil service providers like General Electric (GE), Baker Hughes,¹² Halliburton and National Oilwell Varco have for decades played an unusually large role in Mexico’s oil sector, as Pemex struggled to manage all of its oil and gas fields. Before the energy reform, Pemex was the country’s sole operator. But today, the 48 new companies that won stakes in Mexican oil and gas fields in the first bid round represent potential new customers for oil services contracts.

US companies are also heavily involved in oil and gas infrastructure in Mexico (see Table 2). There are 17 cross-border pipelines between the two countries, and more construction is planned. Pemex has also pursued infrastructure sales (see Table 2) as steadily declining production, low oil prices and growing debt have forced major budget cuts at the company.

Investment in Mexico’s electricity sector is also increasing rapidly. Virginia-based AES and InterGen, headquartered in Massachusetts, are among the largest independent power producers in Mexico. There are also opportunities to invest in Mexico’s growing renewables sector, which, as of 2015, is one of the top ten renewable energy markets globally, according to the International Renewable Energy Agency.¹³ Renewables investment in Mexico doubled in just one year between 2014 and 2015 to \$4 billion.¹⁴ Mexico’s power sector reforms have promoted FDI by allowing

TABLE 1: SELECTED US OIL AND GAS INVESTMENTS IN MEXICO’S ROUND 1 AUCTIONS

Source: National Hydrocarbons Commission (CNH)

US COMPANY	ASSET	AUCTION	BID OFFER
ExxonMobil	50 percent interest in contractual area 2 in the Perdido Basin	Round 1.4	With partner Total, offered 5 percent in additional royalties and a 2-well commitment.
Chevron	33.4 percent interest in contractual area 3 in the Perdido Basin	Round 1.4	With partners Inpex and Pemex, offered 7.44 percent in additional royalties and no well commitment. The consortium is expected to invest \$2 billion in the area.
Murphy Oil	30 percent interest and operator of contractual area 5 in the Salina Basin	Round 1.4	With partners Ophir, PC Carigali and Sierra Offshore Exploration, offered 26.91 percent in additional royalties and a 1 percent additional investment factor.
Roma Energy, Tubular Technology and GX Geoscience	Paraíso onshore field in the state of Tabasco, contractual area 16	Round 1.3	Offered a 35.99 percent increase in royalties and a 100 percent increase in the minimum work program.
Fieldwood Energy	Ichalkil and Pokoch shallow water fields in the Cuencas del Sureste Basin, contractual area 4	Round 1.2	In consortium with Petrobal SAPI de CV, offered 74 percent of operating income to the state (more than double the 33.7 percent required minimum) with a 2-well minimum commitment. The initial drilling and testing of 2 wells will require \$170 million.
Talos Energy	Contractual area 2	Round 1.1	With Sierra Oil and Gas and Premier Oil, offered 55.99 percent of operating income for the state (40 percent was the required minimum) and a 10 percent increase in the minimum work program.

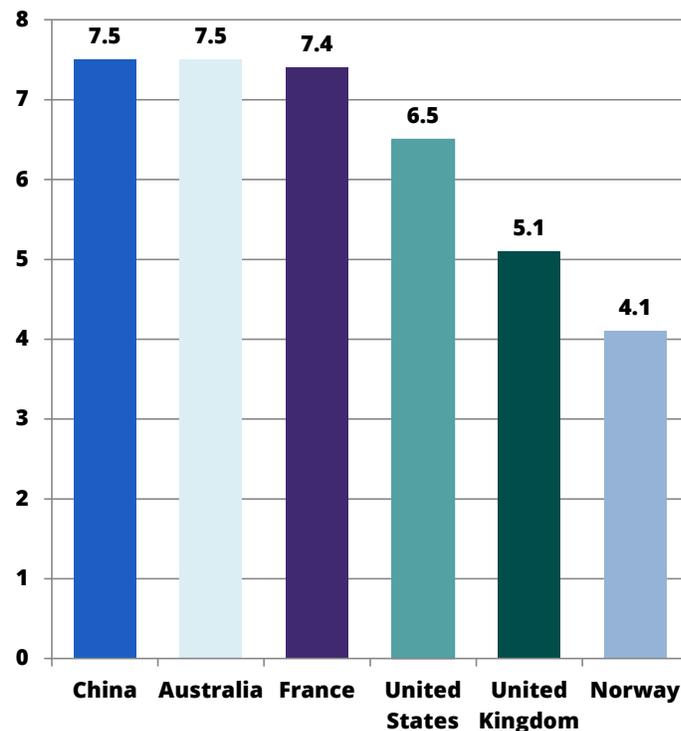
TABLE 2: SELECTED US INFRASTRUCTURE AND RENEWABLES INVESTMENTS IN MEXICO

Source: Authors' compilation based on related news coverage and Institute of the Americas webinar (see footnote 15). Note: Values were not available for SunPower and Frontera Renewable transactions.

US COMPANY	ASSET	VALUE
IEnova (Sempra)	Contract to build Texas-Mexico underwater pipeline with TransCanada	\$2.2 billion
IEnova (Sempra)	50 percent equity interest in Gaseoductos de Chihuahua, a joint venture with Pemex	\$1.1 billion
BlackRock Inc. and First Reserve Corp	45 percent stake in a cross-border pipeline that will carry US natural gas to Central Mexico	\$900 million
KKR & Co. LP	Sale and leaseback agreement with Pemex for assets including pipelines, subsea cables, non-drilling platforms and a natural gas compression facility	\$1.2 billion
IEnova (Sempra)	Ventika wind energy complex (largest wind farm in Mexico)	\$375 million
SunPower Corp.	500 MW power purchase agreement with CFE	
Frontera Renewable (Oak Creek Energy Systems)	800 MW of renewable energy projects	

FIGURE 1: PLEDGED INVESTMENTS IN OIL AND GAS EXPLORATION AND PRODUCTION IN MEXICO BY COUNTRY OF ORIGIN SINCE THE ENERGY REFORM (BILLIONS OF USD)

Source: National Hydrocarbons Commission (CNH)



private companies to build large generation plants and creating a system of clean energy certificates to incentivize clean energy investments.

Looking forward, there are significant opportunities for further US investment in Mexico. Mexico will need to expand its existing network of pipelines, which stretches only 11,000 kilometers (by comparison, Texas alone has more than 480,000 km of pipelines).¹⁵ The country also faces a major shortage of refining capacity and low refinery utilization rates. Mexico may look to private investors to expand refining capacity given Pemex's lack of funds.¹⁶ There will also be more opportunities for investment in oil and gas exploration and production. The CNH is planning three oil and gas auctions this year for shallow water and onshore blocks with potential conventional and unconventional resources.¹⁷ A second deepwater auction is also in the works for late 2017.¹⁸ Additionally, Pemex is considering seven new "farm-outs" in basins with light crude and natural gas.¹⁹ Winners from a third renewable energy power auction will be announced in October, and the country expects to see \$4 billion in investment in new wind generation projects over the next two years.²⁰

Southern Cone

In the Southern Cone, new opportunities have opened up for private investment in the oil and power sectors as more market-oriented leaders have come to power in Brazil and Argentina. The two countries hold massive oil and gas reserves in offshore and shale areas, respectively. In the power sector, clean energy policies, such as wind and solar auctions and renewable portfolio standards, have encouraged renewable energy development – though short term conditions in the region’s largest market, Brazil, are more uncertain as demand has been dampened by weak economic growth.

The United States is one of the largest sources of overall investment in Brazil, with 21 percent of FDI stock in 2014.²¹ US FDI in Brazil’s oil and gas sector has been on an upward trend since the first discovery of the deepwater pre-salt oil reserves in 2007 (see Figure 2). However, private investment slumped following the 2010 energy reforms that increased Petrobras’ role in oil exploration and production. [Oil production growth has been slower than anticipated with Petrobras plagued by a massive corruption scandal, low oil prices and enormous debt.](#)²² However, there are new opportunities for private companies. Legislation signed in November 2016 by President Michel Temer removed a prior requirement that Petrobras be the sole operator in all pre-salt fields with a minimum 30 percent stake. In February, the Brazilian government also announced it would halve

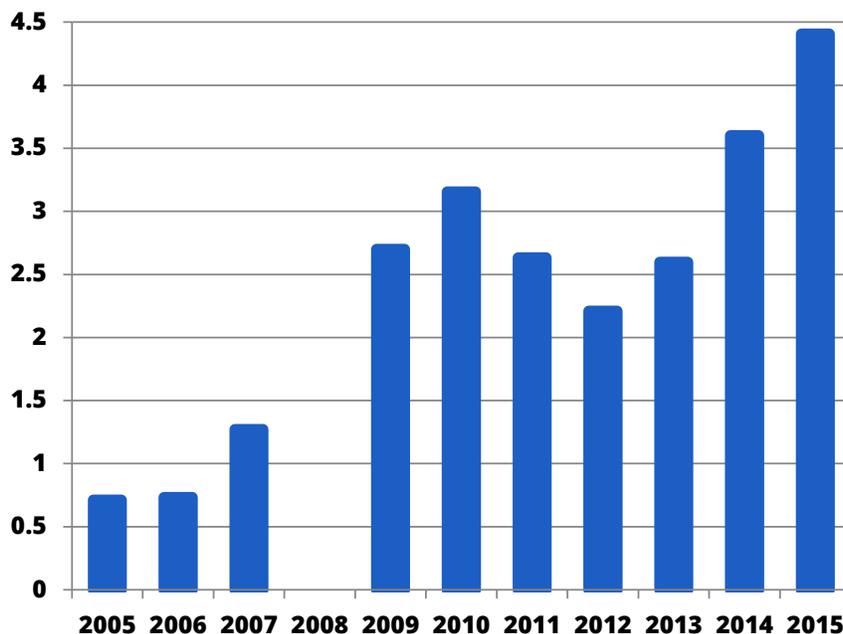
local content requirements for the oil industry to attract more foreign investment and lower operating costs.²³

In Brazil’s upstream sector, European companies Shell and Statoil are the largest investors, but US companies Anadarko, Chevron, ExxonMobil and Denver-based Central Resources are also important players.²⁴ US oil services companies also have a long history in Brazil. Halliburton and Baker Hughes are the largest players. Both companies have a Rio de Janeiro-based technology center and multiyear, multimillion-dollar technical cooperation agreements with Petrobras.

In Brazil’s power sector, Temer’s government reportedly plans to propose legislation reversing his predecessor’s policies, which included energy subsidies and other regulations that led to losses for power firms. AES is by far the largest US power firm in Brazil, with assets in generation, commercialization and distribution of electricity, serving almost eight million consumers.²⁵ GE also has a major presence in the Brazilian market, with approximately 30 percent of the country’s installed capacity and a significant local manufacturing base.²⁶ Last year, the company won a \$900 million contract to construct a 1,500 MW natural-gas-fired combined-cycle power plant, which will become the largest in Latin America.²⁷ ExxonMobil will supply liquefied natural gas (LNG) for the plant.²⁸ US companies also export millions of dollars in generation, transmission and distribution equipment to Brazil each year.²⁹

FIGURE 2: US FDI IN PETROLEUM, BRAZIL (BILLIONS OF USD)

Source: US Department of Commerce, Bureau of Economic Analysis. Note: Data unavailable for 2008.



In Argentina, investment in the oil and gas sector has accelerated since President Mauricio Macri’s election in November 2015. [Macri has taken steps to dismantle many of the long-standing barriers to private sector investment in Argentina](#) like reducing energy subsidies, removing currency controls and renegotiating labor costs with unions. The United States made up a quarter of Argentina’s overall FDI stock in 2015, with 40% alone going to the oil sector (See Figure 3).³⁰ For example, Chevron pledged \$1.24 billion in a joint exploration deal with Argentina’s national oil company YPF and plans to spend \$15 billion to develop Vaca Muerta, one of the world’s largest shale plays;³¹ US-based Dow Chemical

Company, with Shell Argentina, announced \$500 million in investments; and ExxonMobil announced a \$250 million pilot project in the country.³²

Foreign investment in Argentina's power sector has been limited since the 2001 peso crisis. The country has faced repeated blackouts as the government set the price of electricity below the cost of generation, deterring infrastructure investment and encouraging energy consumption. Since taking office, President Macri has looked to reverse these trends by increasing foreign investment in the power sector and expanding renewable energy to reduce Argentina's heavy reliance on natural gas. The country held its first two renewable energy auctions late last year under renewable energy program RenovAr. To date, these auctions have been dominated by local firms and no US companies have participated.³³

Looking ahead, these governments will continue courting foreign investment to develop their energy resources for domestic consumption and export, as the previous policy of relying mainly on domestic capital has proved unsustainable. In Brazil, as Petrobras sells assets and cuts investment, reducing its role in the energy sector, private investment will be needed to increase oil production. [The country expects up to \\$83 billion in investments from 10 oil and gas tenders scheduled for 2017-2019.](#)³⁴ In the power sector, plans to increase the share of renewable energy generation have stalled – the government cancelled the only wind and solar energy auction scheduled for last

year due to weak demand. In Argentina, changes under the Macri administration are already translating into more investment. In January, after Argentina's unions agreed to bring down labor costs, oil and gas companies pledged \$5 billion in investments for 2017 and more than \$10 billion per year in the following years.³⁵ A third renewable energy auction is scheduled for July or August 2017.

Andean region

In the Andean region, US energy investment is predominantly focused on the oil and gas sector, particularly exploration and production. Venezuela, Colombia and Ecuador all hold significant oil reserves. [Colombia, seeking to find and produce more oil to maintain self-sufficiency, has offered very favorable investment terms.](#) In contrast, [Venezuela, marred by political and economic uncertainty and a mismanaged state oil company that controls most oil operations, has seen a sharp decline in investment in recent years.](#) Both Venezuela and Ecuador have become highly reliant on oil-backed loans and oil sector investment from China.

In Venezuela, state oil company PDVSA has held a majority stake in all projects since former President Hugo Chávez nationalized the industry, and several US companies have left the country or entered legal battles over their seized assets. Underinvestment has led to a steep decline in oil production – output declined by about 250,000 barrels per day last year and is now almost below 2 million barrels per day. Nevertheless, some US oil companies remain in Venezuela. Chevron

FIGURE 3: US FDI STOCK IN ARGENTINA BY SECTOR, 2004-2015

Source: Central Bank of Argentina

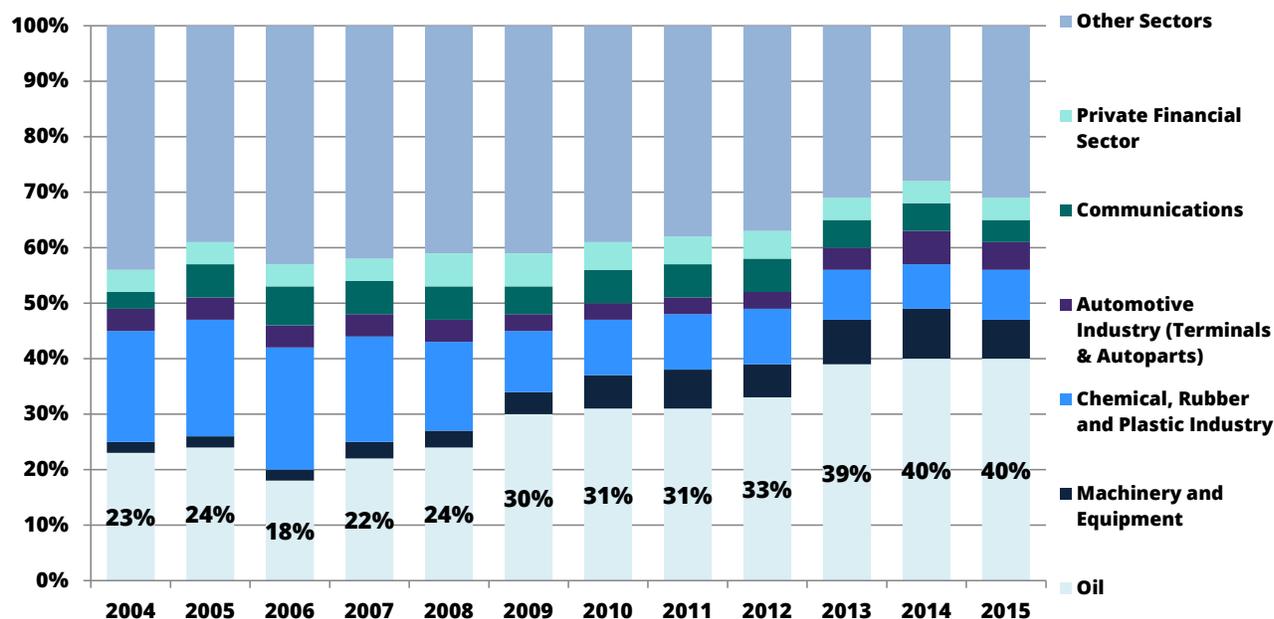
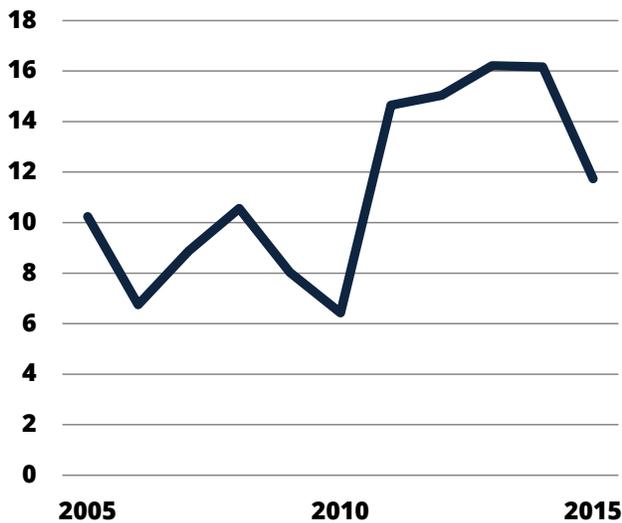


FIGURE 4: TOTAL PETROLEUM SECTOR FDI FLOWS INTO COLOMBIA (BILLIONS OF USD)

Source: Central Bank of Colombia, Subdivision of Economic Studies - Balance of Payments



currently participates in five onshore and offshore production projects in the country. Some US-based service companies are also still active, although they have struggled to collect payment from PDVSA. In 2016, PDVSA awarded a contract for more than 200 wells in the Orinoco Belt to Venezuelan Contractor Y&V Group, which will subcontract Baker Hughes to help drill the wells.³⁶ Halliburton will also offer oilfield services, though the company began reducing operations in Venezuela last year because of payment difficulties.³⁷ In the same tender, PDVSA also selected Oklahoma-based Horizontal Well Drillers to drill 191 wells in the Orinoco Belt.³⁸

In Colombia, oil and gas sector investment has historically made up an important part of FDI, but as oil prices have fallen and oil companies have cut capital expenditure budgets worldwide, it has become more difficult for Colombia to compete. As a result, the oil sector’s contribution to Colombia’s total FDI has fallen (see Figure 4). Even with this drop, however, oil investments represented more than 25 percent of FDI in Colombia in 2015.³⁹ US companies like ExxonMobil, Chevron and ConocoPhillips have a longstanding presence in the country’s hydrocarbons sector. Chevron is the country’s largest natural gas producer and has extensive downstream operations. ConocoPhillips was one of the first companies to invest in unconventional exploration in Colombia.⁴⁰

In Ecuador, investment in oil and gas has declined since President Rafael Correa nationalized the oil industry in 2010. Some US oil companies, like Occidental and ConocoPhillips subsidiary Burlington Resources Inc., have

been awarded arbitration payments for their expropriated assets. While Chinese state companies have clearly emerged as the dominant players in oil exploration and production, US oil service companies are still active in the country. Though drilling activity has declined – according to Baker Hughes, the number of active rigs in the country fell from 27 in August 2014 to just one in February 2016 – there is still some limited investment from US oil services firms Halliburton and Baker Hughes.

The Caribbean

US investment in gas and renewables in Caribbean countries, such as the Dominican Republic and Jamaica, has increased significantly in recent years as countries look to replace costly oil-fired power generation with alternative energy sources. Most Caribbean countries, with the exception of Trinidad and Tobago, lack domestic fossil fuel resources and have been unable to tap renewable energy sources until recently, forcing them to rely on fossil fuel imports for power generation. As of 2013, 11 of 14 nations in the region relied on diesel and fuel oil-fired plants for over 75 percent of installed capacity.⁴¹

As the Caribbean expands natural-gas fired power capacity, Henry Hub-priced natural gas from the United States is the cheapest supply source, due to the United States’ close proximity and ability to export LNG from terminals along the Gulf of Mexico.⁴² As US LNG export terminals come online, the Caribbean is developing island hubs with large re-gasification plants, connecting supply to neighboring countries via smaller LNG vessels or compressed natural gas (CNG). In January, AES completed \$9 million in modifications to its Dominican Republic LNG terminal for the re-loading and re-exportation of LNG to neighboring countries.⁴³ The reception terminal can now accommodate ships as small as 10,000 m3 and, for smaller consumers, load LNG into ISO tanks at a truck terminal for delivery via container vessels.

In the Dominican Republic, AES has invested more than \$1.2 billion and generates 40 percent of the country’s electricity.⁴⁴ The LNG services market has also attracted US companies like Crowley Maritime Corporation, which provides small-scale containerized transportation and delivery, bulk transportation and delivery, vessel design and construction and other services throughout the region through its subsidiary Carib Energy.⁴⁵ GE has turbines that generate 70 percent of Trinidad and Tobago’s power⁴⁶ and commercial wind power installations in the Dominican Republic.

In recent years, several Caribbean countries, including Jamaica and St. Kitts and Nevis, have reformed their regulatory frameworks to attract private investment in natural gas and renewables. However, lack of financing remains a major bottleneck to expanding natural gas and renewables development in the region. Many Caribbean countries have poor credit ratings and cannot take on more public debt, making private sector investment critical in financing the necessary infrastructure to facilitate gas trade or build renewable energy facilities.⁴⁷ This market could present an important opportunity for foreign investors.

Central America

Central America has a relatively diverse electricity matrix, but the region continues to suffer from high electricity prices and progress on regulatory reforms has been mixed. At the same time, Central America will have to expand generation capacity to meet a projected 4.7 percent to 5.5 percent annual growth in demand for electricity through 2030.⁴⁸ To keep up, between 6.5 GW and 11 GW of new capacity must be installed in the coming period – nearly double the region’s total capacity in 2012.⁴⁹

Like in the Caribbean, Central American countries are seeking to replace expensive imported oil products with natural gas to lower electricity prices for consumers. The United States

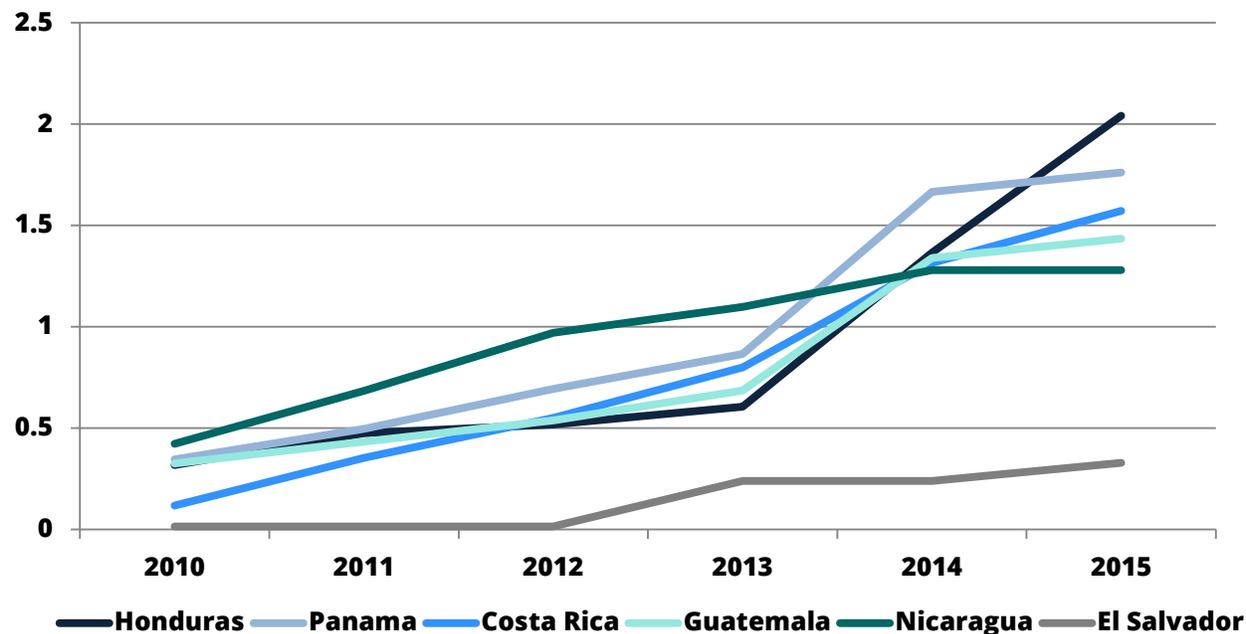
is the most likely supply source, given its close proximity and free trade agreements with many Central American countries. Private sector investment has been key to developing LNG terminals in this region. AES is currently building a 350MW gas-fired power plant, storage tank and regasification facility along the Panama Canal – an estimated \$800 million investment⁵⁰ – which could become a hub to supply natural gas to the rest of Central America, though significant additional infrastructure investments would be required.

There has also been important investment, both domestic and foreign, in renewable energy (see Figure 5). Thanks to a generous subsidy policy for renewable power capacity installed before July 2015, Honduras was the largest destination for renewable investment as a percentage of GDP in all of Latin America in 2015, adding 500 MW to its installed capacity.⁵¹ Panama’s share of regional renewable energy investments is also growing. Between 2010 and 2014, Panama received four percent of regional renewable energy investments, but in 2015, its share jumped to 14 percent.⁵²

Looking ahead, many other countries are also working to attract renewables investment. Guatemala has held multiple renewable energy auctions, attracting \$702 million in investment in biomass, solar, small hydro and wind plants in 2014.⁵³ In February, El Salvador announced its second renewable energy auction for 100MW of solar PV projects and 50MW of wind projects.⁵⁴

FIGURE 5: TOTAL CLEAN ENERGY INVESTMENT IN CENTRAL AMERICA BY COUNTRY (BILLIONS OF USD)

Source: Climatescope 2016



Energy policy under the Trump administration

The new administration has proposed a host of changes that would considerably alter energy policy in the United States, [bringing potential challenges and opportunities for energy ties with Latin America and US investment in the region](#). Most of the President's policies affecting energy are related to reducing regulations, revising trade agreements and cutting the federal budget.

Cutting energy regulations

President Trump has pledged to reduce regulations and regulatory costs in the United States across all sectors to promote private investment, economic growth and employment in the country. The president promised a 75 percent decrease in overall regulation and a large reduction in corporate taxes in a January meeting with business executives from some of the largest companies in the United States.⁵⁵ One of his first executive orders, the so-called 2-for-1 order, requires at least two existing regulations be identified for elimination for each new rule issued. The order also states that the incremental cost of all new regulations for fiscal year 2017 should be zero unless otherwise required by law.⁵⁶

Many of the new administration's most high-profile proposed regulatory changes are in the energy sector. President Trump has said he plans to promote oil and gas development, increase coal production and eliminate climate change-related regulation. He signed a wide-ranging executive order in March 2017 to roll back climate change policies instituted under the previous administration. The order directs the EPA to "suspend, revise, or rescind" the Clean Power Plan (an EPA rule announced by the administration of former president Barack Obama requiring

states to develop strategies to reduce carbon emissions from power plants) and consider repealing a rule that limits carbon dioxide emissions from power plants and methane emissions caps on oil and gas drilling. The order also instructs the Department of the Interior to "lift any and all moratoria on Federal land coal leasing activities" and tasks every agency with conducting a 180-day review of existing regulations that "potentially burden the development or use of domestically produced energy resources".⁵⁷

The president's recently released budget blueprint increases funding for developing energy on public lands and offshore waters.⁵⁸ Trump repealed a rule restricting companies from dumping coal-mining waste into nearby waterways as well as a Securities and Exchange Commission rule – a provision of the 2010 Dodd-Frank Act – that requires publicly traded oil, gas and mining companies to disclose payments including taxes and royalties made to foreign governments.

The administration is also looking to further expedite the approval of LNG export terminals, according to a leaked Trump transition team memo by Thomas Pyle, president of the Institute for Energy Research and head of the Department of Energy transition team. In addition, the president announced a review of vehicle fuel-efficiency standards during a speech at an automotive testing center near Detroit in March 2017 and set up a task force in every federal agency to "identify and remove any regulation that undermines US automobile production."⁵⁹ US auto makers have criticized regulations that increased fuel efficiency standards, which they say would be difficult and expensive to meet and could raise prices for consumers.⁶⁰

Revising trade terms

Revising trade terms to get a better deal for the United States was one of the cornerstones of Trump's campaign, and the president has already indicated that these changes will be a priority. He pulled the United States out of the 12-nation Trans-Pacific Partnership agreement in his first week in office, saying he would pursue only bilateral trade agreements. The president has also frequently promised to renegotiate, update or pull out of the North American Free Trade Agreement (NAFTA).

Trade experts believe discussions on NAFTA will likely include rules of origin – which determine where goods that receive NAFTA treatment are sourced from – investment dispute settlement provisions and intellectual property, environmental and labor provisions.⁶¹ Updated labor and

Many of the new administration's most high-profile proposed regulatory changes are in the energy sector.

environmental standards were part of the TPP agreement, which included both Canada and Mexico, and may form the basis for these revisions in NAFTA negotiations.⁶²

Secretary of Commerce Wilbur Ross and Peter Navarro, head of the newly established White House Trade Council, have also criticized Mexico's 16 percent value-added tax (VAT) which companies must pay on exports to Mexico, suggesting it will be a major sticking point in NAFTA negotiations. Separately, the president has floated a 20 percent tax on imports from Mexico as a potential solution to pay for a border wall, which Mexico opposes.⁶³

Reducing the federal budget

The Trump administration also favors significantly reducing the federal budget, with the exception of defense spending. The administration's budget blueprint proposes a 28 percent cut to the State Department and the US Agency for International Development (USAID) and a 31 percent reduction in the Environmental Protection Agency's (EPA) budget.⁶⁴ The cuts include drastic reductions to UN and multilateral development bank funding to "rein in costs" and share the funding burden "more fairly among members" and the complete elimination of the Global Climate Change Initiative and payments to UN climate change programs including the Green Climate Fund.⁶⁵ The budget also proposes large cuts to economic and development assistance with a focus on continued funding for countries of "greatest strategic importance".⁶⁶

The administration's budget blueprint slates the Overseas Private Investment Corporation (OPIC) and US Trade and Development Agency (USTDA) for elimination. OPIC, as well as the Export-Import Bank of the United States (EXIM) – an export credit agency – has a rocky history with Congressional authorization – both have seen their charters lapse for multiple months before controversial reauthorization votes in recent years.

The president has also indicated he does not support using federal dollars to promote clean energy over fossil fuels. On the campaign trail, Trump expressed support for "all forms of energy" including wind and solar but rejected the idea of giving favorable financing or other preference to renewables over other forms of energy. His budget blueprint for the EPA "discontinues funding for the Clean Power Plan, international climate change programs, climate change research and partnership programs, and related efforts."⁶⁷

Challenges and opportunities for US energy investment in Latin America

These proposed policies represent a shift from the previous administration. While policies related to cutting energy regulations, revising trade agreements and reducing the federal budget are aimed mainly at promoting investment, employment and economic growth in the United States, they would also have important implications for the United States' relationship with Latin American countries. These policies could impact energy integration, bilateral cooperation and access to markets and commercial opportunities for US companies operating in the region. Below we outline some of the potential challenges and opportunities related to these policies.

The potential costs of revising trade terms

Changes to trade agreements, particularly NAFTA, could increase costs for foreign energy companies investing in Latin America. For example, revised rules of origin could be designed to favor goods produced by US industry over cheaper goods from outside North America, increasing costs for energy companies operating in Mexico. Enhanced

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labor and environmental protections introduced under a revised agreement, though widely viewed as necessary, would also likely increase the cost of doing business, and eliminating investment dispute settlement provisions would increase the legal risks of overseas investment.

There is also the question of whether a revised agreement would include new energy-related provisions. Because NAFTA was signed before Mexico fully opened its oil sector to private investment, the agreement exempted Mexico's energy sector from certain stipulations like foreign investment provisions. Chapter 6 of NAFTA automatically began to cover foreign investments in the energy sector when Mexico's market opened up, but renegotiating energy provisions could result in an agreement that is less favorable to investors.

Scrapping NAFTA completely could prove disastrous for a host of industries because of complex, deeply integrated supply chains across the three countries that depend on the agreement. In the energy sector, it could become more difficult for companies to import North American equipment and bring North American workers to operate oil projects in Mexico and for regulators to enforce environmental and safety agreements.⁶⁸ For example, in an operation in Mexico's

Tabasco state, Halliburton was able to bring a rig from Alberta, Canada with a highly experienced, multinational team of workers to manage a project in just one week – a feat that would have been impossible without the NAFTA framework.

The administration's proposed 20 percent tariff on imports from Mexico could also have enormous implications for the energy industry, especially US refiners and automakers, which oppose the tariff.⁶⁹ Crude oil is one of Mexico's top exports to the US – worth \$8.7 billion last year⁷⁰ – and a tariff would encourage US refiners to replace Mexican oil with crude from other countries. Introducing a tax on Mexican crude imports would also make investing in Mexico's oil industry less attractive, since about half of Mexican crude exports go to the United States.⁷¹ Moreover, such a step could prompt Mexico to apply a retaliatory tariff to US exports, including refined petroleum products and natural gas, which would undermine the economic viability of investing in cross-border pipelines.

US-Latin America energy diplomacy and bilateral cooperation

A host of US government initiatives has been established over the past decade to assist other countries to develop regulatory standards that are in line with those of the United States. These initiatives, [such as regulatory assistance for shale development in South American countries](#) and power sector governance in Central American and Caribbean countries, have helped improve investment climates, create commercial opportunities for US companies and facilitate clear and consistent investment rules. Since Mexico's energy reform, Mexican regulatory agencies have conducted extensive exchanges with US state and federal regulators. Mexico sought these exchanges as part of its effort to develop sound regulations as its energy industry expands.⁷² Similar bilateral dialogues exist with other Latin American countries like Brazil, which has a long history of energy cooperation with the United States on biofuels, climate change, energy efficiency, oil and gas and nuclear energy, spanning multiple administrations.

Beyond the benefits of specific initiatives, energy investment ties also strengthen broader economic and political ties. US authorities work closely with their counterparts in Mexico, Central America and other countries to control immigration and coordinate with countries like Mexico and Colombia to fight drug trafficking and organized crime. The US is also deeply integrated economically with Latin America; it is the top export market for many countries in the region, and Latin America is also a destination for many US goods and services.

A host of US government initiatives, such as regulatory assistance for shale development in South American countries and power sector governance in Central American and Caribbean countries, have helped improve investment climates, create commercial opportunities for US companies and facilitate clear and consistent investment rules.

TABLE 3: US-LATIN AMERICA ENERGY COOPERATION INITIATIVES

PROGRAM / INITIATIVE / MEMORANDUM NAME	AGENCY / DEPARTMENT	DESCRIPTION	PARTICIPATING COUNTRIES IN THE REGION INCLUDE
Caribbean Energy Security Initiative	US Department of State with local government partners	Aims to improve energy security and sustainable economic growth by attracting investment in diverse energy technologies with a focus on governance, finance and donor coordination	St. Kitts and Nevis, Haiti, Jamaica, Dominican Republic, Antigua and Barbuda
Unconventional Gas Technical Engagement Program	US Department of State	Provides regulatory and technical guidance to expand shale development	Argentina, Chile, Colombia, Peru, Uruguay
Energy Governance and Capacity Initiative	US Department of State	Provides support for oil, gas and mining oversight, for example, through technical training for international regulators and officials	Brazil, Chile, Colombia, Mexico, Guyana
Power Sector Program	US Department of State	Provides technical, legal and regulatory support to entities like Central America's regional electricity market regulator	St. Kitts & Nevis, Central America
US-Mexico Energy Business Council	US-Mexico High Level Economic Dialogue	Works to promote two-way energy industry investment, trade in goods and services, binational value chains and rapid deployment of new technologies	Mexico
North American Cooperation on Energy Information Initiative	Multiple institutions including: Canada's Department of Natural Resources; Statistics Canada; Mexico's Secretariat of Energy, Pemex; US Energy Information Administration; US Department of Energy	Tasked with generating data, statistics and mapping for energy infrastructure and imports and exports; exchanging views and projection information on cross-border energy flows; and harmonizing terminology, concepts and definitions of energy products	Canada, Mexico
Working Group on Climate Change and Energy	Established by the energy departments of the United States, Canada and Mexico	Tasked with advancing solutions for reliable and resilient low-carbon energy grids, modeling and deployment of clean energy technologies, energy efficiency, carbon capture, use and storage, climate change adaptation and resilience and emissions from the oil and gas sector	Canada, Mexico
Consultative Group on Energy/Binational Energy Working Group (BEWG)	Energy departments of the United States and Brazil	Establishes consultation mechanisms for hydrogen cell technology, carbon credits, biofuels and electricity transmission; 2010 BEWG expands cooperation to include energy security and climate change, renewable energy, energy efficiency, oil, gas & coal, nuclear energy, research cooperation, and research development in both countries	Brazil
Memorandum of Understanding to Advance Cooperation on Biofuels	Signed by Presidents George W. Bush and Luiz Inácio Lula da Silva	Recognizes the importance of ethanol both as a fuel for cars and in terms of diversifying energy sources and improving the environment	Brazil

Protecting US economic interests abroad, promoting US exports and working with countries on economic issues have traditionally been key pillars of US foreign policy (see Table 3). For example, the Obama administration, with bipartisan support from Congress, promoted energy security for Central American and Caribbean countries to reduce their reliance on oil imports, particularly from Venezuela. The administration viewed this assistance as part of a broader strategy to promote economic competitiveness by lowering electricity prices, as a means to reduce incentives for immigration and drug trafficking, particularly in Central America.

Latin America as a market for US energy exports

If the administration's policies promoting investment to develop US oil and gas resources are successful in increasing oil production in the United States, then US producers will need to sell to new markets abroad.

US shale producers have proved increasingly competitive at lower prices, improving well productivity and cutting costs to maintain higher than expected production rates despite the decline in international oil prices since 2014. Companies focused on the US have booked the largest increase in

planned spending for 2017, with budgets set to rise 60 percent year-on-year, according to Wood Mackenzie.⁷³ Some analysts believe that new policies leading to lower regulatory costs could improve break even costs for shale producers and bring even more investment to the United States.⁷⁴

The resulting higher production would mean the United States will need to export even more light oil, which is produced from shale formations. Latin American countries like Venezuela have already started importing the first shipments of US light oil exports. Increased pipeline capacity as a result of the approval of the Dakota Access pipeline also means more light crude will be available for export from Gulf Coast refineries.

Although the United States has begun exporting its surplus light oil, the country will continue to import heavy grades from countries like Mexico and Venezuela because many oil refineries in the Gulf coast are geared toward processing heavy crude. Foreign investors will remain important to developing these heavy oil resources in Latin America and to building midstream and downstream infrastructure to enable the flow of oil across the hemisphere.

Meanwhile, the United States is projected to become a net natural gas exporter in 2018. LNG exports will spike until the early 2020s and then grow at a more modest rate, according to the US Energy Information Administration's 2017 outlook.⁷⁵ A large number of US LNG export projects have already been approved by the Department of Energy but their ability to access financing and reach a final investment decision will depend on securing access to markets. [Latin America has emerged as a key market for global LNG demand.](#) US pipeline exports to Mexico and Canada will also grow over this time period as pipelines currently under construction are brought online. US investment in energy infrastructure, such as power plants and natural gas pipelines in Latin America, can help create markets and spur demand for US natural gas.

Many government initiatives are aimed at expanding markets for US exports. EXIM promotes US goods and services exports. The Department of Commerce's "Look South Initiative", part of its "Open for Business Agenda" is another federal government effort to help US companies conduct business with free trade agreement partners in Latin America by making them aware of emerging trade opportunities and helping them navigate available federal resources to penetrate these markets.⁷⁶

Some analysts believe that new policies leading to lower regulatory costs could improve break even costs for shale producers and bring even more investment to the United States. The resulting higher production would mean the United States will need to export even more light oil.

The geopolitics of energy investment

If the United States cuts investment ties with Latin American countries, other actors may fill the vacuum. Mexico has already accelerated free trade agreement negotiations with the European Union and Turkey, and is pursuing closer trade ties with Latin American neighbors like Argentina and Brazil, both bilaterally and through Mercosur, the South American trade bloc.⁷⁷

China is already heavily invested in Latin America, providing billions in financing and FDI for oil and gas, renewable energy, infrastructure and industrial projects. The China Development Bank and China Export-Import Bank have made more than \$141 billion in loan commitments in the region since 2005, more than three quarters of which (\$99.2 billion) are focused on energy.⁷⁸ China is second only to the United States as the region's largest source of greenfield FDI overall, and between 2011 and 2015, almost 40 percent of Chinese mergers and acquisitions investment in Latin America was in the oil and gas sector.⁷⁹

Chinese engagement in Latin America and elsewhere is largely viewed as a form of economic diplomacy. Chinese investment, trade and credit penetration is correlated with low levels of US influence when Chinese state actors are involved.⁸⁰ Venezuela, Brazil, Argentina and Ecuador have received 98.6 percent of Chinese energy-related lending to the region.⁸¹ With the exception of Brazil, these are the Latin American countries that have the most difficulty borrowing from global capital markets. In terms of FDI, of the \$20.8 billion in Chinese oil investments in the region, 50 percent has gone to Brazil, followed by Venezuela and Argentina.⁸² Some experts believe that China is either actively challenging the US with this investment or avoiding engagement with countries that have strong US ties.⁸³ Others attribute China's focus on countries where the United States is less involved to the fact that these countries hold significant natural resources (oil, natural gas and agricultural commodities), have governments that tend to be highly centralized – making government to government deals easy – and

actively court Chinese investment because of their inability to access other sources of capital due to high political risk.⁸⁴

Clean energy investment opportunities in Latin America

[Renewable energy is a growing sector in Latin America](#) and globally, providing business opportunities as well as environmental benefits. Several Latin American countries offer strong incentives for investment in renewables, such as renewable energy mandates, auctions and favorable financing. Wind and solar energy costs have fallen dramatically and have reached grid parity in multiple markets in the region. Legislation has also been approved in some countries to allow distributed generation.

The US government can help companies to take advantage of this booming sector. Under the previous administration, a key focus of OPIC's lending in Latin America was energy access and increasing the share of renewable energy in Central America and the Caribbean. OPIC has a carbon cap on its investment portfolio while EXIM has a congressional requirement to use "not less than 10 percent of its aggregate authority" to finance US goods and services exports related to renewable energy sources and is prohibited from supporting high carbon intensity plants with a few exceptions.⁸⁵ OPIC's climate-related investments grew from \$155 million in 2010 to over \$1 billion in 2015, with funds going toward programs like the Caribbean Energy Security Initiative.⁸⁶ This funding included a \$43 million loan for a 36-MW wind farm in Jamaica and financing for the Dominican Republic's first wind farm.⁸⁷ The Clean Energy Finance Facility for the Caribbean and Central America, which has four US government partners, OPIC, the State Department, USAID and USTDA, works to promote investment in clean energy infrastructure by leveraging early-stage funding.⁸⁸ US assistance to access financing, along with support for regulatory reforms, has helped US companies to penetrate renewable energy markets in the region, in turn spurring employment in the United States.

RENEWABLE ENERGY IS A GROWING SECTOR IN LATIN AMERICA AND GLOBALLY, PROVIDING BUSINESS OPPORTUNITIES AS WELL AS ENVIRONMENTAL BENEFITS.

POLICY RECOMMENDATIONS

SUPPORT OPEN ENERGY MARKETS AND POLICIES THAT PROMOTE US MARKET ACCESS ABROAD

The US government must maintain a fluid system of exports that allows market access with Latin American and Caribbean countries. This entails both helping US energy exporters to reach Latin American energy markets and ensuring that Latin American markets are open to US investment. Open energy trade policies and free trade agreements have provided the foundation for investment and access to markets in the region. Critical policy steps in recent years, such as removing the crude oil export ban, removing LNG destination clauses that prohibited countries from re-exporting US LNG and steps to expedite LNG export permits have facilitated energy trade and the administration should build on these policies. As the administration re-examines the United States' FTAs with countries in the region, including Mexico, Colombia, Chile, Central America and the Dominican Republic, policymakers should carefully consider the implications for energy trade and investment. The US government should engage in a comprehensive consultation process with input from industry, civil society and career US government officials before renegotiating trade terms – a best practice for any trade deal. In NAFTA, for instance, the original agreement was preceded by over a year of consultations with diverse stakeholders. For its part, the Mexican government has already formally begun its process of consultation with stakeholders to identify its priorities in renegotiating the terms of the agreement. US officials should consult with the energy industry, with an eye to minimizing additional investment costs and maintaining investment protections including investor-state dispute settlement provisions and safeguards with Mexico and Canada.

SUPPORT REGULATORY COOPERATION AND REFORMS THAT ENABLE PRIVATE INVESTMENT

Energy should be included as an agenda item for broader high level policy discussions with many countries in the Western Hemisphere, particularly with Mexico as it continues to implement its energy reforms. A critical area of cooperation with Mexico focuses on safety and environmental regulation. US regulators should continue to work with their Mexican counterparts on prevention and contingency plans for environmental incidents in the Gulf of Mexico, as well as harmonizing environmental standards to provide certainty to investors.

A dark blue silhouette of the continents of Latin America and the Caribbean is positioned in the background of the page. The text is overlaid on this silhouette.

One of the most important areas of focus for US energy diplomacy in recent years has been supporting Central American and Caribbean countries to reduce their reliance on oil. The US government's role in promoting dialogue and coordination on regulatory reforms and regional integration in the power sector in those countries helped to lower electricity prices and diversify sources of energy to improve energy security, which in turn has promoted economic prosperity. From mid-2013 to mid-2016, transactions on Central America's Regional Electricity Market quadrupled, helping to improve energy integration and lower electricity prices. The United States should continue to support efforts by Central American and Caribbean countries to improve regulatory frameworks to attract private investment in renewable energy and natural gas. US support for energy sector reform in Central America and the Caribbean enjoys bipartisan support in the House and Senate but the White House plays an instrumental role in executing legislation that authorizes assistance to those countries. The US government should also support regulation to expand alternative transportation such as electric mobility and improved public transportation in these countries to further reduce reliance on oil. It is an ideal moment to back these efforts because Central American and Caribbean countries are already less dependent on oil imports due to lower oil prices and the shift to alternative energy sources. As a result, countries in Latin America and the Caribbean that have relied on imports of crude oil and refined products from Venezuela have turned to alternative oil suppliers and replaced oil with natural gas and renewable energy. Exports of Venezuelan oil to key partners such as Jamaica, the Dominican Republic, and even Cuba, have declined considerably.

SUPPORT COMMERCIAL OPPORTUNITIES FOR RENEWABLE ENERGY DEVELOPMENT

There are many opportunities for the US government to support market-led expansion of renewable energy in Latin America and the Caribbean. Facilitating access to finance is one of the key policies that can further private sector investment in clean energy solutions. The US government should provide financing support for bankable renewable energy projects through loans from OPIC and EXIM, as well as indirectly through leadership in the Inter-American Development Bank and World Bank.

The US government should also support opportunities to develop and export clean energy technologies to further the booming sector that has created hundreds of thousands of jobs in the United States. The country should follow through on its commitments as part of Mission Innovation, an initiative where member countries agreed to double clean energy research and development spending over the five years to 2020. Clean energy innovation in Latin America is at a nascent stage mainly as a result of barriers to access to capital, inadequate government incentives and a lack of industry-academia ties.⁸⁹ However, Latin American countries also have very ambitious emissions reduction targets, creating an opportunity for clean technology investors and exporters to access this market. Markets in Brazil, Mexico, Chile and Argentina have the greatest opportunities for US clean technology exports and investment while smaller countries in the Caribbean would benefit most from US financing mechanisms.

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