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The Outlook for Energy Under a Trump Administration

Major Volatility Ahead



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Cover photo: Vehicles from the USS Denver take part in an amphibious exercise in the South China Sea in February 2011. Photo credit: US Department of Defense/Wikimedia

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SUMMARY

Oil, gas, and renewable energy markets will face high levels of uncertainty and potentially extreme volatility under a Trump administration in 2017. Some of these uncertainties flow from questions about the new administration's yet-undefined policies on energy production, trade, and climate policy. Others flow from the basket of national security risks that a new US President was destined to inherit. Yet it is Mr. Trump's signaling of major shifts in US foreign policy priorities that may have the greatest near-term impact on energy supply and demand. The impact of these uncertainties, following two years of reduced oil and gas investment and low energy prices, may inhibit investment and sow the seeds of a potential oil and gas price shock by 2020, if not sooner.

Donald Trump at a rally in Laconia, New Hampshire in July 2015. *Photo credit: Michael Vadon/Wikimedia*



NEW PRESIDENT, DRAMATICALLY NEW ENERGY POLICIES

Domestic energy policy

It is too early to tell with certainty what President Trump's energy policies will be. Campaign statements suggest a broad retreat from regulations seeking to reduce greenhouse gas (GHG) emissions (and thereby costs) in the energy sector.¹ These changes include undermining the Clean Power Plan, revoking GHG testing for new infrastructure permits, avoiding new regulation of methane from existing sources of emissions, and potentially withdrawing from the Paris Agreement and regional agreements to reduce GHG.²

Revision of existing regulations is a stated goal, but a slow process subject to legal challenge. Congress can reverse regulations that are less than a year old through the Congressional Review Act (CRA). Industry groups and their congressional supporters are seeking an "omnibus" CRA to reverse several regulations at once.³

In addition, Trump aims to increase US energy supply: he has pledged to open federal lands for coal leasing and expand oil and gas leasing.⁴ Questions remain about a Trump administration's decision on new fuel

efficiency standards. A more permissive policy on pipeline permitting, both for Keystone XL and other US-Canada pipelines, is also high on the Trump transition agenda.⁵

Trade policy

President elect Trump's pledge to impose 45 percent tariffs on China, 35 percent tariffs on certain goods and American companies exporting from Mexico, revise NAFTA, disfavor regional trade agreements,⁶ and potentially withdraw from the US-Korea Free Trade Agreement⁷ (and even the WTO)⁸ all suggest a period of high uncertainty in the future of global trade agreements.

Mr. Trump's transition team has called new tariffs and treaty withdrawal "last resorts"⁹ but Mr. Trump reiterates the threat in spite of legal concerns and resistance within his own party.¹⁰ At the broadest

1 "An America First Energy Plan," The Official Website of Donald J. Trump for President, last modified May 26, 2016, <https://www.donaldjtrump.com/press-releases/an-america-first-energy-plan>.

2 BBC News Staff, "Donald Trump would 'cancel' Paris climate deal," *BBC News*, May 27, 2016, <http://www.bbc.com/news/election-us-2016-36401174>; "An America First Energy Plan," *ibid*.

3 Lydia Wheeler, "House passes bill targeting 'midnight' Obama regs," *The Hill*, November 17, 2016, <http://thehill.com/regulation/306564-house-passes-bill-targeting-midnight-obama-regs>. The Congressional Review Act is used rarely and usually on a case-by-case basis with individual regulations. As the source notes, congressional Republicans seek a single-vote rescinding of all Obama midnight regulations. Targeted rules include the Bureau of Land Management Venting and Flaring Rule, the Five-Year Plan for Offshore Oil and Gas Drilling, and the Department of the Interior's Blowout Prevention and Well Control.

4 "Trump Outlines Plan for American Energy Renaissance," The Official Website of Donald J. Trump for President, September 22, 2016, <https://www.donaldjtrump.com/press-releases/trump-outlines-plan-for-american-energy-renaissance>.

5 On Trump's possible moves on Keystone XL, see: Jennifer A Dlouhy, "Trump Aides Eye Reviving Keystone by Rescinding LBJ's Order," *Bloomberg Markets*, November 23, 2016, <https://www.bloomberg.com/news/articles/2016-11-23/trump-aides-eye-reviving-keystone-by-rescinding-lbj-s-order>. On the Dakota Access Pipeline, see: Kris Maher and Will Connors, "Trump Team Pledges Support for Completing Blocked Dakota Pipeline," *The Wall Street Journal*, December 5, 2016, <http://www.wsj.com/articles/trump-team-pledges-support-for-blocked-dakota-pipeline-1480960849>.

6 "Trade Reform," Official Website of President Elect Donald J. Trump, <https://www.greatagain.gov/policy/trade-reform.html>.

7 "Trump blasts FTA with Korea as destroyer of jobs in US auto industry," *The Korea Times*, October 30, 2016, http://www.koreatimes.co.kr/www/news/nation/2016/10/120_217074.html.

8 Geoff Dyer, "Donald Trump threatens to pull US out of WTO," *Financial Times*, July 24, 2016, <https://www.ft.com/content/d97b97ba-51d8-11e6-9664-e0bdc13c3bef>.

9 Yan Q. Mui and Jim Tankersley, "Trump's new Treasury, Commerce nominees say no 'absolute' tax cut for the wealthy, predict faster economic growth," *The Washington Post*, November 30, 2016, https://www.washingtonpost.com/news/wonk/wp/2016/11/30/trumps-new-treasury-commerce-nominees-say-no-absolute-tax-cut-for-the-wealthy-predict-faster-economic-growth/?utm_term=.8aee91e74b65.

10 Sahil Kapur, "Trump's 'retribution' tax stirs legal questions, GOP resistance," December 5, 2016, *The Chicago Tribune*, <http://>

level, such policies could destroy global demand by disrupting value chains, driving the United States into recession, and inviting a full trade war or at least selective retaliation.¹¹ Similarly, some congressional Republicans have proposed a Border Adjustment Tax (BAT) instead of a tariff system, which would tax imports while making exports tax-free. A BAT would have major implications for US businesses and the energy industries. Pure upstream producers and LNG exporters would benefit while US refineries using imported crude would be greatly and adversely affected. A BAT would almost certainly result in substantial increases in the price of consumer goods and the price of gasoline.

Energy markets could be affected in multiple ways. US liquefied natural gas (LNG) exports could be harmed. Currently, LNG exports to countries offering

the United States national treatment are deemed to be in the national interest, rather than requiring a special determination.¹² However, termination of Korea's status as a free trade agreement nation would remove its status as a nation for which LNG exports are deemed to be in the national interest. It is concerning that many of the key Trump administration transition leaders at the United States Trade Representative (USTR) opposed liberalizing LNG exports because of their belief (widely disproven) that exports would adversely impact domestic electricity prices.¹³

A notice to withdraw from NAFTA could freeze upstream investment in Mexico and destabilize its economy, crushing demand for US petroleum products, light oil, natural gas, energy services, and

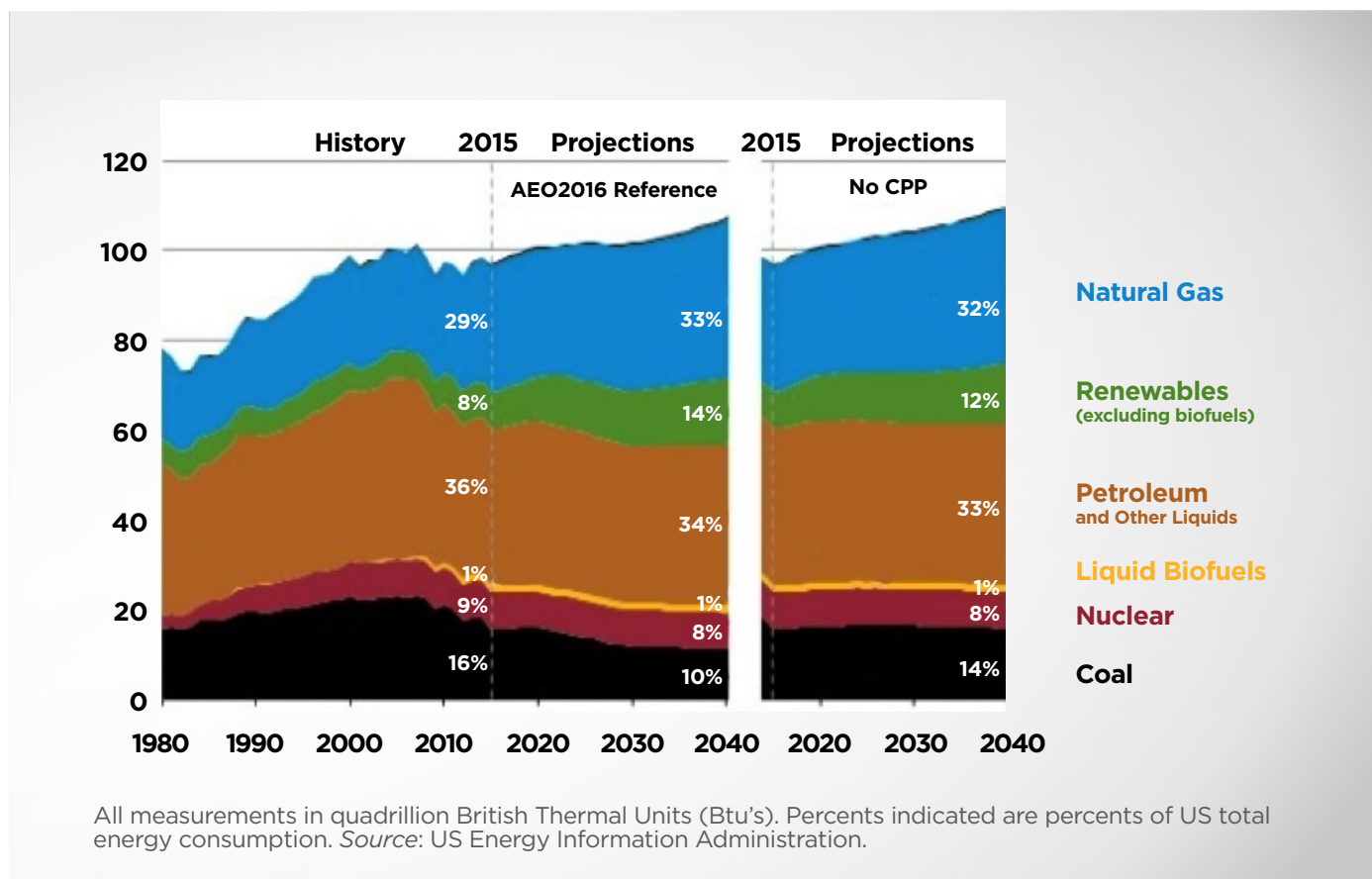
www.chicagotribune.com/business/ct-trump-retribution-tax-20161205-story.html.

11 Marcus Noland, Gary Clyde Hufbauer, Sherman Robinson, and Tyler Moran, "Assessing Trade Agendas in the US Presidential Campaign," The Peterson Institute for International Economics, <https://piie.com/system/files/documents/piieb16-6.pdf>.

12 "Principles of the trading system," The World Trade Organization, https://www.wto.org/english/thewto_e/whatis_e/tif_e/fact2_e.htm.

13 Daniel R. DiMicco, "Guest Commentary: Natural gas exports would halt US manufacturing comeback," Fuel Fix, April 23, 2013, <http://fuelfix.com/blog/2013/04/23/commentary-natural-gas-exports-would-halt-us-manufacturing-comeback/?cmpid=eefl>.

Figure 1. US Primary Energy Consumption



power generation equipment. Actual withdrawal from NAFTA would remove investor protections that are essential to US investment in Mexico's deep water and other energy auctions.

Uncertainty ahead

It is early yet to predict Mr. Trump's policies and outcomes. They will be shaped by White House and agency personnel; influenced by Congress, including Republicans who favor trade and some level of environmental protection; mitigated by the US judicial system; ameliorated by the long term investment vision and risk tolerance of US utilities; and may face intense backlash from citizens, partner nations, and even energy producers. Because of this, it is unlikely that any of Mr. Trump's domestic policy measures will have a material impact on the US fuel mix or global energy markets in the next four years. (In contrast, the effect of these policies on US participation in clean energy innovation, on meeting G-7 goals of global decarbonization by 2100, on the Paris agreement's target of no more than 2 degrees warming above pre-industrial levels, and on investment in climate science could be dramatic).

The economic drivers that led to the retirement of coal fired generation and the rise of renewables deployment (low cost gas and the dramatic decline in the cost of wind and solar equipment) preceded the Clean Power Plan (CPP). With the Investment Tax Credit (solar) and Production Tax Credit (wind) in place until 2020, twenty-nine states utilizing renewable portfolio standards, California and the northeast organized into emissions trading regimes, and the nine states joining a Zero Emission Vehicle Initiative, the United States may reach its Paris Agreement target on a business-as-usual basis.¹⁴

The ability of the Trump agenda to impact oil and gas production is highly uncertain. Easing GHG regulation and pipeline permitting are bullish for US (and Canadian) oil and gas production, but therefore

bearish for global oil and gas prices. License to operate remains a challenge for shale operators and pipeline builders in the United States. Recent defeats of oil and gas pipeline projects in New Hampshire, Georgia, Pennsylvania, and, for now, North Dakota, have been based on state-level opposition.¹⁵ Easier federal permitting may only intensify action at the local level.¹⁶

“Uncertainty over these policies cannot help but inhibit new investment in oil, gas, and power until the pathway is clearer or the price signal grows stronger.”

Energy production will not grow beyond the capacity of infrastructure to evacuate it.

Uncertainty over these policies cannot help but inhibit new investment in oil, gas, and power until the pathway is clearer or the price signal grows stronger. In contrast, the energy markets are more likely to be disrupted by the Trump administration's management of the assortment of national security risks it will inherit over the next twelve months and the impacts of Mr. Trump's proposed foreign policy realignments. These realignments—a more kinetic posture on fighting the Islamic State of Iraq and al-Sham (ISIS), closer alignment with Russia in Syria and possibly North Africa, a more conflictual relationship with China, more transactional relations with traditional European and Asian security partners, and a harder line on Iran sanctions—may disrupt energy production, demand, and energy transit, and create extreme price volatility.

¹⁴ Alan J. Krupnick, “Energy Policy and a Trump Administration,” Resources For The Future, November 30, 2016, http://www.rff.org/files/document/file/RFF-PB-16-13_0.pdf.

¹⁵ Meenal Vamburkar and Jennifer A. Dlouhy, “‘Pipeline Purgatory’ the Goal as Activists Take Fight Local,” *Bloomberg Markets*, November 29, 2016, <https://www.bloomberg.com/news/articles/2016-11-30/-pipeline-purgatory-the-goal-as-u-s-activists-take-fight-local>.

¹⁶ Hannah Northey, “Public barred from meeting as protests loom,” *EnergyWire*, May 19, 2016, <http://www.eenews.net/stories/1060037532>.

EMBEDDED NATIONAL SECURITY RISKS

Geopolitical crises impact energy markets when they disrupt production, disrupt transportation flows, raise insurance rates, or reduce demand. Risks that have the potential to impact energy trade in 2017 can be categorized into three categories: conflict risks, failed state risks, and non-state actor risks.

Conflict risks

CHINA. China is prone to testing new US presidents¹⁷ and Mr. Trump seems intent on testing, if not provoking, China.¹⁸ A miscalculation on either side creates a non-negligible risk of military conflict. The standoff over fishing rights in Scarborough Shoals begun in April 2012 has not been resolved, despite a ruling by the International Court of Justice in favor of the Philippines this past July.¹⁹ A Chinese attempt to create new islands or landing strips could be met with an aggressive rebuff, at minimum making the area a no-go zone for shipping. Taiwan has already become a flashpoint based on President-elect Trump's unprecedented call with Taiwanese President Tsai; China might test how far Trump is willing to go in defense of Taiwan. Either scenario would result in major impacts on oil and gas transit due to insurance cost spikes and closed shipping lanes.

RUSSIA. President Putin has made no secret of his desire to reverse the dissolution of the Soviet Union

and expand Russia's sphere of influence.²⁰ In addition to its aggression in Ukraine and Crimea, the Putin regime has extended its influence in the Middle East through the Syrian conflict, and most recently brokered a fragile ceasefire directly with Turkey, excluding the US entirely.²¹ These events suggest that Russia will continue to grow its sphere of influence if left unchecked to the detriment of US strategic interests. While frozen conflicts in Ukraine, Georgia, Nagorno-Karabakh, and Transnistria are obvious examples, Russia has also increased the tempo of its campaign to intimidate the Baltic and Central European states in the past three years.²² Recent aggressive actions, notably the dangerous flight maneuvers over the USS Donald Cook in April²³ and the deployment of Bastian-style anti-ship missile launchers in the Kaliningrad enclave,²⁴ suggest that Russia's muscular posturing along its borders will accelerate. European security experts are focused on a potential move by Russia to exploit succession challenges in Uzbekistan and Kazakhstan,²⁵

17 Ryan Pickrell, "Is Trump Ready For China's Inevitable Test Of American Power?" *The Daily Caller*, November 27, 2016, <http://dailycaller.com/2016/11/27/is-trump-ready-for-chinas-inevitable-test-of-american-power/>.

18 Anne Gearan, Philip Rucker, and Simon Denyer, "Trump's Taiwan phone call was long planned, say people who were involved," *The Washington Post*, December 4, 2016, https://www.washingtonpost.com/politics/trumps-taiwan-phone-call-was-weeks-in-the-planning-say-people-who-were-involved/2016/12/04/f8be4b0c-ba4e-11e6-94ac-3d324840106c_story.html?tid=a_inl&utm_term=.1592d14fef45.

19 Ankit Panda, "International Court Issues Unanimous Award in Philippines v. China Case on South China Sea," *The Diplomat*, July 12, 2016, <http://thediplomat.com/2016/07/international-court-issues-unanimous-award-in-philippines-v-china-case-on-south-china-sea/>.

20 "Address by President of the Russian Federation," The Kremlin, March 18, 2014, <http://en.kremlin.ru/events/president/news/20603>.

21 Suleiman Al-Khalidi, "Syria rebels freeze talks on Russia-backed peace conference due to ceasefire violations," *The Independent*, January 2, 2016, <http://www.independent.co.uk/news/world/middle-east/syria-rebels-peace-negotiations-russia-moscow-kazakhstan-iran-a7506486.html>.

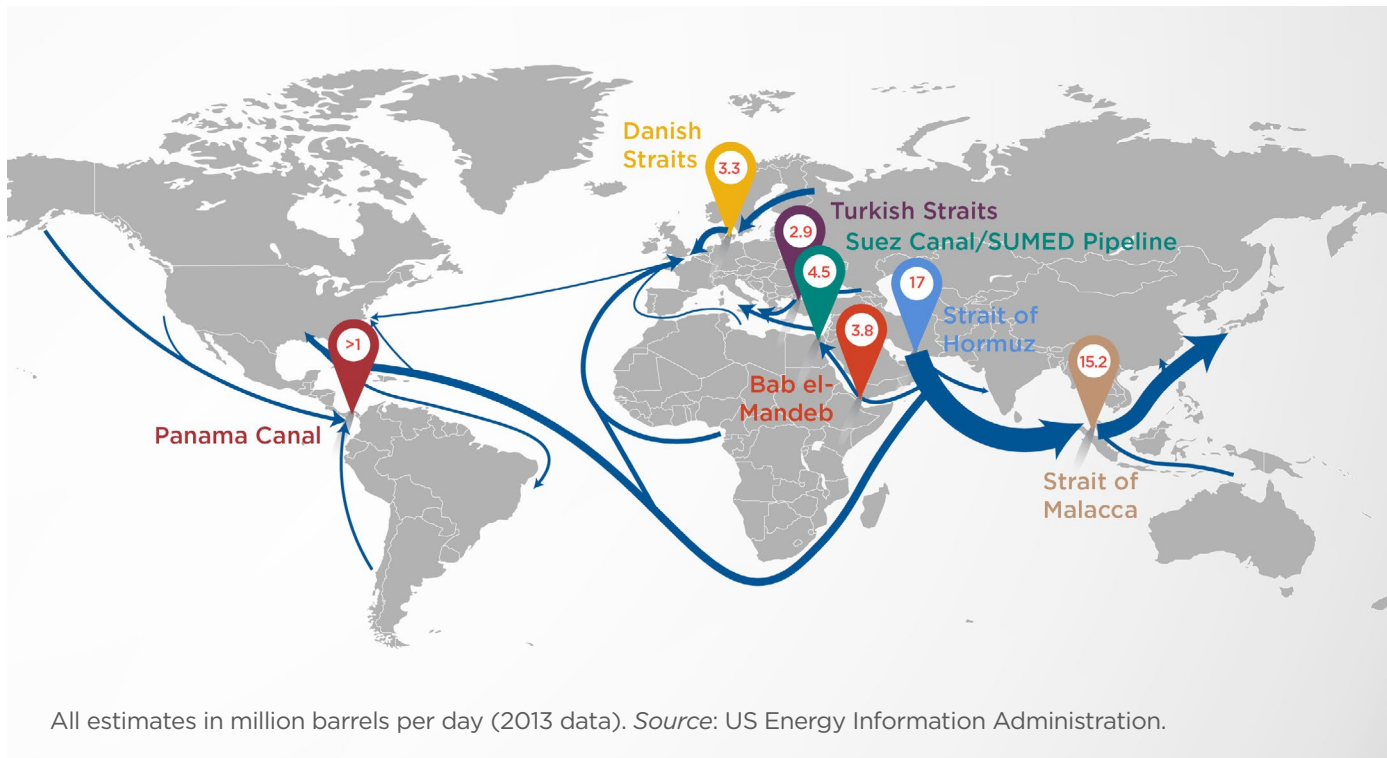
22 Since the annexation of Crimea in March 2014, Russia has employed "hybrid warfare" tools to undermine liberal, pro-Western governments throughout Eastern Europe. See: Andrew Monaghan, "Putin's Way of War: The 'War' In Russia's 'Hybrid Warfare,'" *Parameters*, 45(4) Winter 2015-16, http://www.strategicstudiesinstitute.army.mil/pubs/parameters/issues/Winter_2015-16/9_Monaghan.pdf. There is also evidence that Russia is actively supporting Pro-Russian parties and charities throughout Eastern Europe but also in the West. See: Peter Foster and Matthew Holehouse, "Russia accused of clandestine funding of European parties as US conducts major review of Vladimir Putin's strategy," *The Telegraph*, January 16, 2016, <http://www.telegraph.co.uk/news/worldnews/europe/russia/12103602/America-to-investigate-Russian-meddling-in-EU.html>.

23 "USS Donald Cook buzzed again by Russian jets in Baltic," CBS News, April 13, 2016, <http://www.cbsnews.com/news/uss-donald-cook-buzzed-again-by-russian-jets-in-baltic/>.

24 Nathan Hodge, "Russia's Buildup in Kaliningrad to Test Donald Trump on NATO," *The Wall Street Journal*, December 9, 2016, <http://www.wsj.com/articles/russias-buildup-in-kaliningrad-to-test-donald-trump-on-nato-1481279401>.

25 See, for example, Dmitriy Nurullayev, "Uzbekistan's Succession

Figure 2. Daily Transit Volumes Through World Maritime Oil Chokepoints



while US experts are focused on a potential Russian move on the Baltics.²⁶ Russia could misread Trump’s campaign rhetoric on a closer relationship as a green light to move within Russia’s near abroad. Such a provocation could elicit a forceful response from a Trump administration or, in a more destabilizing scenario, no effective response at all. A Western non-reaction to Russian provocations in the Baltic and Central Asian regions will endanger these states’ independence. Even if a Trump administration does not react to a Russian provocation, the US Congress and European Union (EU) might—with intensified sanctions impacting Russian oil and gas flows, EU oil and gas imports, and Caspian oil and gas flows.²⁷

NORTH KOREA. The top conflict risk the new administration will face is North Korea. The situation cannot remain static. In the past twelve months North Korea has tested nuclear weapons and missiles at an unprecedented rate, including what it claims was a hydrogen bomb, short and mid-range weapons mounting capabilities sufficient to target Japan or South Korea, and submarine-launched ballistic missiles (SLBM), one of which reached Japan’s Air Defense Identification Zone (ADIZ) for the first time.²⁸ Its fifth and most powerful nuclear test on September 9, 2016, launched an intermediate-range ballistic missile into high altitude, capable of reaching American bases in the Pacific territories, suggesting advances in the KN-08 program to develop an intercontinental ballistic missile that could reach the continental United States.²⁹

Question Is Russia’s Strategic Opportunity,” *The Diplomat*, September 4, 2016, <http://thediplomat.com/2016/09/uzbekistans-succession-question-is-russias-strategic-opportunity/>.

26 See, for example, Catherine Tunney, “Baltic countries ‘justified’ in concerns over Putin, says top NATO general,” *CBC News*, November 18, 2016, <http://www.cbc.ca/news/politics/petr-pavel-nato-putin-baltics-1.3857362>.

27 There is mounting evidence that the US Congress will not support reconciliatory measures toward Russia, and key Senate foreign affairs leaders on both sides of the aisle have said they will oppose such an agenda. A unified, bipartisan opposition to Trump’s Russia policies could force the administration to reconsider its proposals. See Karen DeYoung, “A Trump administration thaw with Russia is ‘unacceptable,’ McCain says,” *The Washington Post*, November 15, 2016, https://www.washingtonpost.com/world/national-security/a-trump-administration-thaw-with-russia-is-unacceptable-mccain-says/2016/11/15/a3b5c4da-ab5a-11e6-8b45-f8e493f06fcd_story.html?utm_term=.1999f2bd6892. See also: Michael Crowley, “Lawmakers alarmed Exxon chief could empower Putin,” *Politico*, December 10, 2016, <http://www.politico.com/story/2016/12/rex-tillerson-state-lawmakers-232468>.

administration-thaw-with-russia-is-unacceptable-mccain-says/2016/11/15/a3b5c4da-ab5a-11e6-8b45-f8e493f06fcd_story.html?utm_term=.1999f2bd6892. See also: Michael Crowley, “Lawmakers alarmed Exxon chief could empower Putin,” *Politico*, December 10, 2016, <http://www.politico.com/story/2016/12/rex-tillerson-state-lawmakers-232468>.

28 Scott A. Snyder, “North Korea’s Testing Decade,” *The Council on Foreign Relations*, October 7, 2016, <http://www.cfr.org/north-korea/north-koreas-testing-decade/p38378>. See also: Mike Mullen and Sam Nunn, “A Sharper Choice on North Korea: Engaging China for a Stable Northeast Asia,” *The Council on Foreign Relations*, September 2016, <http://www.cfr.org/north-korea/sharper-choice-north-korea/p38259>.

29 William Broad, “North Korea Will Have the Skills to Make a

While North Korea is not an energy producer, South Korea and Japan are major seaborne importers of oil products and LNG. A heightened carrier presence, much less an actual conflict, could impact this trade. This is not a small risk. South Korea has requested that the US deploy a Terminal High Altitude Area Defense (THAAD) system³⁰ (which China objects to), has considered the use of theater nuclear weapons if necessary,³¹ and has not ruled out a preemptive strike on North Korea's leadership.³² Japan has asked for a three-way summit between themselves, South Korea, and China and begun examining a THAAD system purchase as well.³³

The risks here are multiple. One is increased tension with China over pressure on North Korea.³⁴ A second is a US show of force that could raise tensions and impede or raise the costs of shipping to Korea and Japan.³⁵ Third, a US failure to act in the face of a North Korean provocation could lead to unilateral South Korean action or a call for full nuclearization of the peninsula. In most of these scenarios oil and gas export to China, Korea, and Japan could be disrupted, or suffer much higher insurance risk premiums.

Failed state risks

VENEZUELA. In October 2016, the Venezuelan government effectively suspended the national

Nuclear Warhead by 2020, Experts Say," *The New York Times*, September 9, 2016, <http://www.nytimes.com/2016/09/10/science/north-korea-nuclear-weapons.html>.

30 Christine Kim and Ju-min Park, "U.S. to deploy THAAD anti-missile battery in South Korea in 8-10 months: commander," *Reuters*, November 4, 2016, <http://www.reuters.com/article/us-southkorea-usa-thaad-idUSKBN12Z028>.

31 "South Korea," The Nuclear Threat Initiative, <http://www.nti.org/learn/countries/south-korea/>.

32 Julian Ryall, "South Korea threatens to reduce Pyongyang 'to ashes,'" *The Telegraph*, September 11, 2016, <http://www.telegraph.co.uk/news/2016/09/11/seoul-threatens-to-reduce-pyongyang-to-ashes/>.

33 "Japan and China agree to seek three-way summit with South Korea despite Park scandal uncertainties," *The Japan Times*, November 30, 2016, <http://www.japantimes.co.jp/news/2016/11/30/national/politics-diplomacy/japan-china-agree-seek-three-way-summit-south-korea-despite-park-scandal-uncertainties/#.WFBMh3fMyi4>.

34 The United States has long pressed China to dramatically curtail trade with North Korea; Chinese banks finance a considerable amount of trade and current sanctions have done little to impact North Korea's economy. China has taken some actions; most recently, China supported new UN sanctions that will require a 60 percent reduction of its coal imports from North Korea—one of very few sources of hard currency for the North Korean economy. Nevertheless, these and earlier measures may not be enough to satisfy US demands or alter North Korean behavior.

35 Daniel Altman, "The Economics of War with North Korea," *Foreign Policy*, April 15, 2013, <http://foreignpolicy.com/2013/04/15/the-economics-of-war-with-north-korea/>.

referendum effort, ensuring that President Maduro's Socialist party will remain in power and that he will finish his term.³⁶ The social and economic crisis in Venezuela will intensify; the prospect of workers' strikes and a full-scale humanitarian crisis are growing as basic food and goods shortages deepen. Inflation will continue to run rampant at possibly 1600% in 2017,³⁷ and domestic oil production could fall 150,000 barrels per day (b/d) in early 2017 as the existing facilities of PDVSA, the state-owned oil and natural gas company, lack support for standard maintenance. A complete breakdown of the economy could result in a major supply disruption, possibly 1.5 million barrels per day (b/d), with significant spillover impacts for neighboring linked economies, particularly Colombia.

NIGERIA. Nigeria is likely to face increased attacks on its exports, disrupted production, and dim prospects for its long awaited energy sector reforms. Low oil prices, a summer spike in militant activity in the Niger Delta cut Nigeria's production by 750,000 b/d to 1.4 million b/d (a 30 year low) and put great pressure on Nigeria's budget.³⁸ For policy and fiscal reasons the Delta peace talks fell apart in late November in the wake of renewed attacks, and negotiations between the government and militants are presently at a standstill.³⁹

Further, the Nigerian government's payments system to disincentivize militancy in the region has become plagued by corruption allegations while the major Delta militant groups are accusing the government of renegeing on compensation and retraining funds promised in an earlier amnesty program.⁴⁰ Despite the offer of talks, radical Nigerian militias have resumed attacks on the Abura pipeline in the Delta region.⁴¹ The Niger Delta Avengers have continued attacks on the Forcados, Escravos, and Nembe Creek pipelines during the negotiations.⁴² In the wake of renewed violence and

36 "Venezuela's Maduro recall referendum drive suspended," BBC News, October 21, 2016, <http://www.bbc.com/news/world-latin-america-37724322>.

37 Ian Tally, "Venezuela's Inflation Is Set to Top 1,600% Next Year," *The Wall Street Journal*, July 18, 2016, <http://blogs.wsj.com/economics/2016/07/18/venezuelas-inflation-is-set-to-top-1600-next-year/>.

38 "Crude oil disruptions in Nigeria increase as a result of militant attacks," US Energy Information Administration, August 18, 2016, <http://www.eia.gov/todayinenergy/detail.php?id=27572>.

39 "Peace talks with oil rebels deadlocked," *Pulse Nigeria*, November 24, 2016, <http://pulse.ng/local/in-niger-delta-peace-talks-with-oil-rebels-deadlocked-id5802383.html>.

40 "Nigeria oil infrastructure threatened by cuts to amnesty fund," *Financial Times*, May 9, 2016, <https://www.ft.com/content/6d7f2766-15bf-11e6-b197-a4af20d5575e>.

41 Festus Ahon and Perez Brisibe, "Militants Blow Up NPDC Pipeline in Delta," *Vanguard*, November 27, 2016, <http://www.vanguardngr.com/2016/11/militants-blow-npdc-pipeline-delta/>.

42 "Nigerian oil output suffers large outages," *Reuters*, May 11, 2016,

splits within the Delta militant groups, there are signs that the Buhari government may cease comprehensive negotiations altogether.⁴³ The government has made recent law enforcement appointments, especially of a northerner (from outside the Delta region) as the new commander of the Nigerian military's anti-militancy campaign Operation Delta Safe, that suggest a more strident government stance on militancy;⁴⁴ however, the reality of the budget shortfall suggests that a genuine military crackdown may not be possible.⁴⁵ A more strident government posture and the termination of payments make more oil infrastructure attacks likely. Despite the best intentions of the relatively new Buhari government, the prospects of sector reform (which range from tax and royalty changes to potential privatization of the Nigerian National Petroleum Corporation) remain remote. Entrenched interests render an enduring agreement difficult even in favorable circumstances.

LIBYA. The Libyan state remains divided as the 2015 Libyan Political Agreement has failed to resolve entrenched political divisions.⁴⁶ Oil production was restored this year in the wake of the temporary peace effort when Eastern-based General Khalifa Haftar and Western militias agreed to open export terminals and share revenues while they coordinated to drive the Islamic State out of Sirte. Now that that goal is accomplished, however, conflict among Haftar, other militia leaders, and the Western-backed Libyan Government of National Accord (GNA) is likely to resume.⁴⁷ The prospect of renewed internal conflict puts Libya's recent oil export recovery (now at 600,000 b/d,

doubled from 300,000 b/d since early September) at risk.⁴⁸ A Trump administration may consider realignment in Libya, siding with Russia, Egypt, and the UAE behind Haftar as a "strongman" capable of stabilizing the country and suppressing jihadists.⁴⁹ A battle to determine leadership is likely to re-shutter Libya's export terminals and could place the United States at odds with current UN led efforts at reconciliation, with uncertain impact on the legality of oil exports.

Nonstate risks

ISIS. The Islamic State remains a global threat, especially in Iraq and Syria. Mr. Trump has promised a much more aggressive approach to combating ISIS, although with no details to date.⁵⁰ The risk here is of heightened ISIS attacks on Iraqi infrastructure, spillover into Algeria and increased pressure on Saudi Arabia.

Once pushed out of Mosul (and Sirte), the Islamic State will likely regroup and form operative cells that could target southern fields or Iraq's main export pipeline. Algeria has suffered two attacks on its infrastructure in recent years (In Amenas near the Libyan border and the Krechba facility).⁵¹ With a looming succession crisis, a young and restive population, and borders more extensive than it can effectively police, it remains a vulnerable target. Algeria supplies approximately 50 billion cubic meters of gas to Europe⁵² and 540,000 b/d of oil primarily to Europe.⁵³

<http://af.reuters.com/article/commoditiesNews/idAFL5N18D5B3>.

43 Specifically, the Federal Government has not responded to Niger Delta requests for a military withdrawal from the region, and there are rumors of a military buildup in some parts of the region. See Emma Amaize and Perez Brisibe, "N-Delta leaders to Buhari: The boys have stopped bombing, let us talk now," *Vanguard Media, Nigeria*, December 11, 2016, <http://www.vanguardngr.com/2016/12/n-delta-leaders-buhari-boys-stopped-bombing-let-us-talk-now/>.

44 "New Commander named for Operation Delta Safe," *The Nigerian Observer*, November 18, 2016, <https://nigerianobservernews.com/2016/11/new-commander-named-for-operation-delta-safe/#.WFFrLHeZOi4>.

45 Paul Carsten and Ulf Laessing, "UPDATE 2-Nigerian deficit to rise as Buhari presents record budget," *Reuters*, December 14, 2016, <http://www.reuters.com/article/nigeria-budget-idUSL5N1E941S>.

46 "The Libyan Political Agreement: Time For A Reset," International Crisis Group, November 4, 2016, <https://www.crisisgroup.org/middle-east-north-africa/north-africa/libya/libyan-political-agreement-time-reset>. We applaud and recommend this ICG analysis for its tremendously insightful commentary on the complex situation in Libya at present.

47 Eric Schmitt, "ISIS Remains Threat in Libya Despite Defeat in Surt, U.S. Officials Say," *The New York Times*, December 8, 2016, <http://www.nytimes.com/2016/12/08/us/politics/libya-isis-sirte.html>. Note: Surt is an alternative spelling of Sirte based on a differing translation.

48 "Oil Zone Fighting Threatens Libya with Economic Collapse," International Crisis Group, December 14, 2016, <https://www.crisisgroup.org/middle-east-north-africa/north-africa/libya/oil-zone-fighting-threatens-libya-economic-collapse>. Oil market analysts have noted that stability in the Oil Crescent (terminals which are currently under control of Gen. Haftar) is crucial to continuing to accelerate Libya's oil exports to pre-war levels. Given the inherent political instability in Libya, this uptick in exports is unlikely to last.

49 Karim Mezan, "A Shift on Policy Towards Libya?" *The Atlantic Council*, December 5, 2016, <http://www.atlanticcouncil.org/blogs/menasource/a-shift-on-policy-towards-libya>. This resource is one analysis of what a shift in US policy towards Haftar might look like and what political options a new US administration could consider.

50 Donald J. Trump, "Understanding the Threat: Radical Islam and the Age of Terror," Speech at Campaign Rally in Youngstown, Ohio, April 15, 2016, https://assets.donaldjtrump.com/DJT_Radical_Islam_Speech.pdf.

51 Umberto Bacchi, "Algeria: Rocket attack hits BP Krechba gas plant," *International Business Times*, March 18, 2016, <http://www.ibtimes.co.uk/algeria-statoil-says-krechba-gas-plant-attacked-explosives-1550283>.

52 Lamine Chikhi, "Algeria's gas exports to EU set to rise 15 percent in 2016: official," *Reuters*, May 4, 2016, <http://www.reuters.com/article/us-algeria-energy-idUSKCN0XVOUG>.

53 "Algeria," US Energy Information Administration, <https://www.eia.gov/beta/international/analysis.cfm?iso=DZA>.



Peshmerga fighters on a T-55 tank outside of Kirkuk, Iraq in June 2014. *Photo credit: Boris Niehaus/Wikimedia*

A major extremist attack in Saudi Arabia remains a possibility; the Saudi Ministry of the Interior recently released a report acknowledging 128 terrorist operations in the last fifteen years that killed or injured as many as 1,147 Saudis and expatriates in spite of intensive internal counterterrorism efforts.⁵⁴ On July 4, ISIS claimed responsibility for bombing attacks in three Saudi cities.⁵⁵ In late October, Islamic State operatives were arrested in Saudi Arabia and alleged to have been planning a car bombing.⁵⁶ This risk could grow if President Trump fails to reaffirm the US policy to defend the Gulf states against aggression, known as the Carter Doctrine.⁵⁷

PKK. In the wake of the July 2016 coup attempt, President Recep Tayyip Erdogan has initiated a

national crackdown on internal dissent. He appears to have largely abandoned peace initiatives with the militant Kurdistan Worker's Party (PKK), who have been increasingly engaged in fighting in the Syrian Civil War. The breakdown in the peace efforts risks supply disruptions on multiple fronts: by the PKK on pipelines that run through Turkey, or by ISIS forces on the Kurdistan Regional government.

CYBER. There is growing evidence that nonstate actors have access to destructive cyber attack capabilities and are increasingly willing to employ them against the US and its interests.⁵⁸ In November, a Shamoon-style data-clearing malware attack was used against the Saudi General Authority of Civil Aviation, damaging thousands of computer systems.⁵⁹ There has been further evidence of recent government-wide computer attacks and hacks of Saudi banking systems, likely staged from outside the country.⁶⁰ Likewise, both German and South Korean defense and security services have issued public warnings on

54 Issa Al-Shamani, "More than 128 terrorist operations in Kingdom in 15 years," *Saudi Gazette*, December 7, 2016, <http://saudigazette.com.sa/saudi-arabia/128-terrorist-operations-kingdom-15-years/>.

55 Ben Hubbard, "Suicide Bombings Hit 3 Cities in Saudi Arabia, One Near a Holy Site," *The New York Times*, July 4, 2016, <http://www.nytimes.com/2016/07/05/world/middleeast/saudi-arabia-us-consulate-kuwait.html>.

56 "Saudi Authorities Identify Three Terror Cells," *Al Arabiya English*, October 30, 2016, <http://english.alarabiya.net/en/News/middle-east/2016/10/30/Saudi-Arabia-foils-planned-terrorist-attack-near-football-stadium-.html>.

57 Eric Schmitt, "A President Trump Excites, and Worries, Persian Gulf Leaders," *The New York Times*, December 12, 2016, <http://www.nytimes.com/2016/12/12/world/middleeast/trump-persian-gulf-policy-egypt-iran-syria.html>. The Carter Doctrine originates from President Jimmy Carter's 1980 State of the Union address, where he committed to the military protection of US strategic energy interests in the Gulf region. Although originally directed at the USSR, the same policy can ostensibly be directed at IS and other nonstate threats today.

58 James R. Clapper, "Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community," Senate Armed Services Committee, February 26, 2015, https://www.dni.gov/files/documents/Unclassified_2015_ATA_SFR_-_SASC_FINAL.pdf.

59 Jim Finkle, Tom Finn, and Jeremy Wagstaff, "Shamoon virus returns in Saudi computer attacks after four-year hiatus," *Reuters*, December 1, 2016, <http://www.reuters.com/article/us-cyber-saudi-shamoon-targets-idUSKBN13Q4AX>.

60 Michael Riley, Glen Carey, and John Fraher, "Destructive Hacks Strike Saudi Arabia, Posing Challenge to Trump," *Bloomberg*, December 1, 2016, <https://www.bloomberg.com/news/articles/2016-12-01/destructive-hacks-strike-saudi-arabia-posing-challenge-to-trump>.

the risk of targeted cyber attacks directed by hostile governments in 2017.⁶¹ The Obama administration attempted to address the vulnerabilities of US systems through the Framework for Improving Critical Infrastructure Cyber security,⁶² but struggled to secure widespread buy-in from the private sector on the federal guidelines. In the preview of his agenda, Trump said he would “comprehensively review all of our cybersecurity systems and technology” by initiating a cyber review team,⁶³ but full details are unclear. Given the magnitude of US infrastructure vulnerability to cyberattacks, cyber threats from nonstate actors will continue into the next administration.⁶⁴

State-sponsored cyberattacks

In addition to the risks posed by nonstate cyberattacks, there is a clear threat posed by state-sponsored cyber threats. In recent years, there has been growing evidence that hostile national governments are willing and able to use their cybersecurity services, or affiliated third party groups, to conduct offensive cyber warfare against both state and nonstate actors. The North Korean government has been a leader in the offensive use of cyber, with one of its recent attacks in June 2016 infecting 140,000 computers at 160 South Korean firms and government agencies and successfully stealing 40,000 documents with South Korean defense information.⁶⁵ Russia employed cyber means to cripple the Estonian and Georgian governments ahead of the 2007 and 2008 attacks respectively,⁶⁶ and has only expanded its use of cyber

against pro-Western and EU governments across Europe.⁶⁷

Most recently, the December release of US intelligence information confirms the Russian government’s approval of the Democratic National Convention hacks and other phishing attacks were designed to harm Hillary Clinton’s chances of winning the Presidency.⁶⁸

In late December, President Obama announced an unprecedented response to the cyberattacks, ordering the immediate removal of thirty-five individuals from the United States and indicating that covert steps were also taken to punish Russia for the hackings.⁶⁹ Analysts have repeatedly urged the US government to prepare for foreign governments to become more assertive in their use of cyber offensive measures, and to develop a robust strategy to protect US infrastructure and critical networks.⁷⁰ Most recently, there was evidence of a possible Russian malware attack on a Vermont utility system, suggesting that targeted attacks on critical energy infrastructure are an immediate national security concern.⁷¹ We anticipate that state-sponsored cyber-threats will only grow in severity and frequency during the next administration.

61 For more on German warnings see: Hyacinth Mascarenhas, “German security chief warns of ‘striking increase’ in Russian propaganda and targeted cyberattacks,” *International Business Times*, December 9, 2016, <http://www.ibtimes.co.uk/german-security-chief-warns-striking-increase-russian-propaganda-targeted-cyberattacks-1595645>; For South Korean warnings see: “KISA Predicts More Cyberattacks on S. Korea in 2017,” *Korea Broadcasting System World Radio*, December 6, 2016, http://world.kbs.co.kr/english/news/news_Dm_detail.htm?No=123728.

62 “Framework for Improving Critical Infrastructure Cybersecurity,” National Institute of Standards and Technology, US Department of Commerce, February 12, 2014, <https://www.nist.gov/sites/default/files/documents/cyberframework/cybersecurity-framework-021214.pdf>.

63 “Donald J. Trump Promises Immediate Action on Cybersecurity in His Administration,” *The Official Website of Donald J. Trump for President*, <https://www.donaldjtrump.com/press-releases/donald-j.-trump-remarks-on-cybersecurity>.

64 James R. Clapper, “Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community.”

65 Jack Kim, “North Korea Mounts Long-Running Hack of South Korean Computers, Seoul Says,” *Reuters*, June 13, 2016, <http://www.reuters.com/article/us-northkorea-southkorea-cyber-idUSKCN0YZOBE>.

66 Joe Mullish, “Is Russia Increasingly Relying on Cyber Warfare for Foreign Policy?” *Defense IQ*, October 9, 2014, [http://www.atlanticcouncil.org/blogs/natosource/is-russia-increasingly-](http://www.atlanticcouncil.org/blogs/natosource/is-russia-increasingly-relying-on-cyber-warfare-for-foreign-policy)

relying-on-cyber-warfare-for-foreign-policy.

67 Notably, German security services warned Germany’s political parties of hacking, particularly originating through phishing and malware schemes, earlier in September. See: “Hackers lurking, parliamentarians told,” *Deutsche Welle*, September 20, 2016, <http://www.dw.com/en/hackers-lurking-parliamentarians-told/a-19564630>.

68 Scott Detrow, “Obama On Russian Hacking: ‘We Need To Take Action. And We Will,’” *NPR*, December 15, 2016, <http://www.npr.org/2016/12/15/505775550/obama-on-russian-hacking-we-need-to-take-action-and-we-will>. It is particularly notable that this attack was intended to not simply confuse or muddle a democratic process, but to deliberately support a particular candidate perceived as more friendly to Russian national interests.

69 Lauren Gambino, Sabrina Siddiqui, and Shaun Walker, “Obama expels 35 Russian diplomats in retaliation for US election hacking,” *The Guardian*, December 30, 2016, <https://www.theguardian.com/us-news/2016/dec/29/barack-obama-sanctions-russia-election-hack>. It should be noted that the United States previously utilized cyber means to achieve strategic objectives, such as employing Stuxnet against the Iranian nuclear program. The United States may ultimately choose to use cyber more actively in its own interests in the coming years.

70 For a more in-depth analysis on the impact of cyberattacks on the energy industries and infrastructure, see: Elizabeth Rosenberg, David L. Goldwyn, and Robert McNally, “Increasing Prosperity, Resource Stewardship, and National Security: An Energy Policy Strategy for the Next President,” *The Center for New American Security*, October, 17, 2016, <https://www.cnas.org/publications/reports/increasing-prosperity-resource-stewardship-and-national-security>.

71 “Vt. utility finds Russian malware,” *E&E News*, January 3, 2016, <http://www.eenews.net/energywire/2017/01/03/stories/1060047720>.

FOREIGN POLICY REALIGNMENTS

During his campaign Mr. Trump promised significant shifts in US foreign policy priorities and strategy with respect to countering the Islamic State, the US-Russian relationship, Iran sanctions, immigration, and trade policy.⁷² Each of these proposals could have profound implications for energy.

A more robust strategy to destroy the Islamic State could involve deeper cooperation with Russia, including a political arrangement that leaves Mr. Assad in power. Without a safe haven or amnesty for Syria's Sunni, Kurdish, and Christian regime targets, this shift potentially intensifies the humanitarian crisis and accelerates refugee flows to Turkey and Europe. Military actions that drive the Islamic State into southern Iraq could also further empower or isolate Kurdish forces, further radicalize Sunni forces, and embolden Turkey, potentially disrupting investment and energy flows from the Kurdistan Regional Government. In Libya, an anti-Islamic State strategy could entail realignment towards General Haftar away from the Libyan GNA.

If a Trump administration pursues a “grand bargain” with Russia in Syria, a deal could include removing some or all of sector-specific sanctions over Russian aggression in Ukraine.⁷³ Removing these energy sanctions would allow a restart on unconventional and Barents Sea exploration. A diminution in US pressure for diversification of EU energy supply could facilitate Russia's plans for Nord Stream 2, the twin pipeline system through the Baltic Sea transporting natural gas from Russia to the EU, and expand its European gas market and LNG export opportunities. If a grand

bargain is achieved at the executive level, President Trump could still face concerted backlash from Congress, as both Republicans and Democrats will oppose any measures that resemble appeasement. Key Republicans, including Senators Lindsay Graham and John McCain, and Democratic Senator Ben Cardin have publicly denounced a grand bargain with President Putin and warned the President-elect against pursuing this course.⁷⁴

“[A] trade policy that includes broad-based tariff increases . . . could result in demand destruction from decreased manufacturing and trade that would ripple across global energy markets.”

Candidate Trump pledged to tear up the Iran nuclear deal.⁷⁵ His new appointees and nominees are divided on whether to abandon the deal or increase pressure on Iran by other means.⁷⁶ A Trump administration could pursue new sanctions on Iran without violating the Joint

72 See “Foreign Policy and Defeating ISIS,” “Immigration,” and “Trade,” The Official Website of Donald J. Trump for President, https://www.donaldjtrump.com/?utm_medium=web&utm_campaign=w_djt1209134516_inauguration-card-splash&utm_source=website&utm_content=inauguration-card-splash-continue.

73 The existing sanctions regime on Russia, led by the United States and the EU, has been augmented over time and includes a range of sanctions on the Russian financial and banking sectors, individuals and officials, businesses, and the energy sector. As of September 2014, the latest round of sanctions included the prohibition of sales of technology and technical assistance to the Russian oil sector, sanctions on Russia's deepwater and shale exploration by its largest companies, and a ban on cooperation with Western oil companies including Exxon Mobil and BP.

74 For Senators McCain and Graham, see: Michael Crowley, “Lawmakers alarmed Exxon chief could empower Putin,” Politico, December 10, 2016, <http://www.politico.com/story/2016/12/rex-tillerson-state-lawmakers-232468>. For Senator Ben Cardin, see: Ben Cardin, “The United States needs to hold Russia accountable for its aggression,” November 17, 2016, *The Washington Post*, https://www.washingtonpost.com/opinions/global-opinions/the-united-states-needs-to-hold-russia-accountable-for-its-aggression/2016/11/16/d4f00c22-ac22-11e6-8b45-f8e493f06fcd_story.html?utm_term=.39393d983206.

75 Dan Bilefsky, “C.I.A. Chief Warns Donald Trump Against Tearing Up Iran Nuclear Deal,” *The New York Times*, November 30, 2016, <http://www.nytimes.com/2016/11/30/world/americas/cia-trump-iran-nuclear-deal.html>.

76 While General Flynn has taken a hardline view on scrapping the Iran Deal altogether, General Mattis has suggested that the Iran Deal, although not ideal, cannot be renegotiated and instead the Trump administration should look for other areas, such as ballistic missile development, where Iran poses a threat and target these instead of the Deal.

Comprehensive Plan of Action (JCPOA); both ballistic missile sanctions and an extension of the Iran Sanctions Act (which passed Congress in early December 2016) could be a ploy to push Iran to withdraw or threaten to withdraw from the agreement. These actions risk a defeat for President Rouhani in Iran's upcoming election on May 19, 2017 and replacement by a more confrontational leader. Actual US withdrawal from the JCPOA would also drive a wedge between the United States and European allies, as well as China and Russia. A formal withdrawal from either side would result in major market disruptions. Iran would openly restart its nuclear program, and the United States would likely stand alone with European countries refusing to support a US withdrawal or respect extraterritorial sanctions. Investors are already hurrying to sign deals with Iran in anticipation of possible future sanctions but actual investment in Iran could be delayed for fear of new US extraterritorial sanctions.⁷⁷

Another key issue for Mr. Trump throughout his campaign was immigration; he specifically promised to deport millions of Mexican and Central American immigrants and construct a new wall along the US-Mexico border.⁷⁸ If he pursues an aggressive deportation policy, it could engender resentment and a populist backlash throughout Latin America. National leaders could resist American energy investment and exports, while a populist response in Mexico could lead to electoral consequences that damage its recent energy reforms.⁷⁹ The second-order consequences

could severely threaten both US and Mexican national security. Rapid mass deportations to Mexico would create a humanitarian crisis in that country, potentially aggravating migration pressures. An overtaxed Mexican government would need to redeploy resources away from returning Central American migrants to their countries, increasing those flows to the southern United States. The heightened security risks would harm cross-border trade and investment in both countries, with near-term losses disproportionately falling on US investors and exporters.⁸⁰

Finally, a trade policy that includes broad-based tariff increases (particularly on Chinese goods) could provoke retaliatory tariffs and accelerated tensions with China. The potential shock to the global economy could result in demand destruction from decreased manufacturing and trade that would ripple across global energy markets.⁸¹ In energy trading specifically, continued low oil prices and sustained OPEC production could (as has occurred sporadically since the late 1990s) trigger NOPEC legislation, a Section 301 anti-dumping claim, or an oil import fee.⁸² US oil, LNG, and gas products exports would all be negatively impacted.

77 See, for example: Thomas Erdbrink and Clifford Krauss, "Iran Races to Clinch Oil Deals Before Donald Trump Takes Office," *The New York Times*, December 8, 2016, <http://www.nytimes.com/2016/12/08/world/middleeast/iran-oil-sanctions-trump.html>.

78 Donald J. Trump, "Pay For The Wall," The Official Website of Donald J. Trump for President, https://assets.donaldjtrump.com/Pay_for_the_Wall.pdf.

79 The bar is high to reverse the energy reforms, which included changes to Mexico's constitution. The two largest political

parties, the PRI and PAN hold majorities in Mexico's legislature. Changing the constitution requires a two-thirds majority in both houses plus ratification by a majority of states. But the current leading candidate for the 2018 elections, Mr. Lopez Obrador from the Morena party, opposes the reforms. As President he could stop licensing new areas, use regulatory tools to deter investment, and otherwise chill investment.

80 "The Hidden Costs of A Possible U.S.-Mexico Trade War," The Wharton School, University of Pennsylvania, August 5, 2016, <http://knowledge.wharton.upenn.edu/article/hidden-costs-possible-u-s-mexico-trade-war/>.

81 David Dollar, "The future of U.S.-China trade ties," The Brookings Institution, October 4, 2016, <https://www.brookings.edu/research/the-future-of-u-s-china-trade-ties/>.

82 Frank Verrastro and David Pumphrey, "'NOPEC' Legislation and U.S. Energy Security," The Center for Strategic and International Studies, June 14, 2011, [https://www.csis.org/analysis/"nopec"-legislation-and-us-energy-security](https://www.csis.org/analysis/).

WILD CARD: THE PARIS AGREEMENT AND RENEWABLE ENERGY

Then-candidate Trump repeatedly discussed reversing Obama-era climate policies. In the immediate term, if the Trump administration reverses course on US GHG reduction and signals withdrawal from the Paris Agreement, the emissions impact will be modest. Market and regional/state regulatory forces are already driving emissions down through coal/gas substitution and renewables growth. Further, the Paris Agreement by itself had little discernible impact on long-term oil and gas demand. Internationally, however, failure to fulfill the US \$3 billion commitment to the Green Climate Fund could be replaced by other countries.⁸³

In this situation, multiple Paris Agreement outcomes are possible.

LIFE SUPPORT. The Agreement could technically survive, but participating countries might fail to implement emissions reductions and thus fail to meet their commitments.

RESISTANCE. At the regional level, individual countries or blocs could impose border taxes to penalize countries (like the United States) that fail to meet their targets. This might preserve some of the Paris target but would still impair the setting of new targets for 2020. Regional development banks might target climate development and resilience as much as possible depending on the US voting share in various regional organizations. China could leverage its soft power and utilize the Asian Investment and Infrastructure Bank (AIIB) to finance gas, nuclear, and modern coal power production. These energy development investments would bolster China's longer term "One Belt, One Road" strategy. China seems intent in keeping its target and the agreement itself.⁸⁴

COLLAPSE. With a signal that the United States will not keep its commitment, or potentially participate in future Conferences of the Parties, countries could withdraw from the Agreement, based on the inequity of having the United States compete in the global economy without taking on a fair share of GHG reduction.

The life support and resistance scenarios seem more likely. Individually, many Paris signatories will continue on a lower-carbon trajectory (with or without Green Climate Fund support) because of domestic political or economic reasons. Countries may pursue reforms (like carbon pricing) and changes to their investment frameworks (like feed-in tariffs) in order to be more attractive to private finance. While less probable, US withdrawal could catalyze another country or private sector entities to replace the United States' planned contributions to climate financing in an effort to isolate the Trump administration.

COMPROMISE. Finally, a compromise scenario within the existing Agreement is possible. The United States could opt to support a more broad-based climate approach that includes carbon sequestration, gas import infrastructure, and nuclear energy in addition to renewables. The United States could then apply its leverage in multilateral development banks to provide credit support for private energy investment within this framework.

The reality, however, is that under any of these scenarios the setting of more ambitious climate targets will not include the United States (before 2020 at least) and will therefore be much more challenging. It will fall to technological change, in battery storage, carbon sequestration, or digitized power management and manufacturing, to meet the Paris goal of less than 2 degrees of total warming.

83 Jean Chemnick, "U.S. climate envoy looks for green lining in Trump administration," ClimateWire, E&E News Publishing, December 8, 2016, <http://www.eenews.net/climatewire/stories/1060046846/search?keyword=Pershing>.

84 See Kang Wu and Jane Nakano, "The Changing Political Economy of Energy in China," The Center for Strategic and International Studies, December 14, 2016, <https://www.csis.org/analysis/changing-political-economy-energy-china>.

ENERGY OUTLOOK

In the near term, energy policy uncertainty and a high potential for geopolitical rebalancing could lead to continued low oil prices and frozen investment across the fossil fuels sectors. These developments could precipitate an oil price shock prior to 2020.

The near term outlook for oil and gas prices is weakening. Despite the November OPEC agreement,⁸⁵ supply continues to grow, and the recent OPEC decision to coordinate a 1.2 million b/d supply cut will not, in the unlikely event it is implemented, significantly dent robust oil inventories.⁸⁶ As noted earlier, an increase in US supply is likely, especially in a climate of more permissive US energy development policies, which may in turn unlock additional Canadian supply if cross-border pipelines are more easily approved. The ongoing, two-year historic cuts in capital expenditure will be sustained by weak oil demand and high inventory levels and supply. The producers that will be hit hardest in this environment are deep-water producers, North Sea producers, and higher-cost Canadian producers. Each of these areas will be impacted by long lead times, pushing production recovery outward to 8-10 years.

Over the long term, however, these dynamics risk a future oil price spike. Although oil inventories are at record highs, global spare capacity remains low compared to total demand.⁸⁷ A major oil disruption or a series of smaller disruptions could eliminate these

inventories in less than a year. The risks in Iraq, Nigeria, Algeria, and Venezuela alone could make a major dent. If demand recovers and supply is disrupted, a price spike could come before 2020. LNG faces a comparable situation; weak global demand for natural gas and excess export capacity has led to an oversupply for the next four to five years and a decline in investment, precipitating a future shortage and price spike by 2022.⁸⁸

The oil and gas industries will not be the only industries affected in an uncertain outlook. Uncertainty over a Trump administration's climate policies could lead to uncertainty about future demand across all types of fuels including renewables. Doubts about climate finance commitments could lead to a renewables investment freeze until the international reaction to the US position becomes clearer.

The greatest shock to energy markets could result from a shift in US global leadership priorities and a major geopolitical rebalancing. If the Trump administration questions the value of the NATO alliance, US force projection in Asia, and moral leadership in areas like democracy and human rights, such a shift could incentivize opportunistic behaviors from other great powers. Major global energy producers would likely shift alliances and increase their defense spending. A shift in US policy toward Russia could lead to Russian hegemony in Central Asia and new US Congressional sanctions. In the Middle East, a retreat from the Carter Doctrine could precipitate a nuclear and/or conventional arms race in the region. In Asia, calls for East Asian self-sufficiency could lead Japan and South Korea to develop nuclear weapons, and a hostile Chinese reaction; Japan already seeks (so far without success) to engage with Russia over disputed islands, and a deal between them could include increased energy cooperation. In Latin America and Africa, investment from other hegemonies, from Russia's Rosneft to the China National Petroleum Corporation, will look increasingly attractive.

85 The November 30 OPEC Deal, as well as the subsequent deal with non-OPEC producer Russia, involved agreed upon "production caps," where Saudi Arabia will offer the biggest cuts of 0.5 million bpd to reduce output 10.06 million bpd; its Gulf allies will contribute a total cut of 0.3 million bpd. Nevertheless, analysts have expressed skepticism that the deal will hold. The full OPEC Deal press release is available here: http://www.opec.org/opec_web/static_files_project/media/downloads/press_room/OPEC%20agreement.pdf.

86 "Short Term Energy Outlook," The US Energy Information Administration, December 6, 2016, <http://www.eia.gov/outlooks/steo/>. The latest Short Term Energy Outlook predicts an average of \$43/barrel prices in 2016 and \$52/barrel prices in 2017, with prices remaining soft in the first half of 2017.

87 Jesse Snyder, "Oil prices slide on U.S. inventory data, but analysts warn there is more to the story," *Financial Post*, August 31, 2016, http://business.financialpost.com/news/energy/oil-prices-slide-on-u-s-inventory-data-but-analysts-warn-there-is-more-to-the-story?__lsa=5a6d-005e.

88 See the International Energy Agency's "Medium-Term Gas Market Report 2016," http://www.iea.org/bookshop/721-Medium-Term_Gas_Market_Report_2016.

CONCLUSION

The potential shift in the nature of US global leadership, the management of conflict, failed state and nonstate actor risks, and the potential US and international backlash to a major shift in US policy on the environment all have the potential to roil global energy markets. While the outcomes are uncertain, this very uncertainty may have a chilling effect on energy investment across the value chain. After two years of historic cuts in capital investment, the global market needs more, not less certainty. A failure to invest today will have damaging economic effects before the end of the decade. All we know for certain now is that we are in for a period of extreme volatility.

FROM LEFT: Former UN Secretary-General Ban Ki Moon, former French Foreign Minister Laurent Fabius, and French President Francois Hollande raise their hands after countries approved a landmark climate accord in Paris at COP21.
Photo credit: US Department of State/Wikimedia



ABOUT THE AUTHOR

David Goldwyn is president of Goldwyn Global Strategies, LLC (GGS), an international energy advisory consultancy, and is of counsel to Sutherland LLC. A thought leader in energy security and extractive industry transparency, he is Chairman of the Atlantic Council Energy Advisory Board and the co-editor of *Energy & Security: Strategies for a World in Transition* (Wilson Center Press/Johns Hopkins University Press 2013). Mr. Goldwyn served as the US State Department's special envoy and coordinator for international energy affairs from 2009 to 2011, reporting directly to Secretary of State Hillary Clinton, where he conceived and developed the Global Shale Gas Initiative and the Energy Governance and Capacity Initiative and led ministerial level energy dialogues with the developing world. Mr. Goldwyn previously served as assistant secretary of energy for international affairs (1999-2001) and as national security deputy to US Ambassador to the United Nations Bill Richardson (1997-98). Mr. Goldwyn is a member of the U.S. National Petroleum Council.

Mr. Goldwyn has been published extensively on topics related to energy security and transparency. He is a co-author of the Center for New American Security 2016 report "Increasing Prosperity, Resource Stewardship, and National Security: An Energy Policy Strategy For the Next President". In 2015, David Goldwyn was the co-director of an Atlantic Council task force chaired by Senators Lisa Murkowski and Mark Warner, which culminated in a report, "Empowering America: How Energy Abundance Can US Global Leadership" (Atlantic Council 2015). He has also authored and co-authored numerous reports on regional energy issues, including: "The Waning of Petrocaribe? Central America and Caribbean Energy in Transition" (Atlantic Council 2016), "Africa's New Energy Producers: Making the Most of Emerging Opportunities" (CSIS, January 2015), Mexico's Energy Reform: Ready to Launch" (Atlantic Council, August 2014), "Uncertain Energy: The Caribbean's Gamble with Venezuela" (Atlantic Council, July 2014), and "Mexico Rising: Comprehensive Energy Reform at Last?" (Atlantic Council December 2013). Mr. Goldwyn is the author of "Drilling Down: The Civil Society Guide to Extractive Industry Revenues and the EITI" (Revenue Watch Institute 2008).

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