

RatingsDirect®

Trump & Energy: The Credit Implications Of The 2016 Election

Primary Credit Analysts:

Michael T Ferguson, CFA, CPA, New York (1) 212-438-7670; michael.ferguson@spglobal.com
Kimberly E Yarborough, New York (1) 212-438-1089; kimberly.yarborough@spglobal.com
Michael V Grande, New York (1) 212-438-2242; michael.grande@spglobal.com
Stephen Scovotti, New York (1) 212-438-5882; stephen.scovotti@spglobal.com
Corinne B Bendersky, San Francisco (415) 371-5091; corinne.bendersky@spglobal.com

Secondary Contacts:

Aneesh Prabhu, CFA, FRM, New York (1) 212-438-1285; aneesh.prabhu@spglobal.com
Michael Wilkins, London (44) 20-7176-3528; mike.wilkins@spglobal.com
Peter Tuving, Stockholm (46) 8-440-5913; peter.tuving@spglobal.com
Jessica Williams, London (44) 20-7176-3884; jessica.williams@spglobal.com

Table Of Contents

Hard Choices

The Art of the Coal Deal

Clean Power Plan On The Ropes?

Where Credits Are Due

The Fracking Debate

Keystone Pipeline

Ethanol

Inauguration

Related Articles

Trump & Energy: The Credit Implications Of The 2016 Election

This month, Donald Trump defeated Hillary Clinton, and the implications for the energy policy of the U.S. could become significant sooner rather than later. In about two months, he will take office with an energy agenda that we expect to differ sharply from that of his predecessor.

Naturally, with so much hanging in the balance, we expect there will be credit consequences, impacting, at a minimum, investor-owned utilities, unregulated generators, renewable developers, midstream entities, and coal companies. As the initial market reaction seems to indicate, there is a sharp divide in how these companies might be impacted, with carbon-intensive issuers possibly faring better under a Trump Presidency than they would have otherwise.

Overview

- While Secretary Clinton's energy policies were geared toward addressing climate change, President-elect Trump's are more agnostic to this issue.
- President-elect Trump has, on occasion, denied anthropogenic climate change and promised to roll back environmental rules, while fashioning himself as a champion of coal workers.
- Additionally, President-elect Trump has weighed in on issues such as new pipeline building, fracking, and ethanol production.
- Still, there are aspects of our current energy policy that are unlikely to change, such as support for renewable tax credits.
- Carbon-intensive generators that would have faced tough choices under a Clinton presidency may prosper, though there are still significant challenges in the industry that have little to do with politics.

Hard Choices

Energy Policy in the U.S. remains heavily complicated. Certainly, most Americans would prefer cleaner, cheaper, and more secure energy, but the way in which the country gets to these desirable outcomes can sometimes hurt local economies, challenge reliability, or become expensive to ratepayers; these adverse impacts can influence voters' political choices, and, in some recent elections, the costs of a more progressive generating grid seem to have outweighed the benefits in voters' minds.

Making matters even more contentious, energy-related politics are seemingly in flux. While energy and the environment weren't historically partisan issues (the Environmental Protection Agency was founded during the administration of Republican Richard Nixon), they have evolved into more divisive topics in Washington circles in recent years, hitting a crescendo in the recently ended electoral season. Even the seemingly settled science behind climate change has become a debate topic, largely divided along party lines; in the wake of election, President-elect Trump controversially selected Competitive Enterprise Institute director and climate change skeptic Myron Ebell to

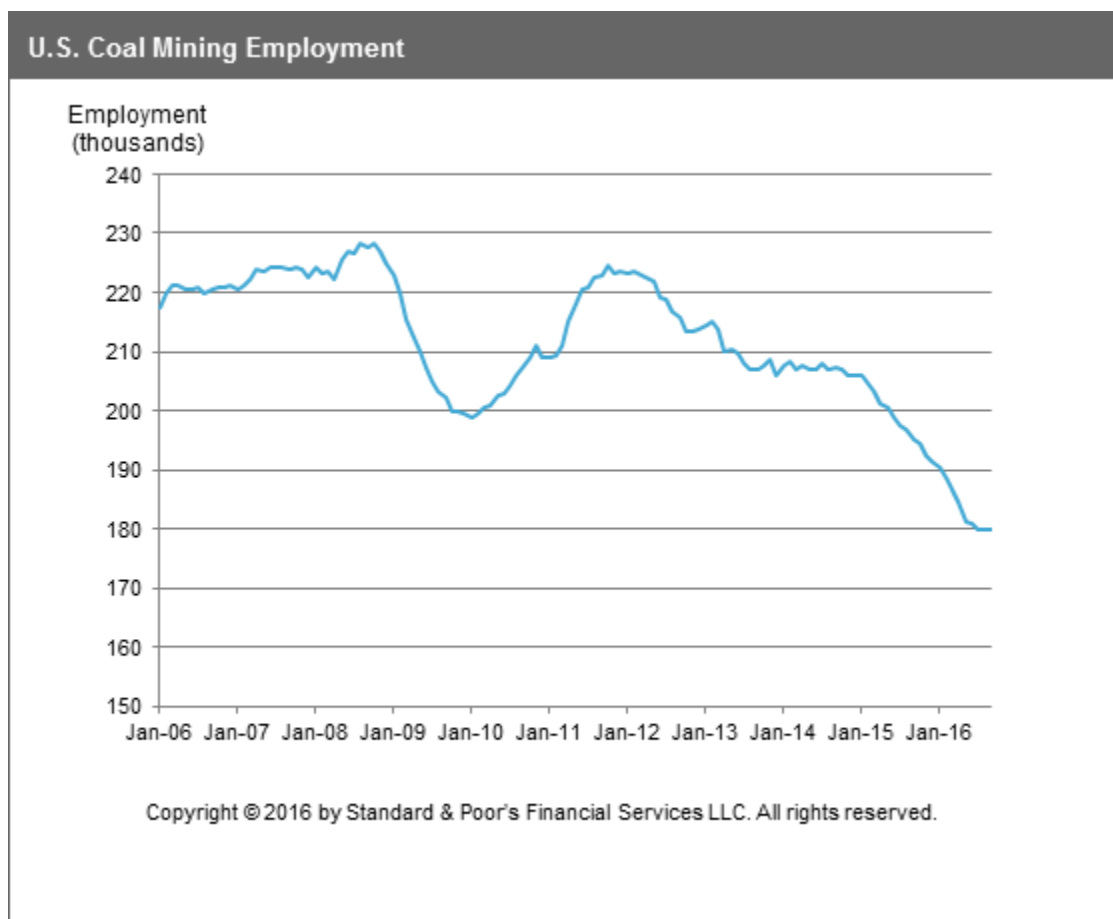
head the EPA's transition. Adding to this discord have been commodity price volatility and technological improvements (cheaper renewables, high efficiency turbines, fracking) that have conspired to jeopardize coal's role as the nation's primary electricity-generating fuel.

Still, there may be a more serious problem. The cycle for electing (and, ultimately, replacing) politicians in Washington is much shorter than the cycle for building and replacing generating assets. Compared with European economies that have reached broader consensus on the manner for combatting climate change, the partisan disputes in the U.S. over the seemingly settled science of climate change can limit regulatory predictability. While President-elect Trump has promised an energy policy that is agnostic to fuel type, there's no guarantee that his successor will. And, with that, they may limit the ability of management teams to appropriately plan for what sort of generating profile they'll need to develop in order to maintain competitiveness, especially because there are multiple levels of government involved in making decisions for how to implement any plans. Until this debate is settled, pursuing environmental quality in the energy sector could continue to be an unnecessarily risky venture.

The Art of the Coal Deal

Perhaps the most memorable energy policy put forward during this historic campaign season is President-elect Trump's proposal to increase coal mining in the U.S. and bring back lost jobs in the industry. The promise was central to his campaign, and contributed to his turning of states like Ohio (which hadn't voted Republican since 2004) and Pennsylvania (since 1988), states which have been wracked by the loss of blue collar jobs.

Chart 1

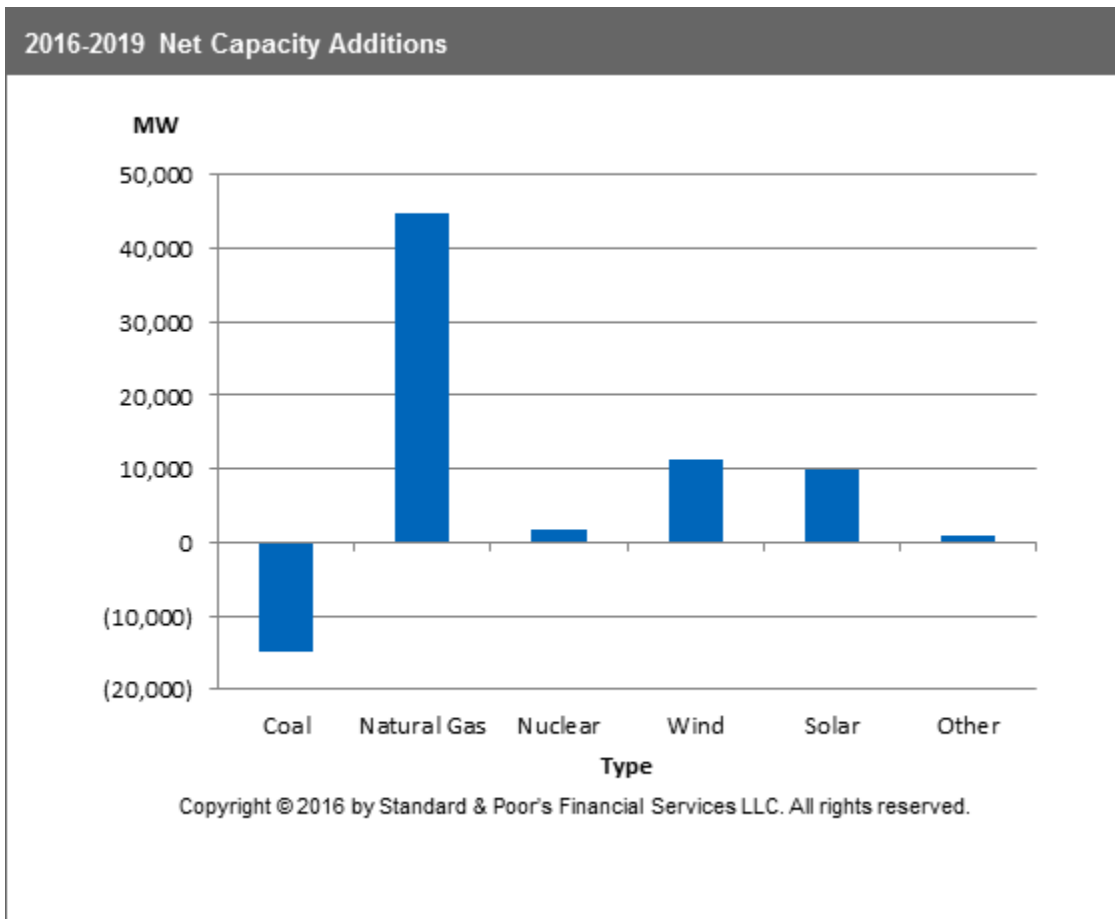


President-elect Trump accurately notes that coal-mining employment in the U.S. has been on the wane throughout the Obama Administration. However, in our opinion, the decline of coal-fired generation, which has been especially pronounced during the past two years, has come about more due to tumbling natural gas prices, which have diminished competitiveness for comparatively more expensive coal-fired assets, especially older units with more cumbersome fixed cost structures. While the Clean Power Plan (CPP)--which itself is in legal limbo and seems in serious jeopardy now--could lead to carbon pricing (that is, a fee or cost attached to the burning of carbon in the power generation process, to be paid by generators) in states that don't yet have such a policy, that regulation wouldn't take effect until 2022 at the earliest. So, it doesn't sufficiently explain the shuttering of over 100 GW of coal-fired generation nationwide between 2010 and 2017 (including scheduled closures).

Even for regulated utilities that remain less sensitive to fuel costs (which can generally be passed through to consumers), this makes it hard to justify long-term investments in sustaining coal-fired assets, especially when the efficiency of state-of-the-art gas turbines has continuously improved and the proliferation of renewable energy resources and weakening demand have conspired to soften power prices in many parts of the country. In sum, despite heated rhetoric on the campaign trail, it seems unlikely that a policy shift can do much to revive the weakening coal industry, which is currently in decline chiefly due to economic, and not regulatory, factors.

Ironically, while the Republican President-elect has attacked the role of onerous government regulations in the demise of coal mining and coal-fired generation, the economics are such that it's likely that only a different (and, for now, very unexpected) form of regulation could resurrect the lagging coal-mining industry. That is, if the federal or state governments were to enact some sort of fracking regulations that would slow natural-gas production, coal could become more competitive again as a generating fuel (more on that later). So far, however, it seems that the invisible hand is the one pushing coal out of the picture, and even a newly anointed Supreme Court justice who may take a stance against the EPA may not be sufficient to revive the coal industry, unless natural gas is somehow made more expensive or coal exports pick up unexpectedly.

Chart 2



Clean Power Plan On The Ropes?

How The U.S. Could Exit The Paris Agreement

A lot of attention was paid to the election outcome at COP 22, which has just concluded in Marrakech. There are generally seen to be three ways in which the U.S. could exit the Paris Agreement. These are outlined below:

Pursuant to the Paris Agreement (four years)

- Earliest possible date: Nov. 4, 2020
- Beginning three years after entry into force (Nov. 4, 2019), parties may withdraw by giving one year's notice
- U.S. law: The president can withdraw from executive agreements on his or her own authority

Pursuant to the UNFCCC (one year)

- The UNFCCC is the framework that oversees the Paris Agreement and other international climate protocols. Any party may withdraw by giving one year's notice
- A party that withdraws from UNFCCC shall be considered as also having withdrawn from the Paris Agreement
- The U.S. would have no input into future UNFCCC negotiations and international agreements after withdrawal
- U.S. law: In practice, presidential withdrawal unlikely to be overruled by courts, even though UNFCCC was unanimously approved by Senate

Outside the terms of the Paris Agreement and UNFCCC

- Withdrawal would violate international law
- U.S. law: It is unclear if the president has the authority to violate international law, but Congress can do so

The CPP generated massive, largely partisan controversy upon its release. Its future has hung in limbo since the U.S. Supreme Court stayed its implementation in a surprise decision earlier in 2016. We expect that the case will be ultimately resolved by late 2017, but now there's greater clarity on who will be making this monumental decision. With Antonin Scalia's unexpected passing in February (just days after ruling to stay the CPP) and the subsequent imbroglio over President Obama's legal ability (or inability) to replace him, it will now fall to President-elect Trump to select a replacement. It's not yet clear who that replacement will be, but the Trump transition team has expectedly mentioned more conservative jurists to date.

Given President-elect Trump's publicly adversarial posture toward the EPA (he has vowed to limit its reach), it's likely that Justice Scalia's replacement would weaken the prospects of the CPP being upheld, though, notably, the court did uphold the EPA's right to regulate carbon emissions even with conservative stalwart (and vigorous EPA opponent) Scalia as a member of it.

Table 1

Clean Power Plan Goals									
CO2 rate-based goal (lbs. CO2/net MWh)									
State	2012 Historical Rate	2020 Projections (w/o CPP)	2030 Rate Goal	Reduction (%)	State	2012 Historical Rate	2020 Projections (w/o CPP)	2030 Rate Goal	Reduction (%)
Alabama	1518	1386	1018	32.9	Montana	2481	2314	1305	47.4
Alaska	N/A	N/A	N/A	N/A	Nebraska	2161	1930	1296	40
Arizona	1552	1409	1031	33.6	Nevada	1102	944	855	22.4

Table 1

Clean Power Plan Goals (cont.)

CO2 rate-based goal (lbs. CO2/net MWh)									
State	2012 Historical Rate	2020 Projections (w/o CPP)	2030 Rate Goal	Reduction (%)	State	2012 Historical Rate	2020 Projections (w/o CPP)	2030 Rate Goal	Reduction (%)
Arkansas	1779	1551	1130	36.5	New Hampshire	1119	636	858	23.3
California	963	712	828	14	New Jersey	1091	981	812	25.6
Colorado	1973	1692	1174	40.5	New Mexico	1798	1225	1146	36.3
Connecticut	846	858	786	7.1	New York	1140	902	918	19.5
Delaware	1254	861	916	27	North Carolina	1780	1273	1136	36.2
Florida	1247	1170	919	26.3	North Dakota	2368	2184	1305	44.9
Georgia	1600	1135	1049	34.4	Ohio	1900	1742	1190	37.4
Hawaii	N/A	N/A	N/A	N/A	Oklahoma	1565	1598	1068	31.8
Idaho	858	766	771	10.1	Oregon	1089	760	871	20
Illinois	2208	1705	1245	43.6	Pennsylvania	1682	1486	1095	34.9
Indiana	2021	1882	1242	38.5	Rhode Island	918	845	771	16
Iowa	2195	1456	1283	41.5	South Carolina	1791	1202	1156	35.5
Kansas	2319	1870	1293	44.2	South Dakota	2229	1229	1167	47.6
Kentucky	2166	1796	1286	40.6	Tennessee	2015	1517	1211	39.9
Louisiana	1618	1235	1121	30.7	Texas	1566	1515	1042	33.5
Maine	873	736	779	10.8	Utah	1874	1779	1179	37.1
Maryland	2031	1411	1287	36.6	Vermont*	N/A	N/A	N/A	N/A
Massachusetts	1003	808	824	17.8	Virginia	1477	959	934	36.8
Michigan	1928	1588	1169	39.4	Washington	1566	634	983	37.2
Minnesota	2033	1658	1213	40.3	West Virginia	2064	2021	1305	36.8
Mississippi	1185	1107	945	20.3	Wisconsin	1996	1940	1176	41.1
Missouri	2008	1950	1272	36.7	Wyoming	2331	2264	1299	44.3

*Vermont does not have a goal (it has no fossil-fuel power plants, so no carbon emissions). CPP--Clean Power Plan. CO2--Carbon dioxide. MWh--Megawatt-hours. N/A--Not applicable. Source: U.S. Environmental Protection Agency.

The fate of a particularly important component of the CPP could be compromised by the outcome of this election. The Clean Energy Incentive Program was added to the final version of the legislation in August 2015. In subsequent months, it became clear to us that this would become a useful tool for states in complying with the CPP because it promises to provide federal incentives to aid in the development of energy efficiency and renewable energy projects, especially in low-income communities. We believe that this aspect would be critical to states that seek to meet their carbon-reduction goals but are wary of passing cost increases onto end users. This, after all, was one of the primary criticisms of the original rule.

This program is unique because it intends to benefit the states in the early years preceding the beginning of CPP's full implementation in 2022, and states could comply in advance, perhaps more cost effectively (due to federal incentives) by participating in this, which would amount to as much as 600 million total tons of carbon. The issue with the

Supreme Court stay, however, is that participation in this program was only to occur in 2020 and 2021. Consequently, even if the Trump Administration doesn't discontinue the CPP altogether, delays in implementation could jeopardize this facet of it.

The outcome of the election could create long term challenges for nuclear generators. In the current state of generating economics, nuclear assets--especially those older, single-unit sites operating on a merchant basis--have become somewhat less economical, and, consequently, many have either closed or been penciled in for closure. In previous articles, we had noted that the CPP, if seen through to completion, could have been a major boon for nuclear operators, which could have benefitted from some pricing uplift without any related carbon cost. Further, we expected some states to subsidize nuclear units over the coming years, the rationale being that they would be so indispensable in reducing carbon emissions under the CPP (and maintaining employment levels) that it was worthwhile to pay higher than market costs for their power now. But a possible abandoning of the CPP may negate this rationale--and, with gas prices staying low in our opinion, we wouldn't anticipate the economics of plants would improve absent some sort of carbon oriented payment. That being said, states like New York, which are subsidizing nuclear assets in pursuit of their own carbon reduction goals independent of the CPP, are not likely to abandon their efforts due to this possible setback.

Chart 3

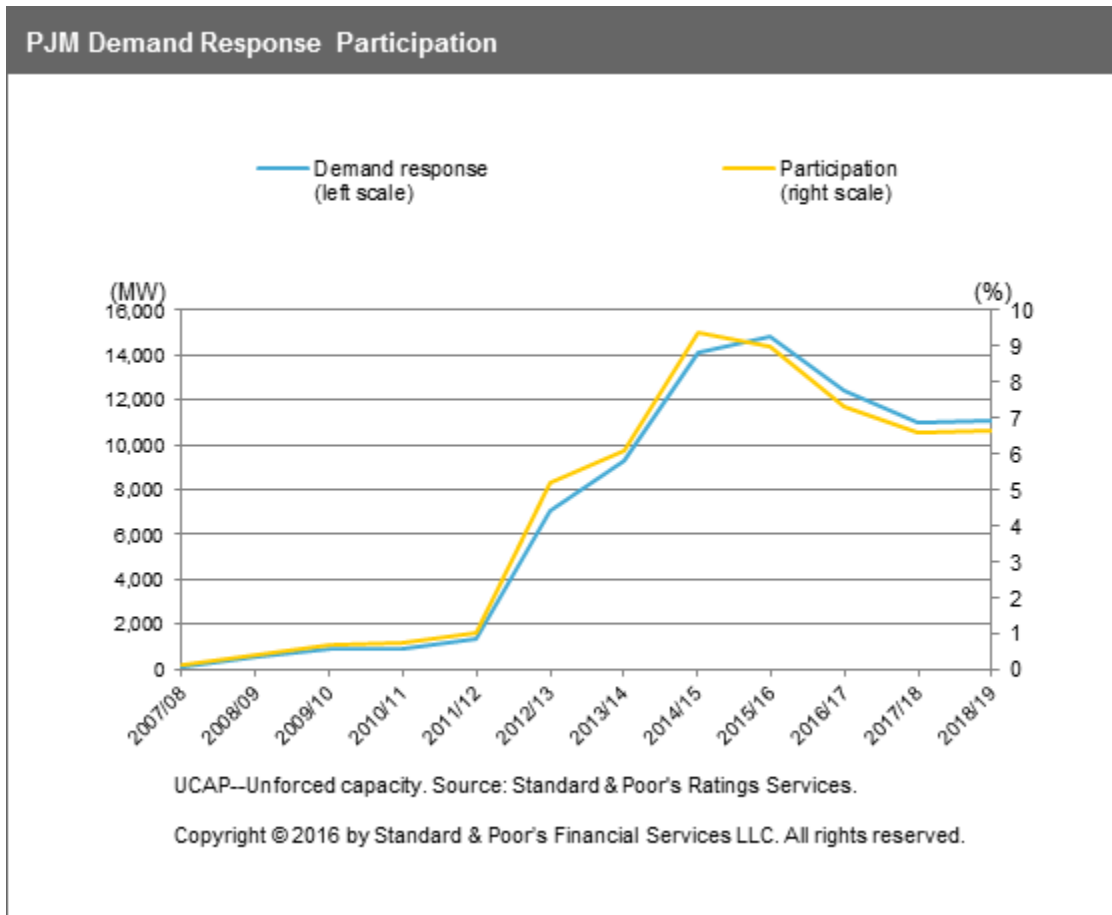


Table 2

Energy Efficiency					
Year	Residential	Commercial	Industrial	Transportation	Total
Life Cycle Savings - Energy Savings (MWh)					
2013	84,525,515	128,026,835	38,500,862	448,421	251,501,633
2014	100,729,499	149,493,353	39,631,016	287,925	290,141,793
Life Cycle Savings - Peak Demand Savings (MW)					
2013	44,351	70,979	19,524	6	134,860
2014	17,911	46,600	12,248	2	76,761
Life Cycle Costs - Customer Incentive (thousand dollars)					
2013	2,698,741	2,875,605	455,357	5	6,029,708
2014	1,749,387	1,912,327	346,218	64	4,007,996
Life Cycle Costs - All Other Costs (thousand dollars)					
2013	2,134,979	1,626,658	234,577	33	3,996,247
2014	1,558,256	1,348,673	216,674	122	3,123,725

While President-elect Trump has said he could include the EPA as part of a wider budget-cutting process, the Clean Air Act mandates that the executive branch is not only allowed but obligated to pursue reduction of greenhouse-gas emissions, so this may be difficult to achieve. As president though, he could--as George W. Bush did--simply not defend certain environmental regulations in court or pursue their enforcement, or certainly push for new regulations. However, given the magnitude of changes the CPP requires, we anticipate that even the most adversarial of states would begin planning for implementation upon a Supreme Court decision that upholds the plan. Still, after a Trump victory, that looks less likely now than it did before the election.

Forget Paris?

Another similar consideration is the U.S. participation in the Paris Agreement. In previous publications, we have been of the opinion that fulfillment of the American commitment under this sweeping international program isn't likely or even possible without a domestic policy (such as the CPP) that is federal in nature and fully supports the goal. The CPP is arguably more stringent than what the Paris Agreement calls for. The Paris Agreement will compel the U.S. to reduce carbon emissions by 26%-28% by 2025, but it's somewhat ambiguous on what, if anything, must happen after that point. Part of the reason that other large economies that emit significant sums of carbon (especially India, China, and Russia) agreed to be bound to the accord resulted from the U.S. taking a new leadership role in the effort. In addition to the Paris Agreement's multilateral coalition, a number of bilateral climate agreements have also been reached, including between the U.S. and China. However, President-elect Trump has said he'll withdraw the U.S. from its commitments under the Paris Agreement, as well as other international climate accords. While the legal ability to break free of a binding international agreement remains in question, the absence of the CPP could make it considerably more difficult for the U.S. to meet its Intended Nationally Determined Contribution, though, notably, carbon emissions have already dropped dramatically in the U.S. in the past decade.

Credit Impacts

We believe that the collective impact of these climate-related actions on specific corporate issuers could be very

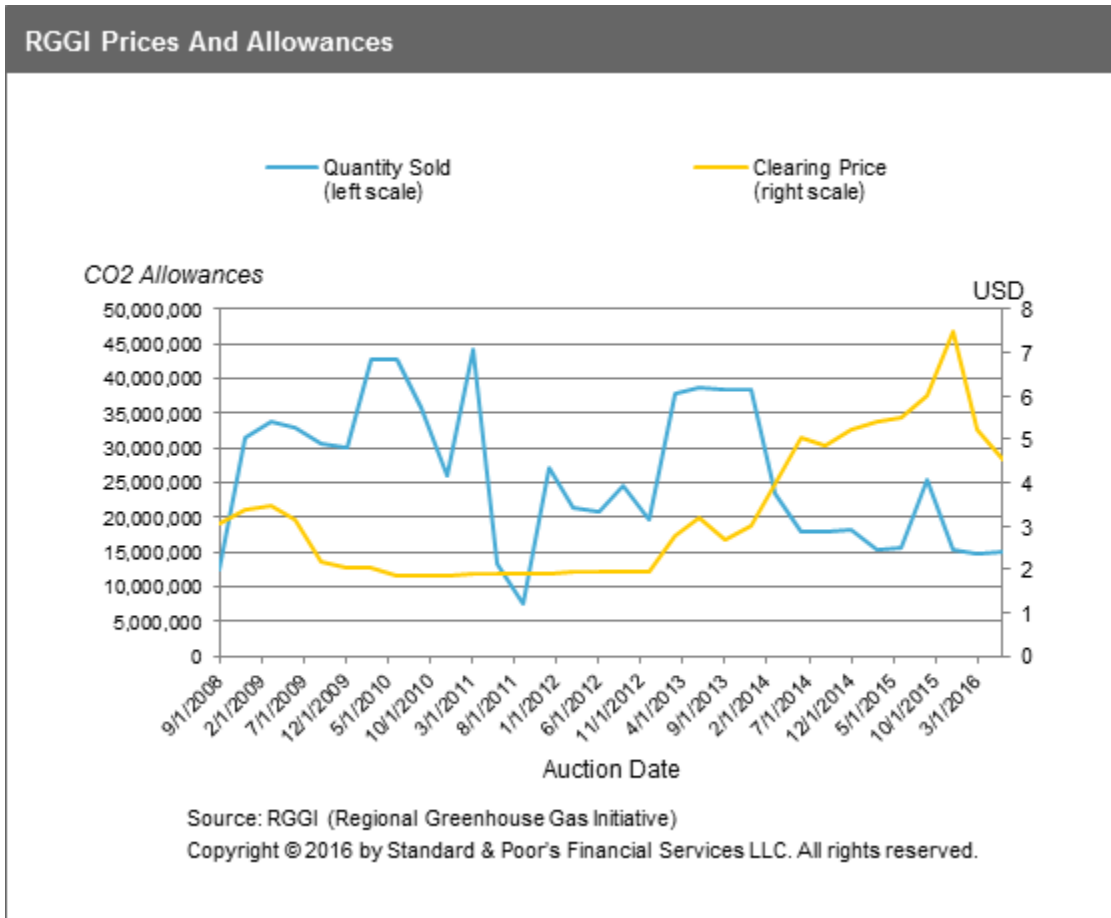
pronounced over time, as each large independent power producer (IPP) we rate has considerable vulnerability to environmental regulations, for better or for worse. While this is not yet applicable in any of our base cases, our power price and cash flow modeling has so far included a carbon price ranging from \$4/ton to \$20/ton, depending on jurisdiction. Some states either already have a carbon price or have suggested that they would join an alliance that uses this kind of market-based mechanism, though it would likely be supplemented in many cases by some sort of renewable portfolio standard.

A more significant carbon price, closer to the higher end of that continuum, would benefit lower carbon generators like Exelon Generation Co. LLC or Calpine Corp., which have no coal in their portfolios. By contrast, generators like Dynegy Inc., Texas Competitive Electric Holdings, NRG Energy Inc., and Talen Energy Corporation, which still retain considerable investments in carbon-intensive coal-fired generation, might stand to benefit from a carbon price being deferred or canceled altogether, which seems much more likely now with a Trump Administration looming. While many coal units are uneconomical with currently low gas prices, the generators may hold out hope that gas prices will rebound, bringing renewed competitiveness for their coal fleets. Of course, a carbon price would undercut this scenario and would compress spreads for these generators (in unregulated markets) and weaken capacity factors. That could potentially sharply diminish cash flow for some of these high-fixed-cost assets. The effect would be especially acute for single asset project financings that we rate. We believe that delays in environmental rules in general provide something of a call option for coal assets, though the effect of this may be somewhat muted in a low gas price environment.

However, the CPP has one countervailing impact (especially if we include the Clean Energy Incentive Program) that uniformly and negatively affects competitive merchant generators. To the extent that energy efficiency, demand response, and demand reduction mechanisms are used to cut carbon emissions, we would expect these mechanisms to have a depressing impact on power and capacity prices, which are both parts of the revenue stream for these generators. Indeed, lower demand growth has already begun to influence power prices significantly (just ask Energy Reliability Council of Texas participants). This has already affected the fortunes of IPPs and numerous power projects we rate during the past two years, even sans any kind of formal, nationwide mandate to reduce carbon emissions. Consequently, even with President-elect Trump assuming office and the need for State Implementation Plans possibly moot, we anticipate that state policies will continue to incentivize demand restriction, possibly weighing on power prices even without CPP coming into full effect.

The Trump victory seems to, at least for the moment, forestall some immediate concerns about weakening credit quality for coal-intensive generators; while certain states in the Northeast and West Coast are certainly likely to continue policies that incentivize less carbon intensive power production, a federal policy doing the same seems more distant now. We still do not expect any new building of coal assets. Aside from the New Source Regulations, which effectively prevent any coal-fired generation from being built without carbon capture and storage technology (which is, as yet, uneconomical on the required scale), the cost recovery time of these assets generally surpasses that of gas-fired assets, which introduces risk that even if the Trump Administration does not focus on climate change, his successor might, jeopardizing these assets. Additionally, in a grid increasingly typified by intermittent renewables and demand side management programs, the more flexible nature of natural gas assets makes them more appealing.

Chart 4



Aside from the wider discussion on how to mitigate greenhouse gas emissions, the growth of the renewable industry may be affected by the outcome of this election. Secretary Clinton's potential Administration was slated to see a greater focus on renewables than the Obama Administration did, a focus that is very likely to be absent from a Trump presidency. And while the Investment Tax Credit (ITC), Production Tax Credit (PTC), and unmet state renewable portfolio standards should propel the building of wind and solar assets even without a CPP in place during the next few years, longer term, a Trump presidency could spell challenges for renewable developers. In previous comments on the Clean Power Plan, we had referred to the ITC and PTC as a 'bridge' to the Obama plan, which would have itself relied on enhanced renewable standards to meet state-level carbon reduction targets, especially in states with significant investments in coal assets. However, we are now likely to see fewer incentives for renewable production in the outer years of our forecasts as the tax credits roll off, unless they are renewed. For renewable developers, this could create longer term cash flow issues, especially if they are unable to grow at current rates into the 2020s.

Chart 5

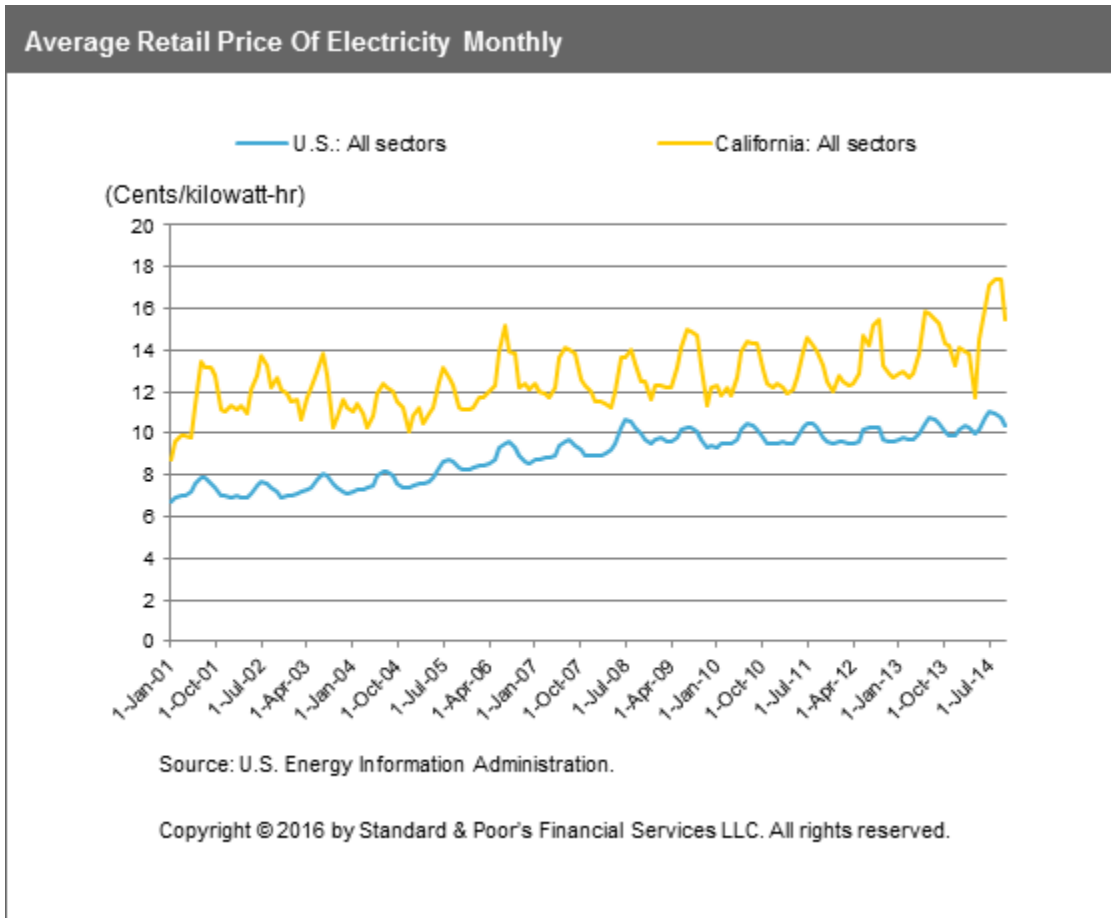


Chart 6

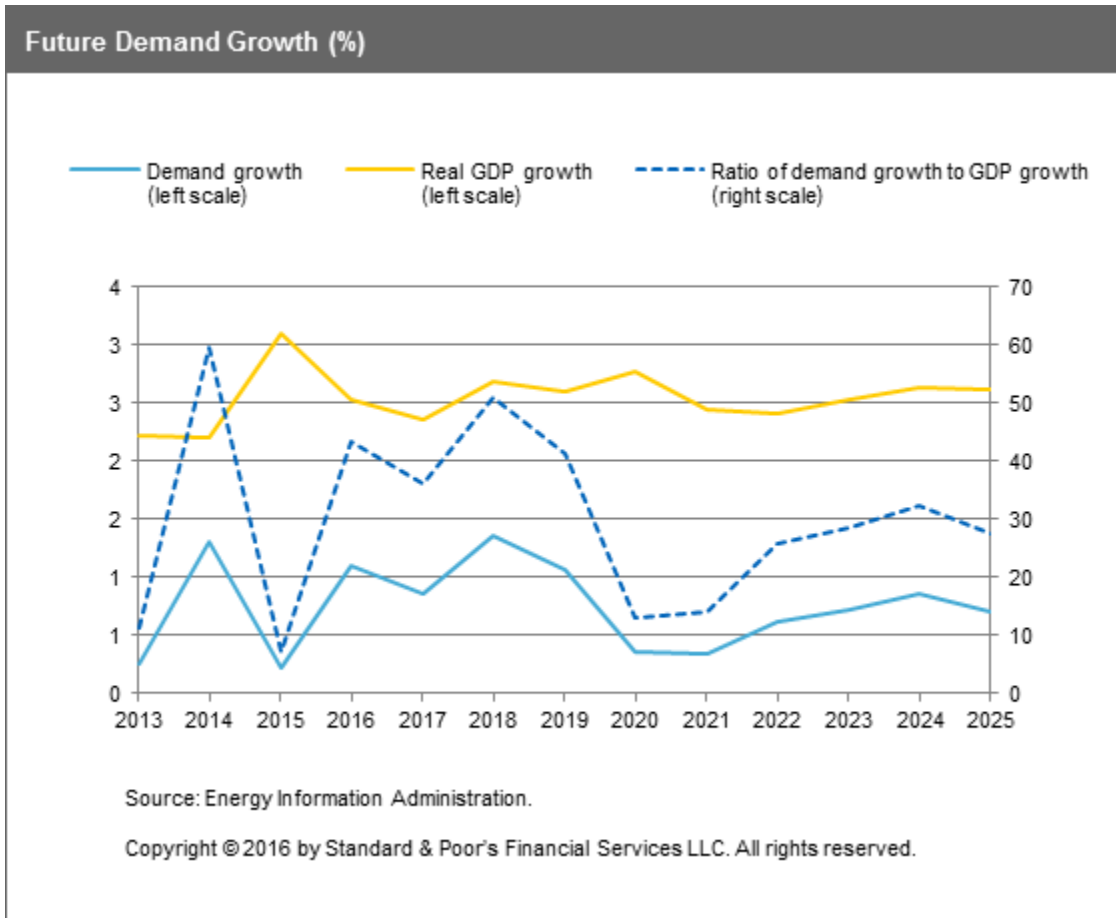


Chart 7

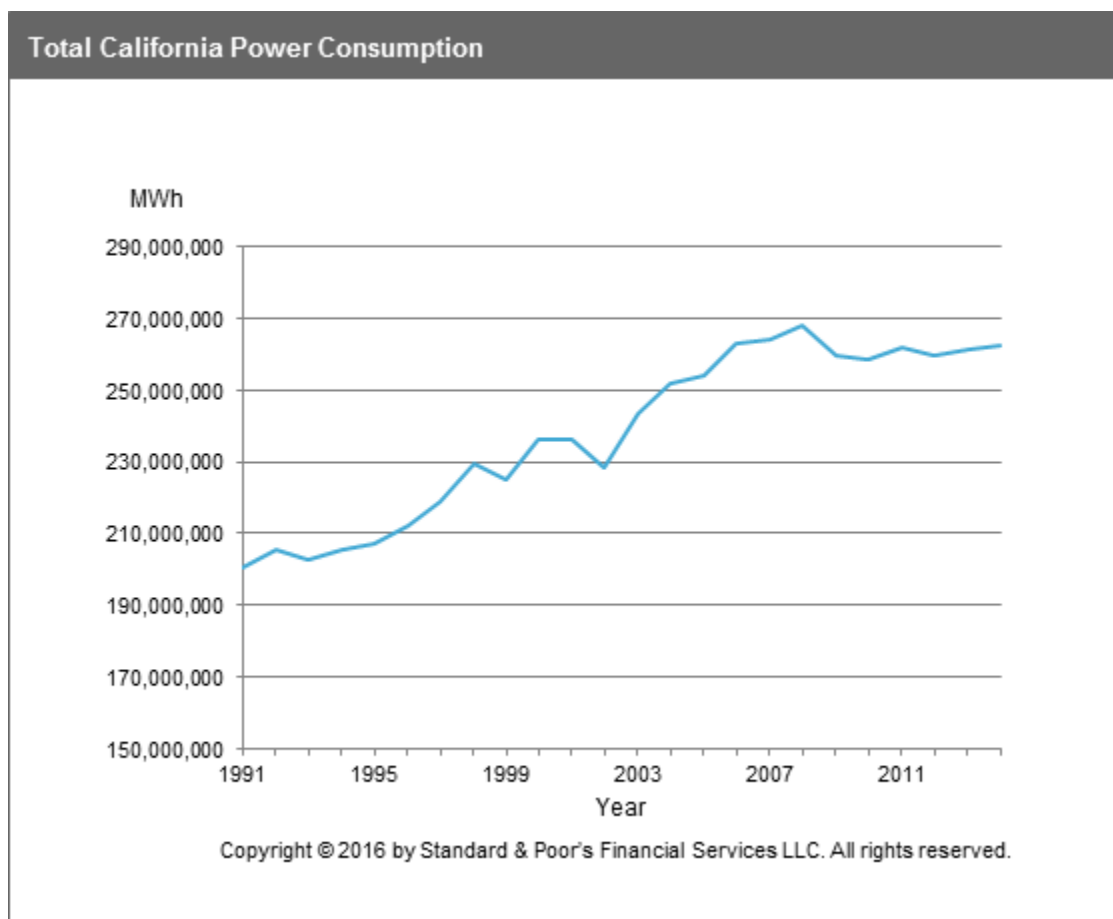


Table 3

PJM Interconnection Load Forecast (Megawatts)						
	Jan. 2016 forecast	Jan. 2015 forecast	Jan. 2014 forecast	Jan. 2013 forecast	Jan. 2012 forecast	Jan. 2011 forecast
2013	155,553	155,553	155,185	155,553	156,254	162,489
2014	156,140	156,140	157,279	158,171	159,842	164,772
2015	150,295	155,544	160,259	162,216	163,168	166,506
2016	152,131	157,912	162,470	165,128	165,691	167,847
2017	154,149	159,808	164,195	167,211	167,443	169,443
2018	155,913	161,128	165,479	168,813	169,032	171,067

Source: PJM Interconnection; S&P Global.

Heightened renewable standards, implemented at either state or federal level, are less likely to influence the credit quality of investor-owned utilities, which are generally less sensitive to power pricing and demand growth. Given the significant time frame associated with either retrofitting coal-fired generation with mercury and sulfur reducing equipment or replacing it within a regulatory framework, we anticipate that many utilities which had already begun planning for CPP compliance are likely to continue doing so. This is in part as a preemptive measure against low

carbon policies of a possible successor to President-elect Trump. Even in the expected absence of the CPP, it's likely that the U.S. will have some kind of broader carbon regulation in years to come, especially if the U.S. remains a party to the Paris Agreement on carbon regulation.

Table 4

CPP Winners and Losers		
Winners	Neutral	Losers
Nuclear Generators (Exelon)	Regulated Utilities	Coal Miners
Renewable Developers	Public Power Entities	Coal Transporters
Transmission Companies		Coal Fired Generators
Midstream Entities		

For what it's worth, the trajectory of local carbon rules and exchanges (such as AB32 or Regional Greenhouse Gas Initiative), which are both likely to continue in spite of the election outcome, could reveal something about what the costs would be on a federal level. If history is any indication, we might expect a national carbon price to increase as carbon allowances become more scarce, if emissions reductions lag; contrarily, over-performance in carbon reduction, which is not unlikely if recent history is any indication (nationwide emissions are down more than 13% in the last decade), could result in depressed allowance prices.

Chart 8

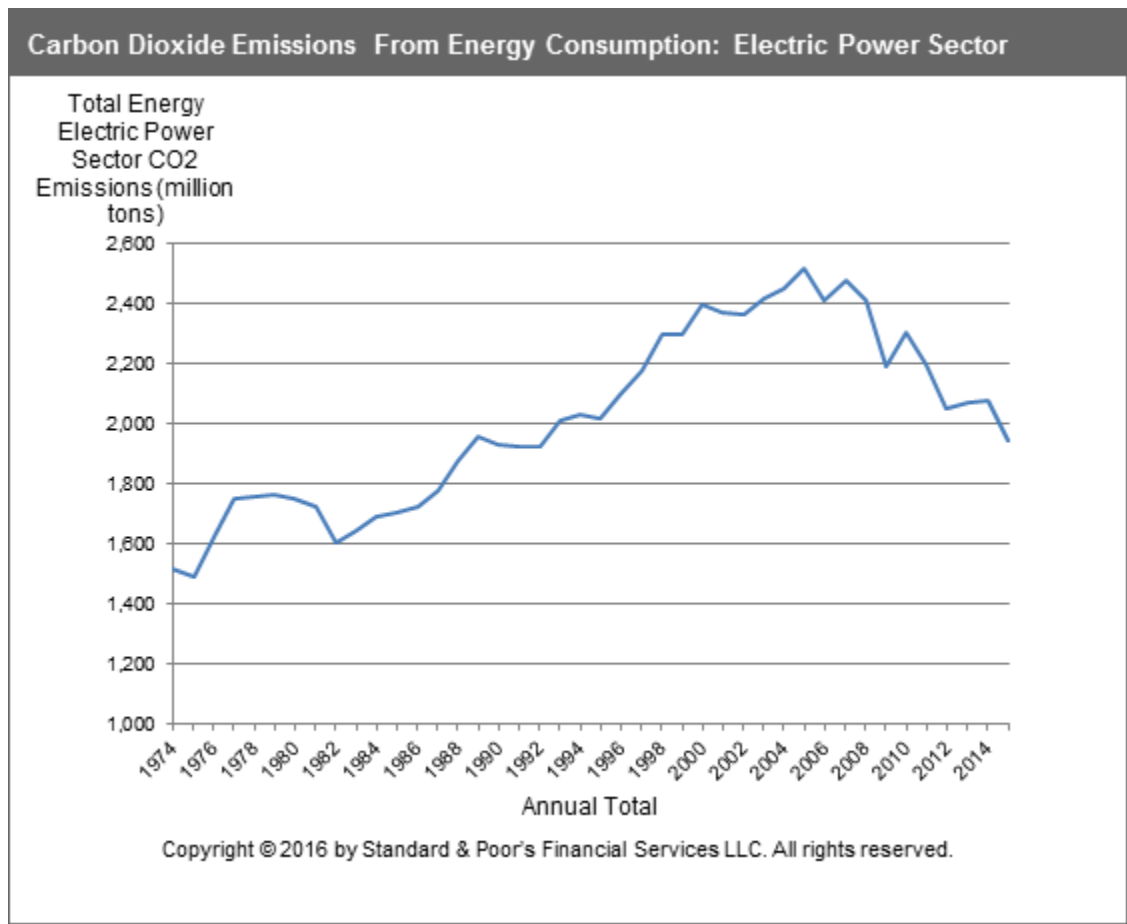


Table 5

Carbon Pricing States

State	MWh from Coal, 2000	MWh from Coal, 2014	Percentage Reduction	MWh from Natural Gas, 2000	MWh from Natural Gas, 2014	Percentage Increase
California	2,363,607	804,760	65.95%	103,218,973	120,426,435	16.67%
Maryland	29,451,065	17,603,291	40.23%	2,852,876	2,505,890	(12.16%)
Delaware	4,112,296	865,384	78.96%	840,508	6,297,458	649.24%
New York	25,009,581	4,592,054	81.64%	39,728,709	54,379,759	36.88%
Connecticut	3,186,096	824,948	74.11%	4,062,029	14,683,905	261.49%
Massachusetts	11,154,272	2,794,889	74.94%	10,707,072	18,497,715	72.76%
Rhode Island	0	0	N/A	5,791,814	5,962,951	2.95%
Vermont	0	0	N/A	90,790	2,465	(97.29%)
New Hampshire	3,965,476	1,310,999	66.94%	138,943	4,388,291	3058.34%
Maine	649,748	79,104	87.83%	3,044,440	4,344,381	42.70%
Carbon States, Aggregate	79,892,141	28,875,428	63.86%	170,476,154	231,489,251	35.79%
U.S. At Large	1,966,264,596	1,581,710,350	19.56%	601,038,159	1,126,608,958	87.44%

Source: EIA. N/A--Not applicable.

However, as we have noted in previous publications, the U.S.' progress towards a cleaner generating grid over time would have only been partially motivated by the CPP. It was our opinion that the Plan would accelerate a carbon reduction trend that was, as of the Plan's time of publishing, well under way. Mass coal to gas switching, increased renewable penetration, certain state level policies and the separation of power demand growth from economic growth have all conspired to decrease carbon emissions markedly from their 2005 peak, and, with most regions anticipating increased renewable build and focus on energy efficiency, this trend isn't likely to abate going forward. It's not clear, however, that absent some kind of additional incentive (such as the CPP), this progress would be sufficient to meet the U.S.' commitment under The Paris Agreement.

Where Credits Are Due

Renewable energy tax credits did not emerge as a contentious political issue in the 2016 election and are among the few topics that have garnered support from Senate candidates on both sides of the aisle. The two key federal tax credits that support renewable energy--the PTC and the ITC--were extended as part of the bipartisan spending bill passed in late 2015. The deal struck by Congress extends the solar ITC at the current 30% rate through 2019. After that year it ramps down incrementally, declining to 10% in 2022 for nonresidential and third-party-owned residential systems and 0% for host-owned residential. For wind facilities, the current \$0.023/kilowatts-hour PTC will extend through 2016 and then will decline each subsequent year until it fully expires in 2020.

The political dynamics behind renewable energy incentives continue to correspond more with geography than along party lines as elected officials from both parties look to leverage renewable resources in their backyards.

President-elect Trump has historically been critical of renewable energy, specifically citing high costs and lack of reliability associated with renewable power sources. His harshest criticism has focused on wind power, with claims

that wind turbines face unfavorable economics, suffer from poor aesthetics, cause adverse health impacts, and harm migratory birds. However, he made statements in November 2015 at a town hall in Iowa suggesting that he supports the PTC to an extent, but he went on to note that he's not in favor of subsidies in the face of high national debt, and has also questioned the reliability of such renewable assets.

Chart 9

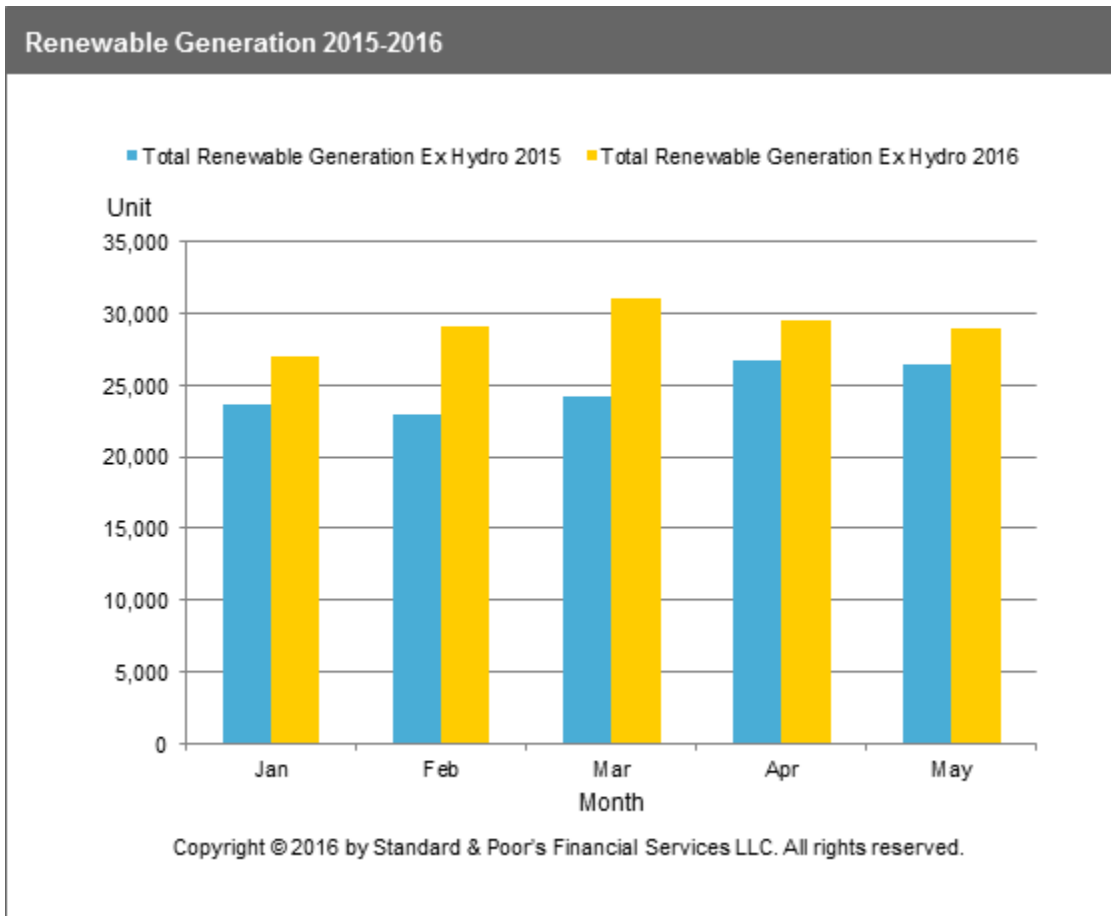
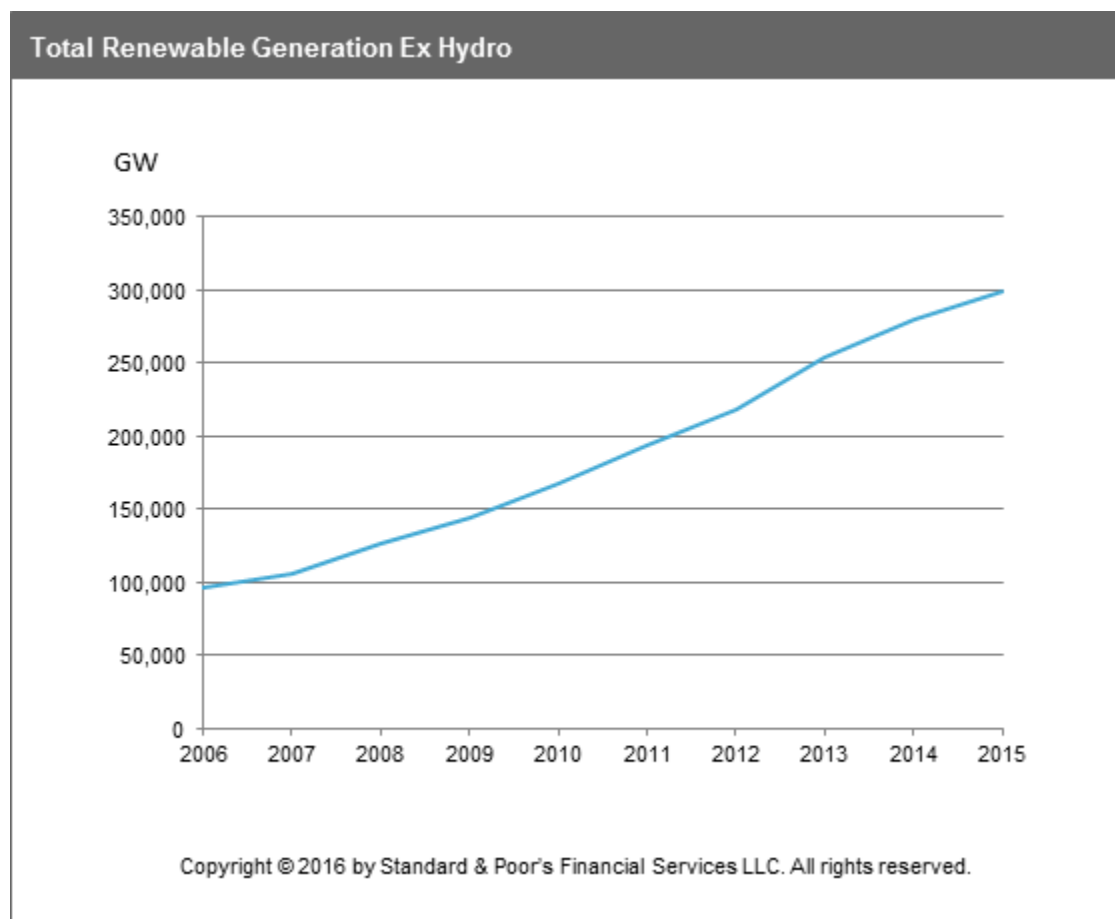


Chart 10



The Fracking Debate

Fracking is the process of well stimulation during which rock is fractured with pressurized liquids and chemicals at high pressure to extract oil or natural gas. The distinction between the two candidates running in the past election became highlighted when the Supreme Court of Colorado in May 2016 deemed local bans on fracking in the cities of Longmont and Fort Collins as invalid because state laws preempted them. The city of Longmont had banned fracking within city limits in 2012 and the residents of Fort Collins voted for a five-year moratorium on fracking in 2013. The local regulations were put in place over health concerns associated with fracking.

Trump, for his part, has generally favored fracking and said in a May 2016 energy policy speech in North Dakota he "would revoke policies that impose unwarranted restrictions on new drilling technologies," as well as lift bans on production on federal lands. However, he has stopped short of preventing municipalities from pursuing local rules if desired. While we don't believe that fracking would have been adversely affected by a Clinton presidency, we now believe it's unlikely that there will be any widespread regulatory pressure that will interrupt the supply of cheap gas, both to power generating assets in the United States and to fill the burgeoning demand for liquefied natural gas exports.

Keystone Pipeline

The Keystone XL Pipeline was a 1,179-mile crude oil pipeline project proposed by TransCanada Corp. that intended to transport 700,000 barrels per day of Canadian heavy crude oil from the oil sands in Hardisty, Alberta, south to Steele City, Nebraska. After a seven-year review process, on Nov. 5, 2015, President Obama denied the required presidential permit for the pipeline's construction, based on perceptions about how this could impact the U.S.' commitment to climate change mitigation. Still, TransCanada is pursuing this, having filed a challenge under NAFTA.

So where does President-elect Trump stand on this issue? He has come out in favor of granting the presidential permit for Keystone, in sharp contrast with both his former competitor and his predecessor. In his new capacity, he would have the ability to grant this permit. Still, much time has lapsed since the idea was originally conceived, and the dynamics of oil extraction, transportation, and refining have changed considerably, so it remains to be seen whether this pipe would actually come to fruition even if legally permissible.

Ethanol

Table 6

New Renewable Fuel Standards				
RFS effective year	RFS (bil. gal.)	Advanced biofuel (bil. gal.)	Ethanol mandate (mil. gals./year)	Annual ethanol consumption (mil. gals./year)
2006	N/A	N/A	N/A	5,481
2007	N/A	N/A	N/A	6,886
2008	9	N/A	9,000	9,683
2009	11.1	0.6	10,500	11,037
2010	13.0	1.0	12,000	12,858
2011	14.0	1.4	12,600	12,893
2012	15.2	2.0	13,200	12,882
2013	16.6	2.8	13,800	13,216
2014	16.3	2.7	13,610	13,443
2015	16.9	2.9	14,050	13,939
2016	18.1	3.6	14,500	4,624*
2017(proposed)	18.8	4.0	14,800	N/A

*4-Month Total. RFS--Renewable Fuel Standards. N.A.--Not available. Source: Energy Information Administration.

Table 7

	New prices			Old prices		
	Brent	WTI	Henry Hub	Brent	WTI	Henry Hub
	\$/bbl	\$/bbl	\$/mil. Btu	\$/bbl	\$/bbl	\$/mil. Btu
Rest of 2016	42.5	42.5	2.5	40	40	2.5
2017	45	45	2.75	45	45	2.75
2018	50	50	3	50	50	3

Table 7

S&P Global Ratings' Oil And Natural Gas Price Assumptions (cont.)

	New prices			Old prices		
	Brent	WTI	Henry Hub	Brent	WTI	Henry Hub
2019 and beyond	55	55	3	N/A	N/A	N/A

Prices are rounded to the nearest \$5/bbl (\$2.5/bbl in 2016) and \$0.25/million Btu. bbl--Barrel. Btu--British thermal units. WTI--West Texas Intermediate. N/A--Not applicable.

President-elect Trump has, in the past, expressed support for the ethanol industry and Renewable Fuel Standards (RFS). Importantly, though, these standards are a matter of federal law (as opposed to a regulation, like the CPP). Therefore, while the EPA administrator (currently Gina McCarthy, though this is likely to change) may have responsibility for setting the year-to-year increases in ethanol consumption mandates, any permanent change to the RFS goals would need to be made by Congress. To date, there have been few serious efforts to that effect. Additionally, we anticipate continued growth (and perhaps sharper growth) in the mandates for advanced biofuels, which are not yet being met due to technological limitations. After all, even amid challenging economics, ethanol continues to have special political significance.

However, we continue to believe that in 2016 and 2017 diminished crude prices, which we don't expect to recover quickly, will continue to put pressure on the economics of ethanol. The pricing of ethanol--and consequently the ethanol producers' fate--hinges heavily on gasoline volumes sold, which may increase with an improving economy and low oil prices, in the absence of changing RFS requirements. Historically, the EPA has been slow to update these. Even as 2016 ends, we're still not sure what 2017 ethanol mandates will look like, either on the conventional or advanced fronts, so it is difficult to gain certainty on the long term credit prospects of companies with ethanol exposure.

Inauguration

With the election now behind us and the presidential transition in full swing, we expect to move from hypotheticals to concrete action on energy policy. That being said, we know that sometimes the most committed policies can sometimes be difficult to implement--even with a conciliatory Congress--because, as mentioned earlier, energy policy can often times take on a regional, rather than political, tenor. Still, as the Trump presidency unfolds in 2017, we'll begin to assess what impacts, if any, his Administration will have on energy industry credit quality, and how those may differ from those brought about by his predecessor's policies.

Related Articles

- Splitting The Atom: How Low Gas Prices And Weak Demand Growth Undermined Nuclear Profitability, Sept. 7, 2016
- How The Transformation Of U.S. Power Production, Transmission, And Consumption Affects Credit, June 30, 2016
- Credit FAQ: Even As The Obama Era Nears Its End, The EPA Isn't Likely To Ease Back, April 20, 2016
- Burnout: U.S. Coal-Fired Generators Feel The Heat From Cheap Natural Gas, March 8, 2016
- The Supreme Court Stay Of The Clean Power Plan Adds Uncertainty But Has No Immediate Rating Impact, Feb. 12, 2016

- In The U.S. Merchant Power Space, A Stable Business Climate Has Become An Oddity, Feb. 2, 2016
- Credit FAQ: After The Clean Power Plan's Finalization, The U.S. Environmental Protection Agency Shifts Gears, Dec. 30, 2015
- The Clean Power Plan's Implications For U.S. Merchant Power Generators, Nov. 30, 2015
- What The Final Version Of The EPA's Clean Power Plan Is Likely To Mean For U.S. States And Industries, Nov. 30, 2015
- How National Commitments To Lower Carbon Emissions Will Alter Global Power Generation, Nov. 16, 2015
- A Convergence Of Factors Could Have U.S. Biofuel Producers Scrambling, Aug. 19, 2015

Copyright © 2016 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED, OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses, and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw, or suspend such acknowledgement at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription) and www.spcapitaliq.com (subscription) and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.