2017 Outlook: Energy Infrastructure North America

Stable Ratings amid Potential Volatility

Outlook Report

Contracted Revenues Protect Assets: Fixed-price power purchase agreements prevail in Fitch Ratings’ thermal power project portfolio, insulating projects from currently low energy prices and revenue volatility, maintaining the stable rating outlook. Most contracted projects operate under tolling-style agreements, avoiding feedstock price volatility and enhancing cash flow stability. Thermal power projects typically employ proven technology with experienced operators, enabling high availability and low operating cost volatility.

Current Negative rating Outlooks and Watches are due to a limited number of project-specific operational challenges and counterparty rating actions not reflective of the overall sector.

Renewables Meeting Expectations: The stable outlook for Fitch’s rated renewable energy projects reflects largely contracted power sales agreements with very little exposure to market pricing. All solar projects and a high proportion of wind projects carry investment-grade ratings, with a sufficient financial cushion demonstrated even during unusually low renewable resources recently. Geothermal and biomass projects include a high proportion of speculative-grade ratings, due to less resource certainty and operational challenges.

Negative rating Outlooks and Watches reflect project-specific wind, geothermal and biomass resource and operational issues.

Oil & Gas Projects Advancing: Rated liquefied natural gas (LNG) export terminals under construction in the U.S. are on schedule for timely completion to operate under tolling-style agreements with investment-grade counterparties, supporting the stable rating outlook. However, growing worldwide LNG export capacity and slowing demand growth are limiting prospects for project expansions or construction of new U.S. greenfield facilities.

Other rated oil & gas projects include a refinery, pipeline and gas processing platform, with strong contracts and structures to mitigate persistently low commodity prices.

Outlook Sensitivities

Evolving Emissions Regulations: The Clean Power Plan (CPP) is pending a ruling by the U.S. Court of Appeals for the District of Columbia Circuit, and recent election results increase uncertainty regarding any eventual implementation. The CPP or other carbon emissions regulation would favor non-emitting generation technologies, such as renewables and nuclear plants, at the expense of high carbon-intensity generators, particularly coal plants but also gas-fired facilities.

Margin Deterioration: Increased merchant market price exposure contributes to cash flow volatility, as does feedstock pricing tied to variable commodity prices. Off-take contracts typically mitigate these risks, but projects remain subject to operating challenges that reduce revenues and increase expenses. Reduced margins considered to be persistent or permanent are likely to lead to negative rating action.

Low Renewable Resources: Rating case revenues assume stressed levels of generation for renewable energy projects based on expected levels of renewable resources. Actual generation for solar projects largely was consistent with forecasts, while most wind projects exhibited considerable shortfalls. Persistent shortfalls may result in wider rating case stresses that could put negative pressure on ratings.
Thermal Power

Rating Outlook: Stable; Sector Outlook: Stable

Contracts Enhance Stability

Thermal projects in Fitch’s portfolio reduce cash flow volatility through fixed-price power purchase agreements featuring capacity payments structured to cover fixed costs including debt service and energy payments designed to fully compensate projects for variable costs of power generation including fuel expenses. Tolling agreements effectively mitigate fuel price risk, with projects responsible for maintaining target heat rates to fully recover fuel costs.

Steady and consistent operating performance also supports the stable outlook. Thermal power technology is well-proven and experienced operating contractors are widely available. High availability factors enable receipt of full capacity payments, and most thermal projects are able to maintain heat rates sufficient to fully recover fuel costs under tolling agreements. Fixed-price operating contracts further mitigate cash flow volatility.

Power Prices Remain Low, Potentially Volatile

Projects lacking long-term power purchase agreements (PPAs), or that are partially contracted, are not rated investment grade. Low energy prices amid slowing demand growth present a challenging environment for all but the most efficient or advantageously located merchant power projects. Capacity markets and financial hedges can improve near-term revenue stability, but are not a sufficient substitute for long-term PPAs to enable investment-grade ratings.

Regulatory Uncertainty

The CPP was finalized by the Environmental Protection Agency (EPA) in 2015, mandating a reduction in power generation carbon dioxide emissions by 32% (compared with 2005 levels) by 2030, with interim goals between 2022 and 2029. The rule anticipated states submitting compliance plans beginning 2016, with the first performance period beginning in 2022, utilizing a range of compliance options including energy efficiency, cap and trade programs, and renewables development incentives.

In February 2016, the U.S. Supreme Court issued a stay of implementation, leading to a review by the U.S. Court of Appeals for the District of Columbia Circuit in September. The appeals court has not yet issued its ruling (expected in early 2017), which could be appealed for review by the Supreme Court, which is not likely to occur before 2018.

However, the CPP may not last that long. President-elect Donald Trump opposes the CPP, and since the rule has not been implemented, the new EPA chairman he appoints is expected to...
substantially modify or withdraw it. While this might gut the CPP in its current form, it would not eliminate the EPA’s obligation to regulate greenhouse gases from power plants as mandated by the Supreme Court in a 2012 ruling.

The CPP was expected to increase retirements of coal plants, and substantially increase construction of new gas-fired power plants and renewable energy capacity. But market forces have already retired or accelerated the planned retirement of older and less-efficient coal plants, and renewables experienced strong growth without the benefit of carbon regulation. Some form of carbon emissions regulation is likely eventually, but the timing is uncertain and now less likely for at least the next four years.

Renewables

Rating Outlook: Stable; Sector Outlook: Stable

Steady Performance

Similar to thermal power, Fitch’s rated renewable energy projects benefit from largely contracted energy sales agreements with very little exposure to market pricing, mitigating cash flow volatility and supporting a stable outlook. Renewable resource generating equipment is demonstrating increasing reliability, and operating costs are generally within budget expectations. Equipment issues typically are limited to some subset of total project capacity, allowing some level of generation and revenues to continue while affected units are repaired, requiring less financial cushion than single-generator thermal facilities.

Resource Sufficiency

Renewable energy project revenues fluctuate directly with the amount of energy generated. Careful O&M procedures can maintain high availability levels, but project output remains heavily dependent on renewable resource levels. Solar projects performed quite well relative to resource consultant forecasts, and output levels tracked closely with base case expectations. Wind projects, however, largely underperformed in most years. Fitch’s rating cases assume stressed levels of renewable resources combined with operating and cost stresses, and investment-grade projects retain sufficient financial cushion to withstand periods of extremely low resources, as was observed for Western U.S. wind projects in the last year.

U.S. Renewable Energy Supply

Fitch’s renewable portfolio includes hydro, geothermal and biomass energy projects, none of which are rated investment grade due to combinations of merchant price risk, operational challenges and renewable resource deficiencies.
Geothermal resources are among the most difficult to assess accurately, with actual depletion rates often diverging significantly from consultant’s expectations. Biomass projects may benefit from fixed-price off-take contracts, but rarely include a full pass-through of feedstock costs, leading to margin compression when fuel costs exceed forecasts due to competition, increased transportation costs or resource unavailability. Geothermal and biomass technology also is generally more complex than other renewable projects, which increases performance and operating cost volatility.

**Increasing Competitiveness, Expiring Incentives**

Growing demand for renewables led to technology improvements and cost reductions, improving the price competitiveness of renewable energy generation and increased market penetration. Capital cost reductions and economies of scale lowered the cost of generation to levels that compete with market rates in some locations, allowing construction of fully merchant projects and PPAs priced below $30/MWh. While interest is building for U.S. offshore wind projects, higher costs capital and operating costs, and fewer qualified contractors than for onshore locations, are likely to limit growth of offshore facilities. Battery storage technology is becoming more cost-competitive and may be a viable alternative to thermal peaking units in areas with high renewable capacity, such as California, with development of utility-scale projects likely in 2017.

Federal investment tax credits and production tax credits are now on a fixed schedule to expire, improving certainty for planning and investment in solar and wind energy projects. But the likely demise of the CPP and the president-elect’s negative views of renewable energy, while favoring fossil fuels, suggest declining support at the federal level, and potential corporate tax rate reductions may curb the appetite for tax-equity investments. Retroactive federal legislation is possible but not likely, given support for renewable energy across both major political parties. State initiatives to increase renewable energy supply, such as California, with development of utility-scale projects likely in 2017.

**Oil & Gas**

**Rating Outlook: Stable; Sector Outlook: Stable**

**Growing Capacity**

The stable outlook reflects expected timely completion for rated U.S. Gulf Coast LNG export terminals. These early movers capitalized on infrastructure surrounding existing LNG regasification terminals, reducing capital costs and facilitating necessary permits and approvals. Investment-grade ratings are supported by tolling-style agreements with investment-grade counterparties, which in some cases are also equity sponsors of the facilities, helping mitigate construction risk. The tolling agreements substantially reduce feedstock cost and supply risk for the projects, and provide supply certainty and diversification for off-takers. The fixed-price agreements insulate rated projects from the global LNG oversupply currently challenging development of new facilities not already approved and permitted.
Challenging Price Environment

Production from major U.S. shale energy plays appears to have peaked, but continuing productivity improvements slowed the pace of output reductions for oil and natural gas, helping extend the currently low pricing environment. Oil prices moderated from lows reached early in 2016, but are not expected to increase significantly in the near term. Natural gas prices remain very low, with current spot prices below $3 per million British thermal units, and are expected to rise only modestly in 2017 due to growing domestic demand and exports.

In addition to LNG facilities, rated oil & gas projects include a petroleum refinery, oil pipeline and gas processing platform, with strong competitive positions or contracts and structures that mitigate persistently low commodity prices.

2016 Review

Fitch’s rating actions for monitored energy infrastructure projects in 2016 were predominantly affirmations (88%), with upgrades (7%) slightly outpacing downgrades (5%), demonstrating the rating stability of the overall portfolio. Upgrades largely were due to improving counterparty credit quality and de-leveraging, and downgrades reflected project-specific completion delays and operating challenges.
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