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Greener resources pave the way forward for US power generation

by KHAW Ker Wei

Independent power producers in the US, in particular the owners of coal power plants, continue to come under pressure as the price of natural gas crashes to historic lows and the US Environmental Protection Agency presses ahead with stricter regulations. The grant of stay by the Supreme Court in February 2016 on Obama's landmark Clean Power Plan, which aims to cut carbon emission by 32% from 2005 levels by 2030, would provide the power merchants with some breather on the environmental front. However, the tectonic shift in the underlying economics of the business clearly favors the operators of natural gas plants, the greener alternative. At a national scale, aging coal-fired power plants, which are the major emitters of carbon in the US power sector, are being retired or converted to burn natural gas instead. The timely interplay of both the environmental and economic factors would usher in a new chapter in the US power sector – the age of cleaner energy.

On 29 February 2016, NRG Energy (NRG), which owns the largest and most diverse electric generation portfolio in the US totaling over 50 GW in capacity, reported a USD 6.44bn loss for fiscal year 2015. The company took more than USD 5bn in impairment charges for the full year, primarily driven by write-downs on its struggling Texas coal plants. The RMI-CRI 1-year Probability of Default (PD) of the company hit its highest at 286bps in December 2015 (see Figure 1), as the underlying risks in the company were further magnified by turmoil in the global stock market. In contrast, the PD of Calpine Corp (Calpine), which holds mostly natural gas power plants in its portfolio, only rose to 29bps during the same period.

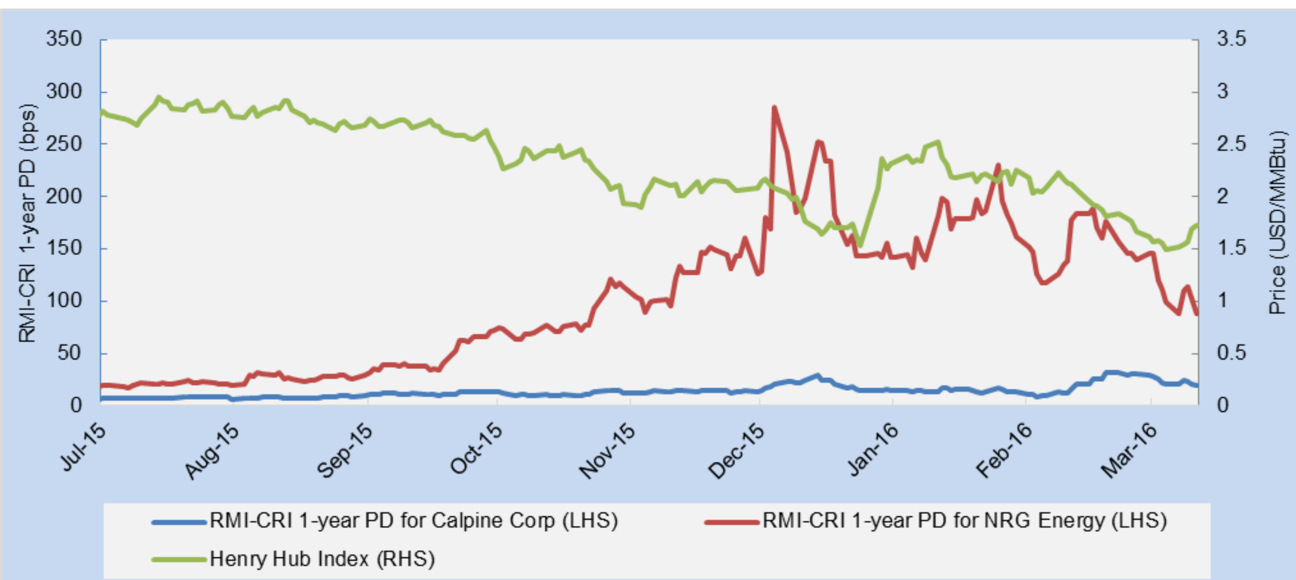

Figure 1. The RMI-CRI 1-year PD for NRG Energy and Calpine against the Henry Hub Index. *Source: RMI-CRI, Bloomberg*

Power generation is a capital intensive business and independent power producers typically finance their assets with large sums of debt. As of the end of 2015, NRG's debt totaled USD 19.5bn, giving it a debt to total asset ratio of 0.59. While Calpine's ratio of 0.64 appears to indicate higher leverage, NRG's total asset included USD 3.3bn of intangible assets. Without these, the debt to total asset ratio of the company would have been reported at 0.66. Additionally, in view of the negative outlook for the US unregulated power sector, there is a potential downside to NRG's credit health, should its fleet of nuclear and coal power plants require further write-downs. In that sense, Calpine's position is more resilient. More than 85% of Calpine's portfolio comprises modern, combined-cycle natural gas plants. The higher operating efficiency, together with the low cost of fuel, presents little risk of asset impairments.

Calpine's large fleet of combined-cycle natural gas power plants provided it with a competitive edge over its peer. The company's power plants delivered a power conversion efficiency rate of approximately 47% in 2015, which was significantly higher than older technology natural gas-fired and coal-fired power plants that typically produce a power conversion efficiency rate of 28 - 36%. As a result, Calpine's reported EBITDA to interest expense ratio has been constantly higher than NRG's (see Table 1) since 2014, after the decline in the price of natural gas handed over the cost advantage of NRG's coal-fired power plants to the greener alternative.

EBITDA to Interest Expense	Q1 2015	Q2 2015	Q3 2015	Q4 2015
Calpine Corp	2.19	2.35	4.04	1.66
NRG Energy	1.63	2.49	2.62	-15.58

Table 2. EBITDA to interest expense of Calpine Corp and NRG Energy. *Source: Bloomberg*

The fall in the cost of natural gas as a source of energy has led to a shift in fuel consumption for power generation in the US. The Henry Hub Index, which is the benchmark pricing and delivery point for New York Mercantile Exchange futures, averaged USD 6.73/MMBtu back in 2006. A decade later, the average price had fallen to USD 2.61/MMBtu, even hitting as low as USD 1.50/MMBtu in the first quarter of 2016. For NRG, whose cost of coal averaged USD 2.33/MMBtu in 2015, the economic impact cannot be ignored. With the transition in the underlying economics, NRG sought to rebalance its portfolio mix by converting existing coal-fired power assets to burn natural gas where possible. As of the end of 2015, coal-fired power plants constituted 30% of NRG's total power generation capacity. The capital expenditure to convert these facilities is estimated to cost NRG hundreds of millions in the next five years, leaving a very tight budget for the company to adhere to in the near term. Additionally, since coal power plants were not designed to burn natural gas originally, the conversion may result in unforeseen technical degradation that leads to efficiency loss. The substantial project risks associated with the portfolio represents further drawback to the credit profile of the company and may yet to be priced into its market capitalization, despite shrinking by 60% in 2015.

In 2015 alone, almost 18 GW of electric generating capacity was phased out and more than 80% of the retired capacity was due to the shutting down of conventional coal power plants. The gap was filled by 14.5 GW of new capacity addition, of which, the combination of wind, solar and natural gas contributed a total of 96%.

Sources:
RMI-CRI, Bloomberg, NRG Energy SEC Filing, Form 10-K, Calpine Corp SEC Filing, Form 10-K

Credit News

Panda bonds set to lure borrowers from the land of the kangaroo

Mar 13. Australian borrowers tempted by one of the world’s fastest growing pools of capital are considering yuan bond sales in mainland China, according to HSBC Holdings Plc. This movement would follow German automaker Daimler AG, South Korea’s government and the Canadian province of British Columbia in embracing Chinese debt issuance. They have all sold Panda bonds since 2014, helping to revive a market which has been dormant for much of the period since it was established in 2005 and has seen total issuance of just RMB 23bn (USD 3.5bn). Kangaroo bonds, an equivalent type of Australian dollar security sold by international borrower Down Under, saw AUD 32.3bn (USD 24bn) of sales last year alone. (Bloomberg)

DBS and Credit Suisse cut Singapore's GDP forecast for 2016

Mar 11. DBS has cut its forecast for Singapore’s GDP growth in 2016 from the earlier projection of 2.1% to 1.5%, which will be the slowest pace of expansion since the global financial crisis in 2009. DBS looked bearish on Singapore’s industry prospect, especially for the manufacturing, electronics, oil and gas, and financial services sectors. Compared to DBS, Credit Suisse made a milder correction for its original forecast from 1.9% to 1.7%. (Channel NewsAsia)

ECB cuts rates to new low and expands QE

Mar 10. The European Central Bank (ECB) announced a bigger than expected package of measures to stimulate the euro zone economy on March 10. The package includes an expanded quantitative easing, incentives to banks to increase leading, and further interest rate cuts. ECB president Mario Draghi stated that interest rates would stay low for an extended period and he kept open the option of a further cut. (FT)

Korea holds rate at record low amid rising debt, capital outflow

Mar 10. The Bank of Korea held the benchmark interest rate unchanged for a ninth month as further cuts might have limited benefit. While the central bank expects the economy to keep growing, weakness in emerging markets is weighing down exports and consumption at home is on a downward trend. Record-high household debt needs to be curbed while noting that volatility in global financial markets has eased. Capital outflows remain an area of concern. Foreign investors withdrew USD 152mn from Korean bonds and USD 1.4bn from stocks this year as of March 9 amid uncertainty in emerging markets and rising tensions with North Korea. (Bloomberg)

Noble seeking USD 4bn of new and refinanced loans without asset sales (Straits Times)

Mexico's ICA has prepared bankruptcy filing as precaution (Channel NewsAsia)

IMF issues warning on global growth as China exports (FT)

Regulatory Updates

Sweden's bankers complain of misrepresentation in Basel talks

Mar 13. The tension between the Swedish central bank and the country's Financial Supervisory Authority (FSA) has resulted in miscommunication to the Basel Committee on Banking Supervision (BCBS). Sweden's bankers are concerned that the BCBS has a misconception about the country's view on adopting a high leverage ratio. The FSA does not want a high capital ratio but the central bank wants banks to set aside more capital as a percentage of total assets. Mr. Stefan Ingves, the governor of Sweden's central bank and chairman of the BCBS, has voted for tighter regulation on behalf of his country despite opposition from the FSA. (Bloomberg)

China said to plan new rules facilitating debt-to-equity swaps

Mar 11. China's central bank and the country's top economic planning agency are planning to make it easier for companies to conduct debt for equity exchanges. Under existing banking regulations, stakeholders can swap debt for equity only if shares were issued as collateral for the loan. In addition, creditors must offload their shares within two years after a debt for equity swap. Worsening loan quality has led to the call for easier debt for equity swap rules as the economic slowdown in China has brought about the highest bad loan level since June 2006 in December. Analysts expect the new rules to help curb the bad loan levels just as they did during the 1990s banking crisis. (Bloomberg)

Moody's to withdraw from Russian domestic market

Mar 9. Moody's is withdrawing from the Russian domestic market as global rating agencies are caught in a dilemma between new Russian laws and western sanctions. According to the rating agency, the legislative changes and other potential restrictions have affected the business of providing national scale ratings. The decision from Moody's marks the most drastic reaction so far to new Russian regulation of credit rating agencies and highlights the risk that the country's financial markets may become more isolated from global markets amid the tit-for-tat fallout of western sanctions against Moscow. (FT)

US watchdog flags up stress test (FT)

Life insurers urged to improve service, transparency levels (Straits Times)

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