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## Calpine (17/04/2013)

The fund established a position in Calpine in mid / late 2011 and added to it during 2012. The position is 5% of the fund. The fund's entry cost is around \$14 compared to the current price of over \$21.

Calpine is a merchant electricity generator that owns approximately 28,000 MW of predominately combined cycle gas turbine generation capacity in the US. This capacity is primarily concentrated in the North East (PJM electricity market), Texas, California and the South East. Calpine has a market capitalisation of around \$9 billion and enterprise value of around \$18.5 billion (they have plenty of debt).

Calpine has a chequered history following its rapid build out of new gas fired generation capacity in the early 2000s. Lower than expected electricity prices and high leverage lead to its financial collapse and Chapter 11 bankruptcy in 2005. Calpine re-emerged from bankruptcy in 2008 with a new management team, new balance sheet and a large fleet of almost brand new, highly efficient, low emission, combined cycle gas electricity generation plants.

Our Calpine investment tenet is that changes to US environmental policy will have a positive impact on gas fired electricity generation margins. The tenet also picks up on the tightening electricity demand-supply situation in Texas.

US environmental policy as it relates to electricity generators has progressed over the last few years to the point that something is actually starting to happen. The key changes are the pending introduction of the MATS and CSAPR rules. CSAPR will regulate emissions of SO<sub>x</sub> and NO<sub>x</sub>, while MATS will regulate emissions of mercury and other toxics. The impact is particularly felt by coal fired generators. The consequences over time for coal generators are lower output, more retirements, greater capital expenditure, and / or higher operating costs. For a given level of fuel costs, these consequences change the position and shape of the electricity supply curve with efficient gas fired generators being able to dispatch at higher prices and more often, thereby increasing their profitability. The evolution of the CSAPR and MATS rules has been very long and we expect the implementation to be no different. Legal challenges to these rules and their interpretation will continue – perhaps best described as two steps forward and one step back. However, we think the trend of tighter environmental controls is clear.

The situation for coal fired generators has been exacerbated by the fall in US natural gas prices over the last few years. Lower gas prices have made gas fired generators more competitive relative to coal, resulting in “coal to gas switching”, whereby efficient gas generation is dispatched ahead of coal. However, our position in Calpine has never been premised on low natural gas prices. Indeed, a key part of our research process included understanding the impact on Calpine of rising and falling natural gas prices. In particular, we wanted to know whether Calpine could grow its earnings in a

declining natural gas price environment.<sup>1</sup> Our work included developing a regional financial model of Calpine's operations so we could get a feel for their sensitivity to natural gas prices, dispatch assumptions, market heat rates, operating heat rates and other variables.

In addition to the environmental rule changes noted above which impact on many electricity markets in the US, Texas faces an increasingly tight electricity demand-supply situation. The predicament is that Texas electricity forward curves have (until more recently) been stubbornly low and flat, and hence not provided the normal price signal to incentivise new generation. The most prevalent reason for this is that natural buyers of electricity (e.g. retailers) have been reluctant to contract out more than a year or so (their contracts with customers typically do not extend beyond a year), leaving forward prices beyond this point depressed (i.e. generators are long electricity but there is little demand beyond the next year). However, with ongoing electricity demand growth and demand-supply continuing to tighten, PUCT and ERCOT (the Texas regulator and electricity grid operator) have implemented some changes to allow higher electricity prices and are giving consideration to other concepts such as a capacity market.<sup>2</sup> While a capacity market is some time off (if it happens at all), these changes and further recognition of the tight demand-supply balance has recently translated into a lift in forward curves – in particular, the 2014/15 forwards are starting to edge up towards the level required to justify new build economics. This should translate into higher earnings for Calpine given its large presence in Texas.

Overall, we are seeing confirmation in our Calpine investment tenet as the CSAPR and MATS rules progress (albeit with regular set-backs), ongoing coal generation plant retirements, recognition in the Texas electricity market of the tight demand-supply balance, and forward electricity curves appear to be moving higher.<sup>3</sup>

Calpine is guiding to slightly less than \$2 billion in EBITDA this year and ongoing capital expenditure should be around \$350 million, implying an unleveraged coupon of around \$1.5 billion or yield of around 8% on an enterprise value of \$18.5 billion<sup>4</sup>. There should be material upside from here if spark spreads / market heat rates in Texas, PJM and other markets move closer to the levels required to justify new build economics. It is also worth noting that the current enterprise value of \$18.5 billion compares to a replacement cost in the vicinity of \$30 billion.

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<sup>1</sup> A common rule of thumb is lower natural gas prices mean lower earnings for gas fired generators. However, the relationship is more complex than this.

<sup>2</sup> Texas is an "energy" only market whereas PJM is an "energy" and "capacity" market. Capacity markets pay generators a fee for making available their generation capacity and therefore provide another revenue stream.

<sup>3</sup> Note that we do not expect forward curves to necessarily sustain or even reach the levels required to justify new build economics – someone will always build ahead of the curve thereby increasing supply and depressing prices. However, we think there is scope for spark spreads / market heat rates to improve and for this to be reflected in future earnings.

<sup>4</sup> Calpine has significant unused tax losses which we have not reflected in our valuation.

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