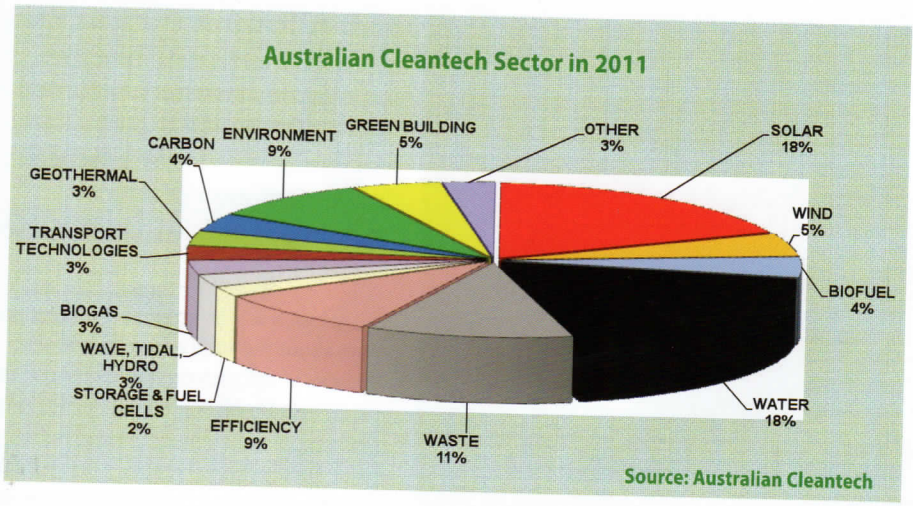
Why gas is not cleantech

The definition of clean technology should insist on tranformational rather than transitional technologies.

Profile by JOHN O'BRIEN



For many investors around the world, natural gas is seen as the perfect fit for a clean energy portfolio. While there are a number of good reasons for this, the principles that make a robust definition for cleantech mean that gas should be excluded.

Natural gas has a lower emissions profile than coal, oil or diesel powered electricity and, through its greater generation flexibility, can be used for peaking, intermediate and base-load power generation. It can also be shipped in a high energy density liquid form and therefore reduce reliance of countries such as China and India on coal - another reason for its inclusion as 'clean' energy.

It recent years, investors in some gas assets, especially those classed as unconventional, have made very strong returns. The early investors into coal bed methane (CBM) in Australia or South Africa provide examples. Similarly, the transformation of shale gas from an unlikely future resource to one of the hottest global investment plays, provide good incentives for investors to examine the sector carefully.

It therefore seems to tick all the boxes: cleaner, more flexible and with good investment returns. What's not to like?

The version of cleantech we use in our work is: *Economically viable products, services and processes that harness renewable materials and energy sources, dramatically reduce the use of natural resources and cut or eliminate emissions and wastes.*

Natural gas falls into the category of 'clean' fossil fuels. This also includes underground coal gasification, gas to liquids, carbon capture and storage and clean coal technologies. However, despite the 'clean' tag, all of these remain fossil fuel energy sources and are therefore, at best, are transition resources or technologies. The do not fit the definition of cleantech because they do not 'harness renewable energy sources' or 'reduce the use of natural resources'. They reduce emissions but overall, 'clean' fossil fuels are only incremental improvements - and whilst profitable, do not fit into cleantech's vision for a sustainable future.

With gas excluded, where can investors look for cleantech stocks. The recently released Australian Cleantech Review 2012 provides many examples of clean energy companies that present investment opportunities as alternatives to gas. The report reviewed 1,160 Australian cleantech companies with combined revenue of $26 billion and employing 45,000 people. During 2011, these companies were involved in capital transactions totalling $2.9 billion. The graph shows the distribution of number of companies by sector is shown below with categories such as Waste, Water, Solar, Environmental Services and Wind all generating more than $1 billion of revenue in 2011.

The risk profile of these opportunities varies widely. They are not all early-stage high risk venture investments. They include a few companies that are active in mature lower risk clean energy sectors such as **Infigen Energy** (ASX: IFN) in wind and **Energy Developments** in waste to energy (ASX: ENE).

Looking forward, there are some important trends that may provide pointers on where to find better cleantech returns.

With a high oil price, companies that offer transport efficiency measures, alternative fuels and plastics recycling may improve their profitability e.g. **Vmoto** (ASX: VMT) or **Mission NewEnergy** (ASX: MBT).

The start of the carbon price in July is likely to provide further growth for carbon sequestration companies such as **Carbon Conscious** (ASX: CCF) and **CO2 Group** (ASX: COZ) as well as companies involved with energy efficiency.

This year may also see the first signs of renewed life in the geothermal industry. The first proof of concept deep wells are scheduled for completion, which may benefit early movers such as **Geodynamics** (ASX: GDY) and **Petratherm** (ASX: PTR).

So whilst a genuine cleantech portfolio would not include gas companies, there are still many Australian cleantech investment options. Whilst the sector has been battered in recent years, there are encouraging trends that should now drive industry growth. ei

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