



Hot rock concepts can be attractive

NOW that the birdies in the parliamentary nest finally have decided to agree on something, a mandatory 20 per cent renewable energy target by 2020 is on the way.

While the immediate beneficiary will be the wind-power industry — wind being the cheapest form of alternative power — the idea of clean electricity from a bounteous subterranean heat source will become increasingly alluring.

First, a reality check: the concept of tapping heat sources deep within the earth's bowels remains largely that, conceptual.

Of late there's been an uptick in drilling and development activity, prompting broker Wilson HTM to issue a fortnightly update on the sector "in response to increasing news flow in the area".

In (over) simplified terms, hot-rock energy involves drilling down to naturally heated rocks and then fracturing them to enable water to flow down one hole and then up another in superheated form. Bung on a generator for decades of clean power.

The main specialist stocks in the sector are Geodynamics (GDY), Petratherm (PTR) Panax Geothermal (PAX), Geothermal Resources (GHT), Greenerth Energy (GER), Torrens Energy (TEY), Kuth Energy (KEN), Green Rock Energy (GRK) and Hot Rock (HRL).

While activity is focused on South Australia's known hot-rock provinces, Kuth is active in Tasmania, Greenerth has tenements around Geelong and Hot Rock has extensive western Victorian acreage. Green Rock has conventional geothermal interest in Hungary.

It also has an interesting alliance with the University of WA, by which the company drills under its Crawley campus to unleash heat. The heat is then used to replace the uni's electric-powered compression chillers (used for airconditioning) with geothermal-powered absorption chillers.

There's a huge gap between the market value of Geodynamics (\$290 million) relative to the others (Panax ranks second with a \$27m market cap). The reason is that Geodynamics is cashed-up to the tune of \$115m, and by the far most advanced with its Habanero wells in the Cooper Basin near Innamincka.

Petratherm's Paralana joint venture in the northern Flinders Ranges rates a mention if only because it's backed by Beach Petroleum and TRUenergy. Petratherm recently received the first \$2.45m milestone payment under a \$7m program to fund two proof-of-concept wells there.

In other recent activity, Geothermal Resources announced its first inferred geothermal resource — inferred being pretty much a guesstimate — at its Frome project in SA, with an estimated 84,000 petajoules in place.

Kuth reckons it has a 260,000PJ inferred resource at its Carlton-Lemont prospect in Tassie.

Going up the reliability scale, Panax has announced a second measured resource of 11,000PJ at its Tirrawarra project in the Cooper Basin, taking its total measured resource to 22,000PJ, with a further 62,000PJ indicated and 289,000PJ inferred

Torrens Energy claims by the far the biggest inferred resource, of 780,000PJ.

One milestone to watch out for is Australia's first certified proven geothermal reserve: Panax hopes to achieve this status with a drilling effort at its Penola project on the Limestone Coast, due to start next month or early in October.

But the real heart-in-the-mouth moment comes when Geodynamics plans to commission a 1 megawatt pilot plant in view of installing a 50Mw commercial plant — enough to power 50,000 households — by 2011. These pilot plans were thrown six to nine months behind schedule after a well incident in April which saw an "unexpected rapid release of steam and water". If anything, Geodynamic's problem is that it's dealing with overly virile (rather than too weak) flows.

A common investor beef is that Geodynamics is simply too far way from transmission lines and a decent-sized market.

The other stocks fall in the "worth a punt" category, although most will run out money if they don't provide a steady stream of superheated news.

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