



Clean energy may be below us

By Brad Lester

SOUTH Gippsland remains a possible region for geothermal energy exploration, despite searches now centring on the Latrobe Valley and Warragul.

However Victorian-based company Greenerth Energy is planning to explore the Yarram district for sources of water heated to steam by extreme temperatures in hydrothermal geothermal systems deep beneath the ground.

In ample supply, the steam could be powerful enough to turn turbines to produce electricity, with minimal greenhouse gases.

Greenerth Energy last year received a permit from the Victorian Government to explore the Yarram district through to the Latrobe Valley and Sale.

Company director Rob Annells said geothermal heat was found at Yarram by drillers searching for oil and gas on behalf of sister company, Lakes Oil.

"Lakes Oil drilled a well at Seaspray four years ago and they had hot water and steam come to the surface at 89 degrees. That was at 220m deep and we believe that if we go

and we believe that if we go deeper, we could get hotter water," he said.

"We have a cooperative arrangement with Lakes Oil and we collect samples from their oil wells and there are some in the Yarram area."

Mr Annells said a viable geothermal system must have a suitable temperature and volume of water.

"If we get those two things, there is every reason that we could generate non-polluting power," he said.

"But until we drill the holes, we are only surmising."

The company will initially concentrate exploration efforts in the Latrobe Valley, close to existing electricity networks and major industry that could become customers.

"We are talking to a number of people in the region. We think we can lend a hand in the Latrobe Valley with coal drying, just as long as we can get hot water there," Mr Annells said.

"As far as industry is concerned, they are big users of heat that use gas at the moment as well as electricity, so there is the possibility that we could generate environmentally friendly heat for them."

Exploration efforts in the Yarram district will entail drill-

ing up to three test holes, possibly up to 3km deep.

"Until somebody does it, we don't know whether we're right or wrong. We need to step out and take that risk," Mr Annells said.

Another company, Sydney-based Granite Power, has the licence to explore south and west Gippsland. Managing director Stephen de Belle said a 'clear target' has been identified five to 10km south of Warragul, towards Leongatha.

"It's a properly delineated body of heat that we can develop. It could support two to three 250MW power stations, much smaller than those in the Latrobe Valley, but we're talking about greenhouse-free electricity," he said.

Another site south-west of Warragul has indicated heat between one and two kilometres below the surface. That heat could be used for power generation or by industry, Mr de Belle said.

"We only have generalised data at this stage," he said.

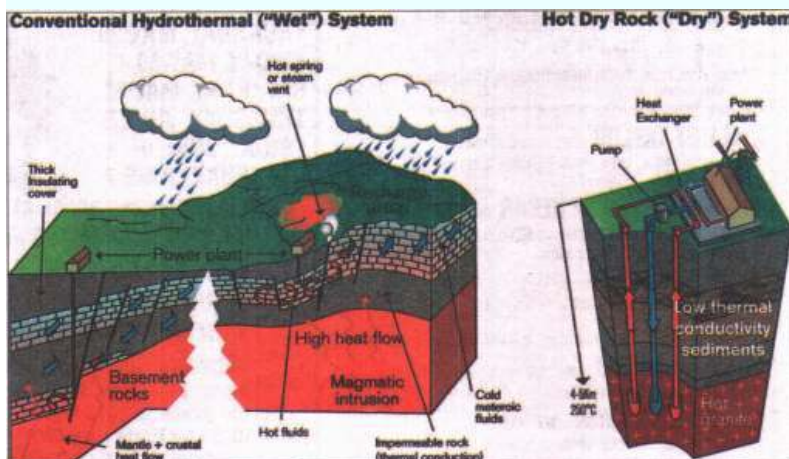
Underground heat can be harnessed via two systems: in hydrothermal geothermal systems, deep groundwater that has been naturally heated to steam temperatures is brought to the surface and used to turn

turbines.

In dry rock systems, water is injected into hot rocks and returned to the surface once heated.

In response to strong industry interest in exploration for geothermal energy, the Victorian Government recently released 19 new Victorian exploration areas. Energy and Resources Minister Peter Batchelor said the new exploration areas were located mostly in the Wimmera, in the north of the state, and also East Gippsland. "The Brumby Government is taking action on climate change and with the rapid improvement of geothermal technology, now is the ideal time for exploration and investment in Victoria's geothermal resources," Mr Batchelor said. He said the government, through the Victorian Renewable Energy Target scheme, aimed to increase energy generated from renewable sources to 10 per cent by 2016.

"Geothermal energy has the potential to provide clean and reliable energy, with close to zero greenhouse gas emissions, because it is generated from naturally occurring heat from hot rock and water reservoirs deep beneath the earth's surface," Mr Batchelor said.



Options here: the difference between a hydrothermal geothermal system and a dry rock system