



ARENA



Australian Government
Australian Renewable
Energy Agency

MEDIA RELEASE

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MURADEL STARTS PRODUCING CRUDE OIL FROM ALGAE AT DEMONSTRATION PLANT

Renewable fuels company Muradel has launched Australia's first integrated demonstration plant to sustainably convert algae into green crude, as a first step towards a commercial plant with the potential to produce 80 million litres of crude oil a year.

The \$10.7 million demonstration plant at Whyalla, to be officially opened today (Friday) by Regional Development Minister Geoff Brock and Australian Renewable Energy Agency (ARENA) CFO Ian Kay, will produce 30,000 litres of green crude a year using Muradel's Green2Black™ technology for the continuous production of an environmentally sustainable fossil crude equivalent.

Muradel CEO and University of Adelaide Associate Professor David Lewis said if the demonstration plant was successfully scaled to a commercial plant, it would produce 500,000 barrels of refinable green crude a year by 2019 – providing enough petrol and diesel to fuel 30,000 vehicles for a year.

"This is world-leading technology which can be scaled up exponentially to help steer our fossil fuel-dependent economy to a more sustainable future," Dr Lewis said.

"At a time when Australia imports most of its crude and refined transport fuels, Muradel's advanced biofuel technology can improve Australia's terms of trade, reduce life-cycle greenhouse gas emissions, and improve Australia's fuel security."

The planned 1000-hectare commercial plant would also create at least 100 new skilled and operational jobs in the Whyalla region.

Regional Development Minister Geoff Brock said the Muradel project was a natural fit for South Australia's status as a national leader in the fields of aquaculture and renewable energy - two industries firmly based in the regions.

"The State Government is focused on supporting industry diversification, investment and jobs growth. Transformation of our economy will be built on the ability of our local businesses to adopt new ways of doing things," Mr Brock said.

"The government is working to help SA businesses identify new opportunities for innovation and to develop and expand their capabilities. Muradel is an excellent example of this approach."

ARENA CFO Ian Kay said the new plant could be important for transitioning from fossil fuels in Australia, particularly oil, diesel and petrol for transport.

"Muradel has successfully taken this technology through to demonstration and is poised to offer it commercially with the ambition of making it available as a renewable alternative at the pump," Mr Kay said.

Using microalgae produced on site, plant biomass and organic waste, Muradel's energy-efficient subcritical water reactor converts them in minutes to a crude oil that is functionally equivalent to fossil crude. Standard oil refining then produces cost comparable, low net carbon, liquid transport fuels including petrol, diesel and aviation fuels.

The microalgae is sustainably grown in seawater ponds on marginal land that doesn't compete with food production, and is a resilient strain that has proven productive all year in Australia's sunny conditions. At the commercial scale, Muradel expects production costs would be on par with the cost of producing fossil fuels for transport.

"Not only will the plant be a boon for the region's economy, the algae ponds will act as carbon sinks that can capture greenhouse gas emissions produced by Whyalla's heavy industry," Dr Lewis said.

The demonstration plant was partially funded through a \$4.4 million grant from ARENA. Additional in-kind and financial support came from the Whyalla City Council, the South Australian Government through BioSA, and Muradel's shareholders.

Next month, Muradel will commence talks with downstream oil processors about refining and distributing its crude as transport fuel for shipping, aviation and road vehicles.

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About Muradel Pty Ltd

Renewable fuels company Muradel capitalises on Australia's natural resource advantages – solar radiation and availability of land - to produce green crude oil from photosynthetic microalgae and other sources of biomass, including biosolids generated by wastewater treatment plants.

Muradel operates Australia's first microalgae-to-green crude demonstration scale plant in Whyalla, South Australia, where it exploits its Green2Black™ suite of technologies for the integrated production of green crude. Muradel's green crude is ready to refine into drop-in liquid transport fuels that are compatible with existing fuel supply infrastructure and engines.

Muradel was established as an Australian joint venture between the University of Adelaide, Murdoch University and SQC Pty Ltd, the last linked to Aban Australia Pty Ltd, the principal source of private funding to date.

About ARENA

ARENA was established by the Australian Government as an independent agency on 1 July 2012 to make renewable energy technologies more affordable and increase the amount of renewable energy used in Australia. ARENA invests in renewable energy projects, supports research and development activities, boosts job creation and industry development, and increases knowledge about renewable energy.