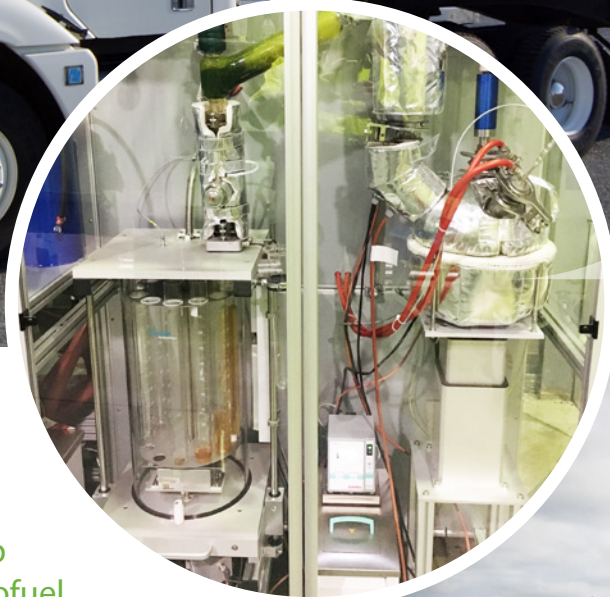


## The Northern Oil Advanced Biofuels Laboratory



The Northern Oil Advanced Biofuels Laboratory at Yarwun, near Gladstone, in Queensland is the next step in developing Australia's biofuel industry.

The state of the art laboratory is the first dedicated biocrude and biofuel testing facility in the country, removing a cost and access barrier that has hindered domestic innovation in the field.

A partnership between Southern Oil Refining and the Australian Renewable Energy Agency, the laboratory provides world class analysis and experimentation to guide biocrude producers and government in developing biocrude and refined renewable fuels, and product specifications.

The end goal is the know-how and legislation needed to create a commercial biofuels industry in Australia that will fuel private and commercial vehicles and military ships and aircraft.

The laboratory supports Southern Oil's Northern Oil Advanced Biofuels Pilot Plant, also sited at Yarwun, and the objectives of the Queensland Government's Biofutures Roadmap and Action Plan, which aim to stimulate an industrial biotechnology revolution in the state.



The laboratory is key to developing renewable fuels for commercial and private vehicles and military ships



## Leading the field in research and development

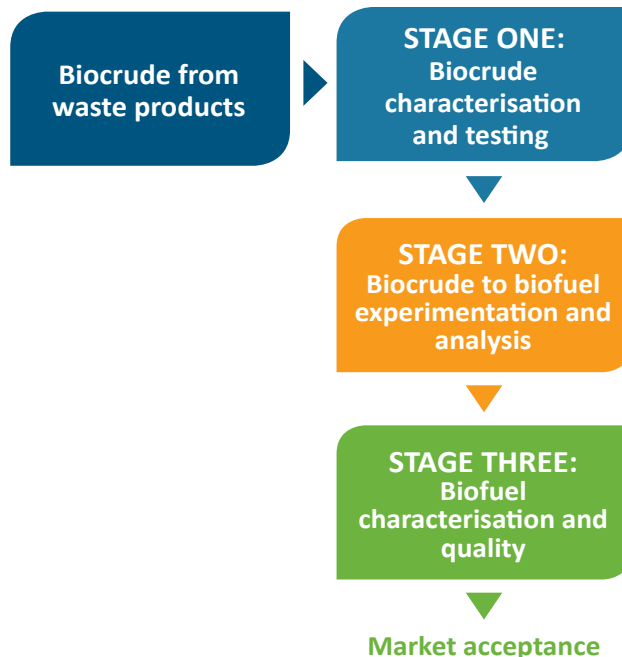
The Northern Oil Advanced Biofuels Laboratory is built for purpose using the latest technology and expert advice from around the world.

The laboratory will take crude made from bio and green products such as sugarcane bagasse, waste tyres, wood, human and agricultural waste and apply a three stage process that:

- determines the fuel potential of the biocrude;
- identifies the most economical treatment method to achieve that potential; and
- compares the performance of the final biofuel to petroleum-based fossil fuels and against Australian and American civil and military standards.

Southern Oil has a biofuels research partnership with the Queensland University of Technology, and has invited other Australian universities to collaborate with and work from the Northern Oil Advanced Biofuels Laboratory.

## The laboratory's process



## ARENA partnership

The Australian Renewable Energy Agency (ARENA) provided \$2.37 million to help develop and construct the \$5.3 million state of the art laboratory, with Southern Oil contributing the balance.

As part of the partnership with ARENA, Southern Oil's extra contribution to Australia's new energy industry will be to support other biofuels developers by making the laboratory available at no cost.

Australian biofuel developers have previously had no choice other than to send their products overseas for testing, which has cost time and money.

The Northern Oil Advanced Biofuels Laboratory will be available, free of charge, to other Australian biofuels developers to conduct testing on various raw fuels.

