

Northern Oil Advanced Biofuels Pilot Plant

The pilot plant is sited at the Northern Oil Refinery



The Northern Oil Advanced Biofuels Pilot Plant is a \$18 million green fuel game changer developed by Southern Oil Refining at its Northern Oil Refinery at Yarwun, near Gladstone, Queensland.

The pilot plant will use biomass and waste material such as sugarcane bagasse and prickly acacia as feedstock for the production of biocrude oil, which will be refined into saleable kerosene and diesel products.

The pilot plant aims to produce one million litres of fuel for use in field trials by the US navy as part of its Great Green Fleet initiative, by the Australian Defence Force, by Australian heavy road transport operators and possibly for the aviation sector.

The pilot plant aligns with the objectives of the Queensland Government's Biofutures Roadmap and Action Plan; stimulating an industrial biotechnology revolution in the state.

Southern Oil continues to drive innovation in this space, and has partnered with the Queensland University of Technology to fund research into the production of industrial products from by-products generated during biofuel and recycled oil production.



Queensland Premier Anastacia Palaszczuk MP tours the site for the pilot plant

Leading the field in research and development

Southern Oil built Australia's first biocrude and biofuel laboratory as part of the Northern Oil Advanced Biofuels Pilot Plant.

The laboratory is an important step in developing product specifications for Australian biocrude and refined renewable fuels, paving the way for an open market, and will provide Australian biofuels innovators with domestic testing of product samples – saving time and money.

Ultimately the laboratory will help to determine whether a compelling business case can be made to build a commercial scale biorefinery to produce renewable diesel and jet fuels.

The Australian Renewable Energy Agency (ARENA) contributed \$2.37 million towards the cost of the \$5.3 million state of the art laboratory, with Southern Oil financing the balance.

Field trials for the US Navy's Great Green Fleet project





Waste tyres



Green waste



Prickly acacia



Bagasse

From trash to treasure

Following successful field trials, a \$150 million commercial-scale biofuel plant producing 200 million litres per annum of advanced biofuel suitable for military, marine and aviation use will be constructed.

This stage of the project will create hundreds of jobs and new industries across regional Queensland.

The commercial plant will require large feedstock volumes of what is currently considered to be 'waste material', including bagasse from sugar cane milling, green waste from regional cities, woody weeds like prickly acacia and other wastes such as tyres from the mining sector, heavy transport and passenger vehicles.

Southern Oil has identified 12 regions that may be suitable sites for primary processing plants to produce liquid feedstock for the Gladstone facility.



1. **Brisbane region:**
green waste and waste tyres
2. **Bundaberg region:**
sugar cane waste
3. **Rockhampton region:**
green waste
4. **Mackay region:**
sugar cane waste
5. **Burdekin region (Ayr/Home Hill):** sugar cane waste
6. **Townsville region:**
green waste
7. **Herbert River mill (Ingham region):** sugar cane waste
8. **Tully/Innisfail region:**
sugar cane waste
9. **Cairns region:**
sugar cane waste
10. **Hughenden or Richmond:**
prickly acacia
11. **Clermont region:**
waste tyres (mining)
12. **Roma or Toowoomba region:**
waste tyres (mining)
13. **Mount Isa:** waste tyres (mining) and prickly acacia