

ElectroComms & Energy Utilities

BIOFUELS INDUSTRY IN AUSTRALIA

Biofuel from plants

Plants go through a process called photosynthesis which converts sunlight, carbon dioxide and water into energy. They store energy as sugars.

Biofuels such as ethanol are made from converting the sugars in plants into a liquid fuel.



Fueling up for the future!

Biofuel production facilities are emerging in many regional areas of Australia. Advocates say the new facilities will boost regional economies and local employment opportunities.

Biofuel technology

Biofuels are made from renewable resources like plants and animal by-products. Common biofuels include:

Ethanol - produced by the fermentation and distillation of sugars in plants such as sugar cane, corn and grain crops.

Biodiesel - produced by the transesterification of waste oils and fats into a liquid similar to existing diesel and suitable for use in diesel engines.

Why is the biofuel industry growing in Australia?

The demand for oil continues to grow rapidly and supply may already have peaked. Oil prices will continue to rise making alternatives more economic.

There is also intense scrutiny on environmental and health effects relating to the use of fossil fuels.

Governments are developing policies to fast-track the development of alternative fuels and to reduce greenhouse gas emissions.

These policies include targets for the production of biofuels for use in motor vehicles. This scenario is creating a solid platform for long term development of the biofuels industry in Australia.

Research and development

New methods of producing biofuels involving the conversion of cellulose - the energy storage parts of the plant - into ethanol are under development. This would greatly increase the amount of biofuel that could be produced from agricultural crops.

Regional benefits of biofuels

When biofuel production replaces imported petroleum products it will present a major shift of emphasis in the regional and national economies.

The feedstock used to produce biofuels is usually an agricultural product and the manufacturing and distribution would be located in and integrated with regional economies.

The by-products, such as distillers grains, can be used for animal feed and provide additional value to agricultural operations.



“As the prospect of peak oil looms, it seems biofuel may be part of the answer to the energy dilemma. Biofuel is clean, green and runs in today’s cars.”



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So what happens at a local biofuel facility?

Company: Dalby Bio-Refinery Ltd

Location: Dalby, Queensland

Project description:

Australia's first grain to ethanol plant is under construction. Apart from producing ethanol for biofuel, the plant will also produce industrial grade ethanol.

As a bio-refinery, additional side products will also be produced such as wet distillers, grain and syrup for cattle food.

Employees: 20 plus personnel

Sectors involved:

- Manufacturing
- Electro-communications and energy utilities
- Business and Innovation
- Transport and logistics
- Retail services

Career opportunities:

- Production managers
- Maintenance supervisors
- Process operators
- Laboratory technicians
- Front end load operators
- Instrument technicians
- Mechanics
- Forklift drivers
- Leading hands
- Mechanics

For more information: www.dalbybiorefinery.com.au

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