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### **Ethtec announces ethanol production commercialisation project**

Australia's Ethanol Technologies Limited (Ethtec), a Willmott Forests Limited company, has announced that work had begun on a three-year AU\$20 million project designed to commercialise a new patented fuel ethanol production process.

The technology converts fibrous biomass to ethanol and generates surplus electricity from combustion of the lignin co-product.

The individual new technology processes to be brought online at the new plant during the next three years include:

- Phase one: Hydrolysis: concentrated sulphuric acid treatment of woody biomass feedstock to produce sugars using a twin screw extruder and tube reactor.
- Phase two: Lignin separation and acid recovery: separation of the lignin and the acid from the sugars, recycling of the acid for continuous production and recovery of the lignin for combustion to provide process energy.
- Phase three: Fermentation: simultaneous fermentation of the pentose and hexose sugars to ethanol using newly developed micro-organisms.
- Phase four: Ethanol recovery: from the fermentation broth by induced phase separation using potassium carbonate, simultaneously treating and recycling the water to production.

Ethtec director and chief scientist Dr Russell Reeves says that, if the commercialisation program is successful, production time could be slashed from "days to minutes" and fuel ethanol production costs dramatically reduced.

He says feasibility studies have concluded that fuel ethanol produced by the Ethtec process will have a crude oil equivalent cost in the range of US\$36-50 per barrel when the ethanol is used in blends with petroleum fuels.

This cost of ethanol, without government subsidies, is highly competitive with the current cost of crude oil which is in the range of US\$90-100 per barrel.

*<http://news.envirocentre.com.au/co2/newsletter.php?issue=106>*