



## PROJECT STATUS REPORT FORM

<b>Project Number:</b> RDG-07-26	<b>Task Force:</b> REDGTF
<b>Title of Project:</b> A Fully Integrated Process for Biodiesel Production from Microalgae in Saline Water	
<b>Lead Partner Country:</b> Australia	
<b>Participating Partner Countries and Organizations:</b> China: South China University of Technology India: Parry Nutraceuticals Ltd	
<b>Project Location</b> (Country, State/Province, City): Australia, Western Australia, Perth	
<b>Project Manager Information</b> <b>Name:</b> Prof Michael A Borowitzka <b>Organization:</b> Murdoch University <b>Address:</b> South St, Murdoch, WA 6150, Western Australia <b>Phone:</b> +61 8 9360 2333 <b>Fax:</b> + 61 8 9360 6308 <b>Email:</b> m.borowitzka@murdoch.edu.au	
<b>Project Start Date:</b> 18 June 2008	<b>Date of Project Status Update:</b> 8 May 2009
<b>Actions Since Last Update:</b>	
<b>Deliverables Since Last Update:</b> Progress Report B covering Milestone 3 due 1 June 2009	
<b>Date Completed:</b>	
<b>Milestones Reached:</b> Milestone 2	
<b>Next Steps</b> As per Milestone Schedule (1) Site Selection & Permits for pilot plant. (2) Pilot Plant design & engineering. The design will incorporate a number of novel improvements over current systems in the area of materials, construction methods, and energy conservation.	



*(3) SMALL SCALE TRIALS*

(a) Best algal strains and monitoring protocols identified. Strains will be grown in Perth in 1 m<sup>2</sup> and 2 m<sup>2</sup> raceway ponds, and the lipid productivity optimised. The best culture monitoring and management processes will also be established.

(b) A bench-scale optimised process (low cost, high efficiency) for harvesting the algal strains. Harvesting experiments will be undertaken on a 2 m<sup>2</sup> algal raceway pond located at the University of Adelaide. The operation of the pond will be based on optimal conditions recommended from the Murdoch trials.

(c) A bench-scale optimised process for extracting the oils from the algal strains. In the first instance, algal biomass harvested at Murdoch will be shipped to Adelaide for extraction experiments.

*(4) PRELIMINARY ECONOMIC MODELLING AND LIFE-CYCLE GHG EMISSIONS*

The financial and economic model for the whole process will be developed at the beginning of the project, and a detailed preliminary economic assessment will be undertaken at the conclusion of the small-scale trials.

Whole of life-cycle greenhouse gas emissions for the production and use of bio-diesel from microalgal lipids based on existing knowledge of large-scale algae production and using data obtained during the small-scale trials.

Results of economic modelling and life-cycle emissions assessment will be used to decide whether to proceed to the large scale trials.

**Proposed Project End Date:** 30 September 2011

**Project Already Complete:**  Yes  No

**Other Information:** Chinese partners are still seeking funding to support an expansion of their work on the project.