Safe Harbor Statement

Matters discussed in this presentation contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. When used in this press release, the words "anticipate," "believe," "estimate," "may," "intend," "expect" and similar expressions identify such forward-looking statements. Actual results, performance or achievements could differ materially from those contemplated, expressed or implied by the forward-looking statements contained herein, and while expected, there is no guarantee that we will attain the aforementioned anticipated developmental milestones. These forward-looking statements are based largely on the expectations of the Company and are subject to a number of risks and uncertainties. These include, but are not limited to, risks and uncertainties associated with: the impact of economic, competitive and other factors affecting the Company and its operations, markets, product, and distributor performance, the impact on the national and local economies resulting from terrorist actions, and U.S. actions subsequently; and other factors detailed in reports filed by the Company.
CASE STUDY

ALGAE FOR CARBON CAPTURE
The Vision

A BREAKTHROUGH TECHNOLOGY TO EXTRACT OIL FROM ALGAE
CO₂ for Value Added Products

- Discharge
- Effluent Water + Carbon Dioxide + Sunlight -> Algae
- Oxygen + Treated Effluent
- Water Recycling
- Algal Biofuels
- Algal oils / Plastics
- Animal Feed / Aquaculture
- CCS Biochar
- Fertilizer
- Human Nutrition

A BREAKTHROUGH TECHNOLOGY TO EXTRACT OIL FROM ALGAE
4-Stage Process to Scale

JCU Research Facility
(5,000 m²)

Tarong Energy Display Plant
(1-Hectare)

Pilot Plant
(30-90 Hectare)

Demonstration Plant
(500-Hectare +)

A BREAKTHROUGH TECHNOLOGY TO EXTRACT OIL FROM ALGAE
A Fast-Growing Partnership

Technology To Date:
1. Quantum Fracturing™ (QF) technology to inject CO2 and nutrients into algae culture.
2. Single Step Extraction™ (SSE) for continuous, highly-scalable, chemical-free dewatering and cell lysing.

Timeline:
- June 2010: MBD orders research-scale QF & SSE systems. Strategic agreement.
- December 2010: Research systems operating successfully at James Cook Univ.
- January 2011: MBD orders construction-phase SSE for Tarong Power Station.
- April-May 2011: Scale and integration trials at MBD.
- May 2011: MBD orders full-size SSE for Tarong Power Station 1ha Display Plant.

Looking Ahead: “...a growing pipeline of large-scale CO2 to Energy Algal Synthesizer installation projects at power stations and other emitters in Australia and around the world.” Andrew Lawson, Managing Director, MBD Energy, 23 May 2011.
The Big Picture

MANAGING THE NEXT PHASE
The New Phase of Algae Scale-Up

- MBD and other producers (e.g. Aurora Biofuels) have now exited the test phase.
- New stage: Industrial Demonstration
- Challenges:
  - Managing real-world inputs (e.g. CO2 emissions, waste water)
  - Consistent health and yields of algae fields (many factors)
  - Process management for quality and automation
  - Managing very large harvest inflows (up to 300GPM continuous for 1ha cultivation)
  - Development of offtake arrangements, carbon tax mitigation, etc.
  - Managing expectations in media, government, investors, the public.

Completion of this stage = Key industry inflection point.
Lessons Learned: Vendor Integration

- Early customer message: don’t make us manage multiple vendors!
- Current integration projects:
  - Real-time control network (SCADA*) with hooks into growth control systems
  - Process integration with 3rd party equipment:
    - Dissolved Air Flotation
    - 3-Phase Separation
    - Fractionation systems (multiple approaches)
- Biggest challenge: low-energy, reliable, chemical-free systems.
- Biggest opportunity: cross-leveraging vendor distribution networks.
- One year outlook: lots of test sales as producers experiment widely.
- Three year outlook: vendor shakeout as best-of-breed solutions emerge.
- Multi-way vendor alliances will be key to long-term survival.

* SCADA: Supervisory Control and Data Acquisition
Innovation vs. Product Management

OriginOil’s challenges:
- “too much good stuff” – innovations in all areas of algae production
- Lots of diffuse demand from potential customers
- Fast-moving technology development

Solutions:
- Focus: Single Step Extraction™ the only product offered
  (Additional process, service offerings only for existing SSE clients)
- Product Management:
  - Standardization on two capacities – entry-level and full-scale modular
  - Process Engineering and Design
  - Version and Build management
- Evergreen support contracts:
  - Customer guaranteed our best offering
  - Beneficial standardization of product fleet
Process Engineering vs. Live Algae?

- Existing algae production is like farming or brewing.
- Large-scale algae production is like waste water treatment:
  - Large volumes of water and dynamic input variables
  - Potential for crash events
  - Load balancing is critical
  - Integrated real-time controls required from growth through offtake.

Process engineering best practices are essential to achieve very large scale production.
Intermediate Feedstock Standardization

- For scale, growers need a defined output standard.

Requirements:
- Compact for transportation (minimum 10% solids)
- Achieved without toxic chemicals (local permits issue)
- Minimal biomass degradation
- Cell disruption achieved for downstream processing

Suggested labels:
- Formal: Uniform Intermediate Feedstock
- Informal: Algae Crude

OriginOil wants to work with growers, process partners, standard-setting bodies to develop a standard.

We want your opinion!
“Algae Crude”
(Uniform Intermediate Feedstock)

Produced by Evodos™ centrifugation after OriginOil® Single Step Extraction™
Summary

- Carbon capture a major driver for large-scale algae production.
- New stage: industrial demonstration.
- Customers demanding vendor integration and a single point of contact.
- Biggest challenge: low tech, low-energy systems.
- Evolution toward best-of-breed systems will drive a shakeout.
- Focus, standardization imperative.
- Industrial-scale algae process is like waste water treatment.
- Growers need a defined feedstock output.
- OriginOil helping to define a uniform intermediate feedstock – Algae Crude.

Completion of this stage = Key industry inflection point.
THANK YOU!

Riggs Eckelberry

QUESTIONS?

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