



**BIOENERGY**

GROUP PTY LTD

Australian Biofuels Infrastructure Program

# Mission Statement

**Bioenergy Group is dedicated to driving Australia to the forefront of the global stage for the production of biofuels. Our mission is to enhance environmental sustainability in the communities we serve, drive regional economic growth and employment and promote sustainable agricultural practices.**

Leveraging cutting-edge technologies and proven methodologies from Europe and the USA, Bioenergy Group is focused on developing the biofuels industry to promote fuel security and agricultural excellence. Through strategic partnerships with industry experts, we have developed an innovative project pipeline centered on biogas refinery assets. These assets are designed to generate renewable hydrocarbons and recover valuable agricultural products from a variety of biomass and organic residues.



# Business Case Summary

## Unique Selling Proposition:

- First market mover advantage in Australia
- Significant appreciation in the land value assets
- Bioenergy Group owned land for feedstock supply security
- Vertically integrated supply chain, feedstock colocated with plant
- Logistics optimised carbon score utilising Renewable Diesel (RD) used for operations
- Lowest carbon score SAF on the market as each project is a carbon sink
- Offers a strong Corporate Social Responsibility (CSR) proposition
- Emerging Fuel Technology catalyst conversion ratio is the best in class
- Commercial model not reliant on any Australian Government financial support

# Biomethane Transmission & Certificate Export Gas Infrastructure Network Australia

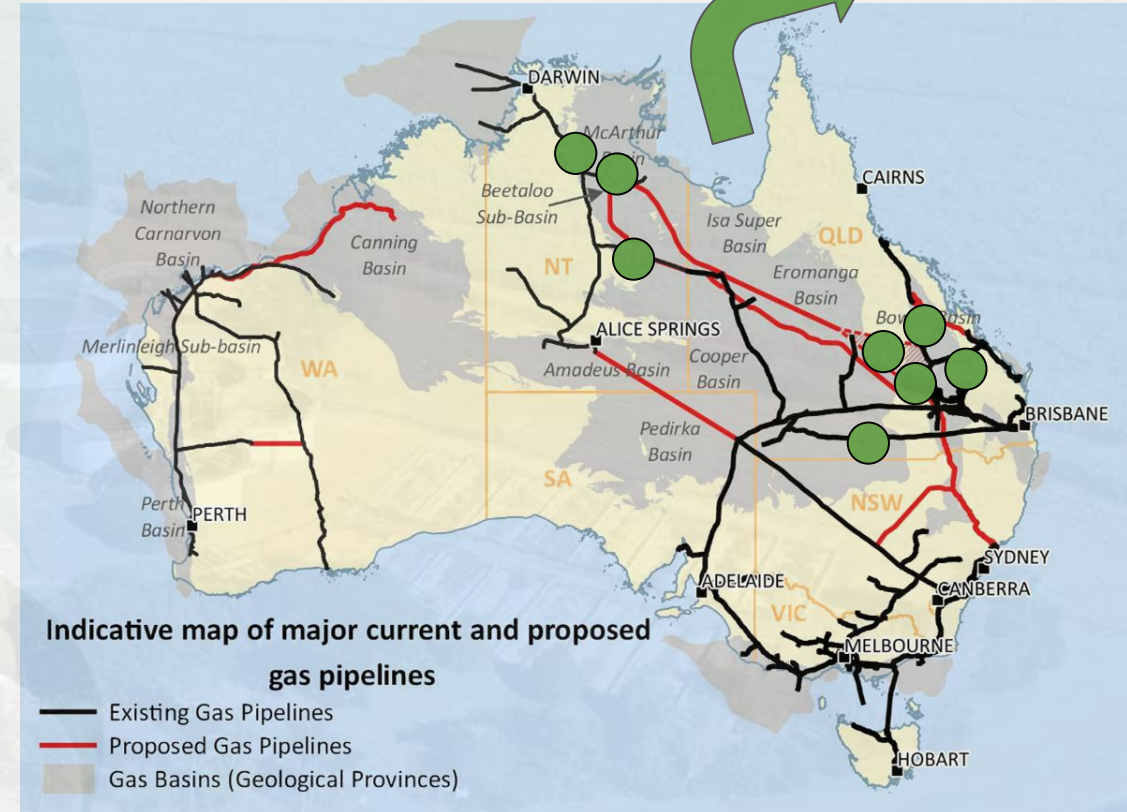
Biomethane produced at our biorefinery is upgraded to pipeline specification on site. Injection into the East Coast gas transmission network is undertaken via existing APA Group (or equivalent) gas infrastructure, which provides connectivity to industrial demand centres including Gladstone, Darwin, Brisbane and other capital centres. Under Australia's newly introduced biomethane certification framework, biomethane volumes can be tracked and certified through certificates of origin. These certificates can be transferred with the physical gas molecules or traded separately under a book-and-claim mechanism once injected into the grid.

This allows customers such as INPEX to contract for certified biomethane delivered on a virtual basis to Gladstone or other demand centres, without requiring dedicated point-to-point physical transportation from the production site.

## Indicative Biomethane Export

Phase 1	2.4 PJ	Q1 2028
Phase 2	24 PJ	Q1 2029

## Renewable Gas Guarantee of Origin Certificates



● Indicative Bioenergy Group Biorefineries

# Phase 1

## Bundaberg Biofuels

- Centre of excellence demonstrates;
  - Biomethane
  - Liquid biogenic CO2
  - Precision liquid/solid fertiliser
  - SAF and Renewable Diesel

## Dingo Biofuels & Maranoa Biofuels

- 58 million litres of SAF from both farms
- 1.2m GJ of Biomethane per year
- 360,000 tonnes of liquid bio CO2

circa 7,000 hectares each farm to guarantee feedstock

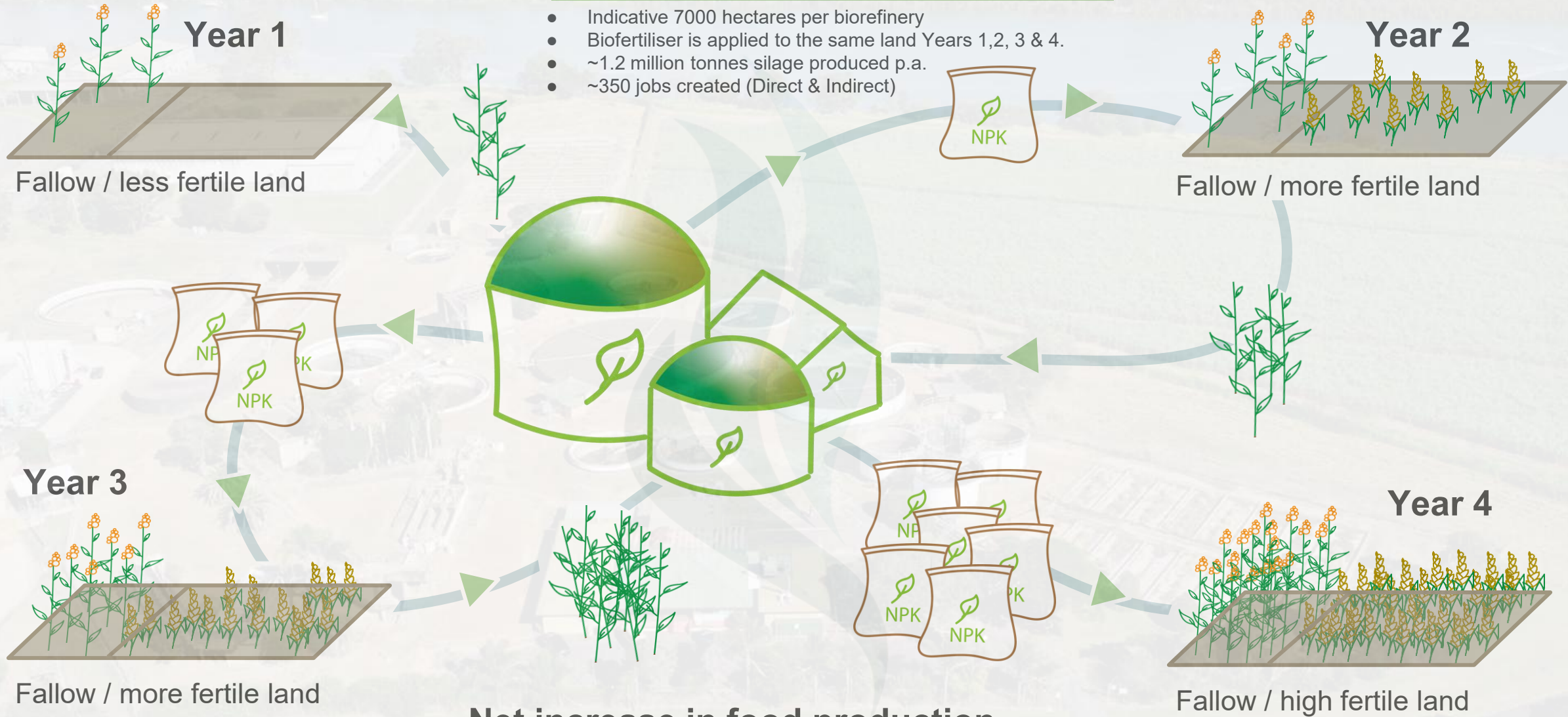


Phase 1	CH4 GJ per year	CO2 tonnes per year	Construction Completed (first gas produced)
Project 1 Bundaberg	450,000	30,000	Q2 2027
Project 2 Dingo	1,200,000	180,000	Q4 2027
Project 3 Maranoa	1,200,000	180,000	Q4 2027

# Land Rehabilitation

## Land Owned - Bioenergy Group

- Indicative 7000 hectares per biorefinery
- Biofertiliser is applied to the same land Years 1,2, 3 & 4.
- ~1.2 million tonnes silage produced p.a.
- ~350 jobs created (Direct & Indirect)



# Technology Partner - Anaerobic Digestion



Bioenergy Group has chosen BIOGEST® to provide the technology for the construction, installation of both Anaerobic Digestion (AD) plants to underpin each bioHub.

Biogest's AD technology is proven with over 200 operational facilities across Europe. The selected technology includes equipment for pre-processing, feeding, digestion, biogas storage, biogas upgrading, combined heat and power, CO<sub>2</sub> liquefaction, pasteurization and liquid/solid separation.

<https://www.biogest.at/>



## Wittersheim, France Biomethane

### Wittersheim Biomethane Plant

250 Nm<sup>3</sup>/h with a possible extension to 380 Nm<sup>3</sup>/h of biomethane (113,611 MMBTU/year)

36,000t/year of feedstock

Supplied by a group of Farmers (ABH)

Biomethane is fed into the local distribution gas network



## Frogmary, United Kingdom Biomethane

### Frogmary Biomethane Plant

7.6 MW<sub>th</sub> (199,838 MMBTU/year)

Approx. 70,000 tons of animal and agricultural waste and crops processed per year

Feedstock: Cattle slurry, farmyard manure, poultry manure, beet, maize silage, grass silage, whey

2 plant extensions already completed



## Charchigne, France Biggest biogas plant in France

### Charchigne Biogas Plant

3.6 MW<sub>el</sub> (254,888 MMBTU/year)

More than 110,000 metric tons per year of cattle manure are processed

Supplied by more than 110 farmers

Electricity produced can supply approx. 8,500 households



## Oak Valley, USA Biomethane

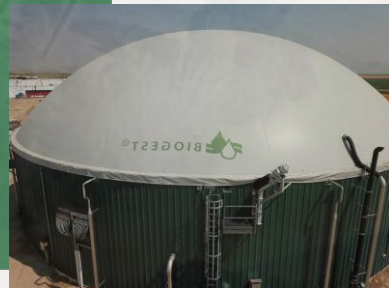
### Oak Valley Biomethane (RNG) Plant

Over 295,000 metric tons of cattle slurry are processed per year

Cattle slurry is provided by two farms owned by Oak Valley Dairy

Producing 184,000 MMBTU/year

Providing fuel for the California Natural Gas Transportation industry



Anaerobic Digestion

# Technology Partner - Fischer-Tropsch Synthesis

**EMERGING FUELS**  
TECHNOLOGY

Emerging Fuels Technology (EFT) is a technology company focused on methods for producing synthetic fuels.

## 2021

- Produced jet fuel for the US Air Force from CO<sub>2</sub> with **Twelve**
- Developed Maxx Jet/Maxx Diesel upgrading Technology
- Signed license agreement with Nordic Electrofuels for 200 BPD CO<sub>2</sub> to fuels plant - FEED completed
- Agreement with Topsoe for Maxx Jet/Diesel upgrading catalysts

## 2022-2023

- Started development of neat jet fuel method and 100% jet yield
- Started FEL 2+ study on 100 BPD bioGTL plant
- NiQuan (licensee) produced first diesel product
- Participated in ARCHII H<sub>2</sub> hub application (\$925 million awarded)
- Master License with **Twelve**, first demo underway
- MOUs with Raven SR and TerraStar Energy
- Licensed 625 BPD GTL plant for Northern Canada – FEED complete
- 3 patents issued

[www.emergingfuels.com](http://www.emergingfuels.com)



## 2024

- **Twelve** sign 785,000 tonne eSAF supply contract with the International Airlines Group (IAG)

# Contacts and Questions

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