



# RENULEUM

A Frontier Impact Group company

FRONTIER  
IMPACT  
GROUP

## Pioneering Australia's Renewable Fuels industry

Fuelling a better future.

**Renewable Diesel**

**Sustainable Aviation Fuel**

**Green Hydrogen**



# About Frontier Impact Group

Frontier Impact Group is a climate-solutions advisory and project development firm, deploying specialist expertise at scale to drive financially viable, planet-friendly solutions and accelerate the global race to Net Zero.

We work to ensure the technical, financial, social and environmental success of projects that have impacts on the four pillars for a sustainable environment.



## HEALTHY SOIL

Sustainable agriculture and production of soil carbon and other offsets



## CLEAN ENERGY

Renewable energy, hydrogen and energy efficiency



## FRESH AIR

Reduced greenhouse gas emissions and improved air quality



## WATER

Clean water and efficient water usage

# Initial projects



We have committed to two projects with other in Australia and overseas in the pipeline.

## Narrogin Future Energy Park

- JV Frontier Impact Group and Carnarvon Energy in the State of Western Australia only.
- On completion will produce 18 Million litres of renewable fuel and 8,000 tonnes of biochar annually
- Successful for \$6,700,000 in grant funding from WA government

## Mildura Renewable Energy Park

- Development of Australia's second project has commenced
- Renuleum were successful in a \$235,000 grant from Sustainability Victoria

Economic growth - In WA alone our pipeline of projects have the potential to deliver **over \$20 billion GDP** over the life of the projects (Independent ACIL Allen Economic Report)

# The **First Circular Economy** renewable diesel production model



## ENVIRONMENTAL & COMMUNITY BENEFIT

- Modular basis provides flexibility to be closer to biomass source and add more value to communities
- Project co-products including wood vinegar and biochar reduce emissions and regenerate landscapes
- Australian Pipeline
  - 5,000 direct and indirect jobs in regional areas
  - 1 billion litres = 4.7M tonnes CO2 e reduced per annum
- Downstream opportunities including graphene



# Project Development Overview

## PROJECT MANAGEMENT

### FEEDSTOCK

Composition, processing and logistics

### TECHNOLOGY

Best match for feedstock based on yield and economics

### SITE

- Detailed evaluation matrix

## PROJECT SCALE

- Optimal risk-adjusted sizing

## BUSINESS STRUCTURE

## PROJECT DEVELOPMENT FUNDING

- Investment and grants

## STAKEHOLDER MANAGEMENT

- Community, government, advocacy and marketing

## FINANCIAL MODELLING

- Undertaken using bespoke financial model with sensitivity analysis

## SALES AGREEMENTS

- Biofuel, biochar, wood vinegar and others

## PERMITTING

- GHG emissions, EPA, LCA, Government planning approvals, output certifications

## RISK

- Risk management and mitigation

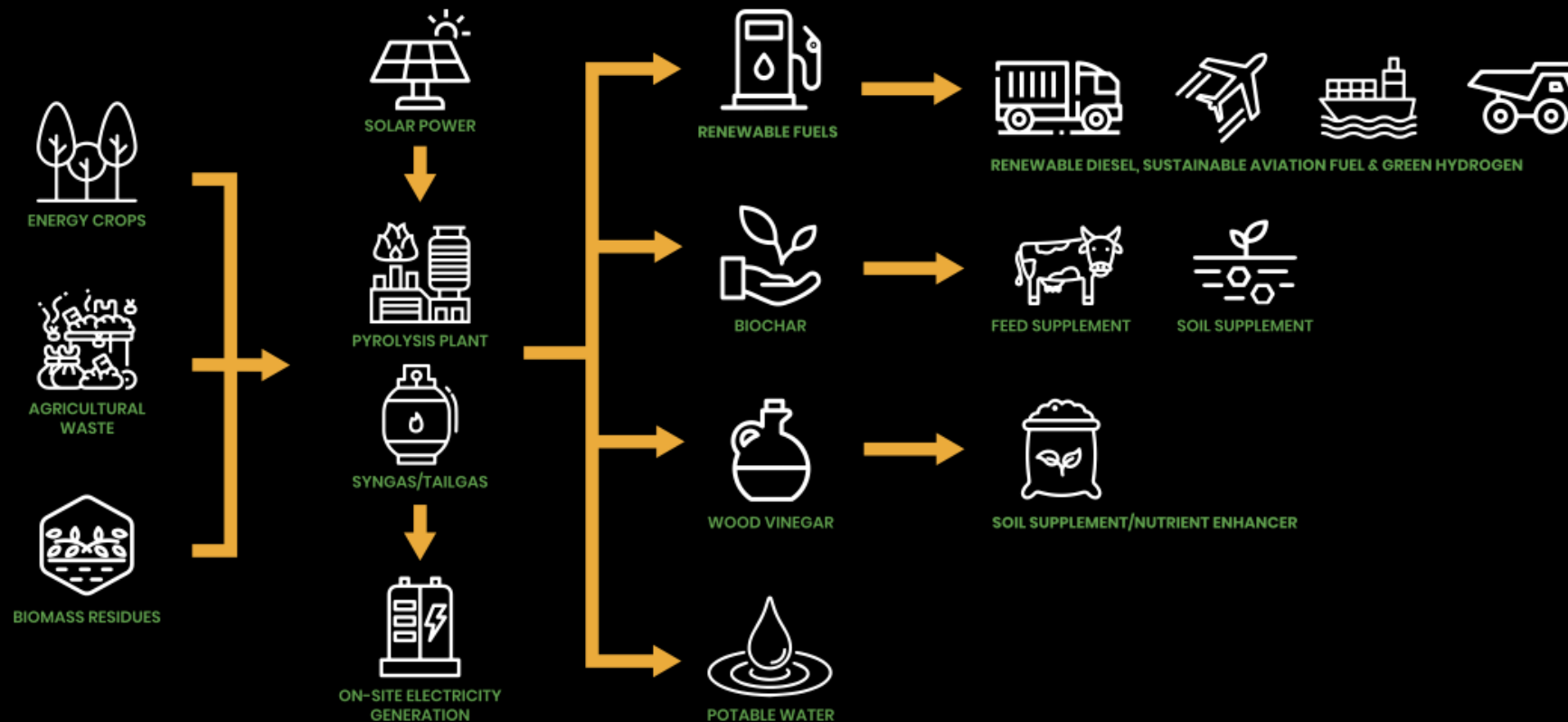
## INVESTMENT

- Grants, debt, equity, R&D

# How does it **work?**

## RENULEUM BIOREFINERY PROCESS

- Converts waste & biomass into high quality renewable diesel, SAF and hydrogen



# Biochar

A valuable graphene-rich biochar as a process by-product



## **CARBON SOIL ENHANCER**

Proven to increase carbon in the soil (Improves microbes)

## **METALLURGICAL CHARCOAL**

Proven market to clean up contaminants from mining

## **WATER FILTRATION**

Proven market in deactivated carbon

## **WATER RETENTION**

Research demonstrates water better retained. Helps resilience to droughts & reduce cost of water

## **ANIMAL FEED**

Improves the nutritional value of fodder and improves the health of the animal

## **MATERIAL STRENGTHENING**

Increases strength of concrete and asphalt when added

# Graphene

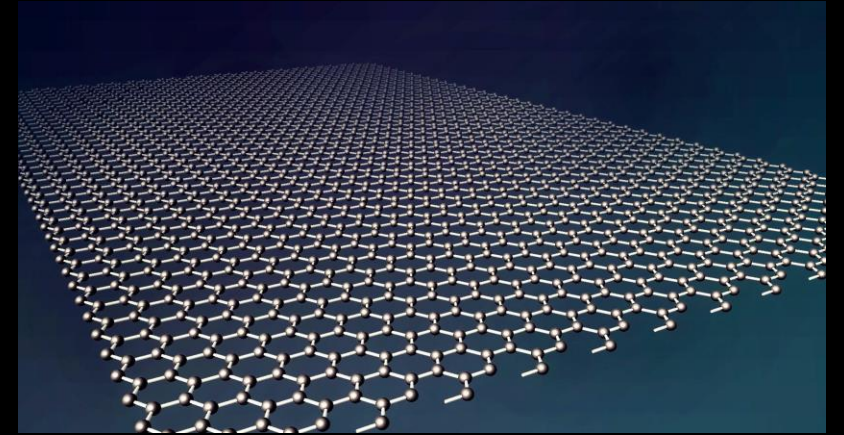
Good quality feedstock will produce high levels of graphene in biochar

## PROPERTIES

- Harder than diamond
- 20x more thermally conductive than copper
- 100x stronger than steel
- 1000x more electrically conductive than copper
- Corrosion resistant
- Lighter than paper

## APPLICATIONS

- High-strength building materials
- Batteries
- Electronics
- Road surfaces
- Defense





# Find out more



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