
Renewed Carbon

# Executive Summary

- Renewed Carbon will manufacture a range of products sourced from sustainably-sourced biomass, including **bio-wastes**, **undervalued biomass residues,** or **biomass generated from farm or landscape restoration/remediation activities**
- Renewed Carbon products will include:
  - **recarburisers** for industry,
  - **activated carbons** for manufacturing,
  - **speciality biochars** for agriculture, and,
  - '**bio'-methanol**, **specialty timbers** and **wood vinegars**
- All Renewed Carbon outputs effectively **sequester $CO_2$** into next-generation products
- Management has a **distinguished track record** in designing and implementing first-of-type complex engineering projects
- Over the past 10 years, more than **$5m has been invested** into the Company's technical and market development, and in subsequent BioHub project pipeline
- The first (Cobar) BioHub to be developed is now registered as a **project of State Significance (**via **NSW Planning)**
- Renewed Carbon is now completing an **equity financing round of $750k**, at a valuation of $5 million, to finalise selected off-take agreements by providing production samples and expediting project licencing and approvals
- With off-take agreements secured, Renewed Carbon will then seek **$5 million of institutional investment** at a significantly higher valuation, to achieve financial close for the Cobar BioHub Project

# Who is Renewed Carbon

- Renewed Carbon is a specialised manufacturer of carbon negative “bio”carbon products, focused on mainstream markets:
  - industrials (eg metal smelters)
  - manufacturers (including petro/chem)
  - agricultural sector (soil sequestration, non “fossil” carbon in fertiliser products)
- These are all markets where physical carbon is essential for the actual chemistry of each application and markets are supplied by “fossil” carbon sources as the only currently practical option
- Renewed Carbon supplies sustainable biomass-sourced carbon (**“bio”carbon**) products - carbon is sourced from the atmosphere via photosynthesis, and presents as a biomass feedstock for conversion into a range of “bio”carbon products
- Renewed Carbon’s “bio”carbon products sequester atmospherically sourced carbon for between 5 to 5,000 years depending on product type and final application
- These carbon sequestration outcomes are excellent collateral benefits delivered as a result of a superior operating and business model - no additional carbon sequestration economics (eg ACCUs, RECs, etc) have been factored into the Renewed Carbon business model

# The Problem – Unmet Customer Demand

**Customer Demand for ‘ clean’ carbon**

- Whilst clean energy can be provided by a range of technologies, many industrial and agricultural markets still need ‘physical’ carbon
- Renewed Carbon’s “bio”carbon products are on satisfying this market demand

## Biomass – the Sustainable Competitive Advantage

Comparison of benefits, features and properties of non fossil sources

| Low carbon energy sources | Renewable | On demand supply | Heat | Power | Fossil source replacements ↓ Bio Gas | ↓ Bio Oil | ↓ Bio Char | PetroChem industry precursors | Potential to be Carbon negative |
|---|---|---|---|---|---|---|---|---|---|
| Fossil fuels with sequestration | | ✓ | ✓ | ✓ | | | | | |
| Hydro | ✓ | ✓ | | ✓ | | | | | |
| Wind | ✓ | | | ✓ | | | | | |
| Solar - thermal | ✓ | | ✓ | ✓ | | | | | |
| Solar - PV | ✓ | | | ✓ | | | | | |
| Geothermal | ✓ | ✓ | ✓ | ✓ | | | | | |
| Wave/Tidal | ✓ | | | ✓ | | | | | |
| Nuclear | | ✓ | ✓ | ✓ | | | | | |
| Biomass | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

The unique competitive advantage of Biomass

Whilst <100yrs biomass can be converted to fulfil all the roles currently provided by fossil resources, there is nowhere near enough.
So what can be sustainably sourced should be applied to highest and best uses, where bioenergy usually presents as a by-product.

# The Problem – Waste Biomass

**Biomass ain't Biomass**

- Waste biomass is expensive to dispose of
- Renewed Carbon procures input biomass materials, sustainably, by:
  - Systematically solving intractable bio-waste problems
  - Properly valuing currently undervalued biomass residues and by-products
  - Reclaiming biomass generated from specific farm and landscape restoration, remediation activities
- It is the third approach (utilising waste biomass from landscape restoration efforts) that provides long-term and secure process input materials for the Renewed Carbon signature **Cobar BioHub** Project
- This process is executed in such a way that securing these input biomass materials, for the production of the Renewed Carbon "bio"carbon product range, can be delivered as a separate profit centre

# Business Approach

- Renewed Carbon business models are based on fully monetising the very distinct sustainable competitive advantages of biomass as a manufacturing input

- Sustainably sourced biomass, presenting as having "**no higher resource value than for manufacture of essential "bio"carbon products**" is a globally finite commodity
- All such material identified, secured and procured will always be applied for the realisation of their inherent HNRV (Highest Net Resource Value)
- Straight energy products may result as essential by-products of the primary manufacturing activities, but are not the primary driver of any Renewed Carbon BioHub Project.

- View Project Video Click here:

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# Cobar Situation and Approach

- Highly degraded rangelands result in lost economic and biological potential, with no historical, viable economic model for regeneration
- More than 50% of Australia's semi-arid rangeland properties are in a severely degraded state after 150 years of poor farming practices - these lands have been colonised by Invasive Native Scrub ('INS'), resulting in carbon, water and nutrient deficient soils
- This degraded state results in a loss of economic and biological potential as the land cannot support livestock or dryland crops, and wildlife biodiversity is severely diminished
- Rangeland restoration at scale is too costly for farmers and the current (literal) "slash and burn" approach results in not only this valuable resource being wasted, but also releasing significant volumes of carbon dioxide back into the atmosphere
- Product range to be produced in Cobar is a direct outcome of detailed assessment of the actual biomass presenting as troublesome INS (Invasive Native Scrub) in the Cobar region
- Revenue is generated from supply of "bio"carbon products to industrial customers via off-take agreements
- Revenue can also be earned by delivering crucial landscape remediation/restoration service for property owners afflicted with the otherwise intractable INS infestations

# Cobar BioHub - Technology

- The Renewed Carbon team, with technology development partners, have been designing and developing “best of type” biomass conversion and carbonisation technologies in house since 2004, to a proven, commercial ready status

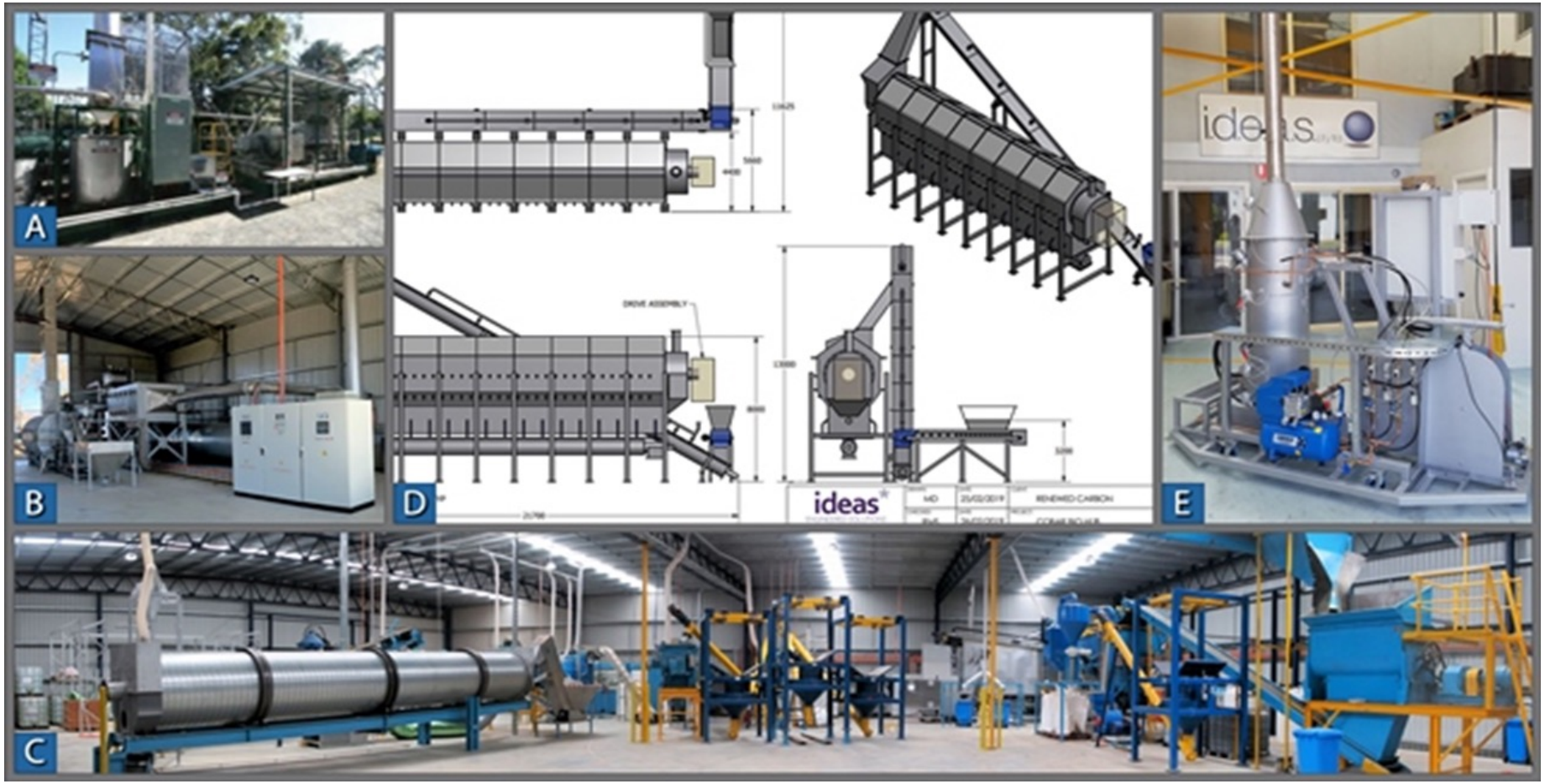
A. *Initial “demonstration/pilot” plant (2004-6) (300-500kg/hr) that established essential process design criteria.*

B. *Commercialised version of this basic technology currently operating (different Business Model) in New England, NSW.*

C. *More recent adaptation of same basic technology (Bacchus Marsh, VIC.) and subsequently adopted by Incitec/Pivot (see press release attached).*

D. *Emerging designs specifically for the Cobar BioHub .*

E. *Highly specialised “test rig” to establish perfect process design conditions for any biomass sample presented as potentially suitable for any future BioHub Project.*



# Cobar BioHub – Securing Biomass Supply

- Historically, the outcome shown to the right is the only practical approach for cleared invasive native scrub (INS)
- It is reluctantly approved by NSW Local Land Services authority (the relevant Government regulator)
- Conflagrations of this scale throughout the year in the Rangelands areas cover some ~ 50% of the Australian landmass
- Securing input biomass materials can be delivered as a separate profit centre within the project
- Process can typically incorporate significant value capture opportunities for landowners, as full land values are restored
- Renewed Carbon was invited by the Cobar Community to be briefed on their needs and the resultant problems and opportunities
- Renewed Carbon's Cobar BioHub solution emerged from this community consultation/collaboration process, providing 100% social licence to operate

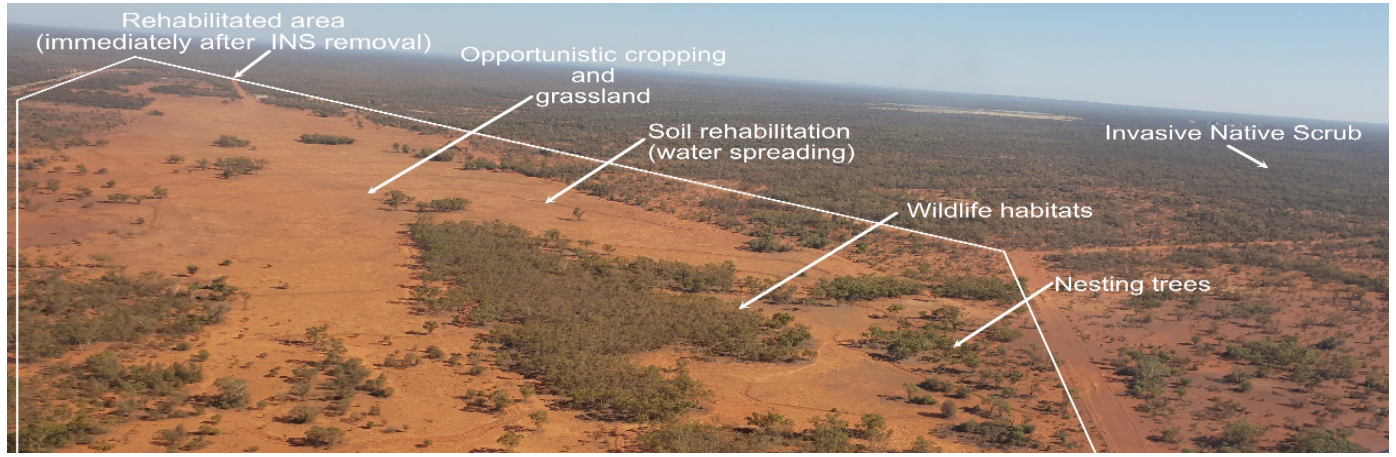
# Cobar BioHub - Supply

- Secured appropriate land  adjacent to the Cobar rail line, and this project is now registered by NSW Planning as a Project of State Significance (streamlining the subsequent approvals processes)
- Secured agreements with at least 10 major property owners farmers to secure INS feed supply and there is enough INS within a 70 km radius to **provide feedstock in perpetuity**

# Cobar Solution for Landowners

**The establishment of the Cobar BioHub – as an "abattoir for vegetation"**

- Cobar facility can extract and monetise the Highest Net Resource Value (HNRV) from all the species and vegetation types currently presenting as INS, and match them precisely with the various finished "bio"carbon products that the Renewed Carbon has secured off-take markets for
- Removal of INS can be completed at a significant cost reduction to farmers
- Cleared land can be replanted with approved native vegetation and even cash crops in certain landscapes
- Sculpting the land for water retention, can lead to increased soil, water and nutrient retention – this replanting and sculpting can deliver a 2-4x land value uplift (value capture opportunity)



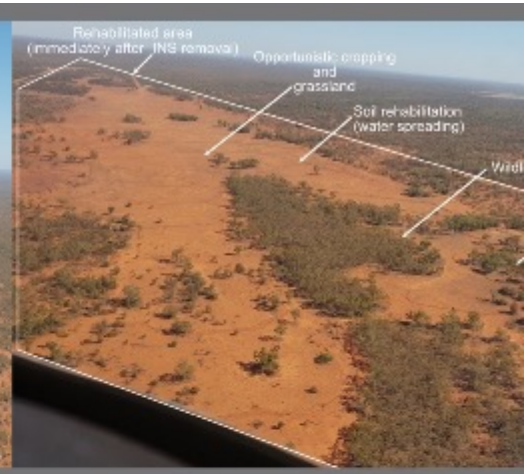
# Cobar Region - Before & After Images

This "open wooded grassland" landscape status is what existed before European settlement and is the ultimate goal & objective of the Renewed Carbon landscape rememdiation task.

What the currently scrubbed-up properties look like today. The Renewed Carbon remediation starting conditions.

Pictured:
Mulga Country &
Cypress infestations.

The industrial scale of the problem.




The NSW LLS "standard" or "example" of a sensitively restored property.

After recent rains all the bare patches are now lush and verdant.

# Why Support Renewed Carbon?

- ✓ Cobar BioHub will be first to market for large scale BioHub solutions
- ✓ Major growth opportunity and ready to scale across Australia (and internationally)
- ✓ Fully developed technology and proprietary know how
- ✓ Ready markets and pricing for BioHub products
- ✓ Profitable carbon sequestration
- ✓ Land rehabilitation and restoration as value capture opportunities
- ✓ Experienced management team, Board and Advisory Board
- ✓ Excellent financial returns and possible ASX listing for liquidity and longer term growth capital

# Renewed Carbon

If you are interested to understand more about this outstanding investment and environmental opportunity, please contact: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