



Exploring Beyond Diesel 2 – Online Forum Wednesday September 2nd 2020

Bundaberg bioHub Queensland - Biohub idea/vision, outputs/uses, potential in STPs old and new

Fiona Waterhouse, CEO, Utilitas Group



““ Utilitas Group (UTG) develops regional bioHubs that create energy, jobs and value from organic waste.

UTG repurposes and augments industrial sites to deliver a circular economy edge for investors and cleaner, smarter and cheaper utility services for industry.

Our unique delivery model includes integrating advanced anaerobic digestion (AD) as a platform for biomanufacturing.

We work with the most capable, diverse, resilient humans on earth to execute our **UTG:100** vision 100 bioHubs, 100 regional communities, 100% HSEQA Assured, still valued by locals in 100 years.



Fiona Waterhouse

Founder/CEO Utilitas Group (UTG)



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Fossil fuel-based energy sector investors face growing risk of “stranded assets”.

There is now growing impetus for renewable natural gas, including biomethane and hydrogen, in Australia.

Renewable natural gas fuel, or biomethane, is produced from organic waste.

Renewable natural gas (RNG) is a pipeline-quality gas that is fully interchangeable with conventional natural gas and thus can be injected into the gas grid and used in natural gas vehicles.

gas giant says it can
19, but can it survive decarbo

Michael Mazengarb 26 August 2020 <https://reneweconomy.com.au>



e of Australia's largest investors in gas infrastructure is slowly coming to grips with what
bonisation of the energy sector may mean for its business, as it faces the prospect
billion in assets becoming stranded.

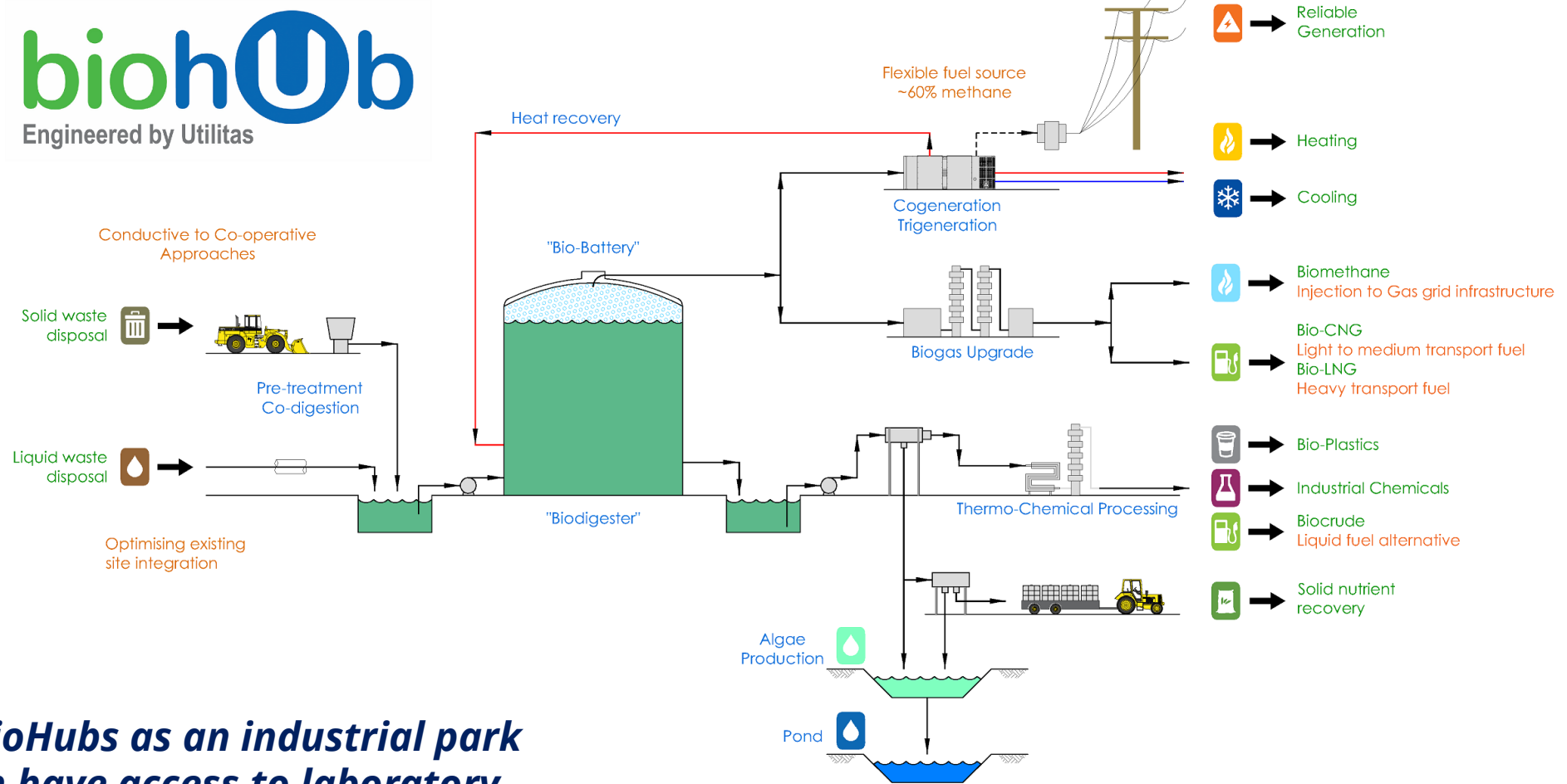
arnings for the 2019-20 financial year, the listed APA Group says it
ort term disruptions caused by Covid-19, and any falls in
many earnings. But it is clear from its pro

lobal commit



Anything that can be made from fossil fuels can be made from organic waste materials and local biomass

The advantage of our bioHubs as an industrial park is that our tenants can have access to laboratory services, organic waste services, wastewater services, electricity, gas, CO2 and hot water.





Utilitas bioHubs overcome legacy barriers to deployment of renewable gas

Legacy issues: historically cheap energy, abundant space, lack of environmental enforcement

Lack of policy: no policy drivers, no incentives, no carbon value

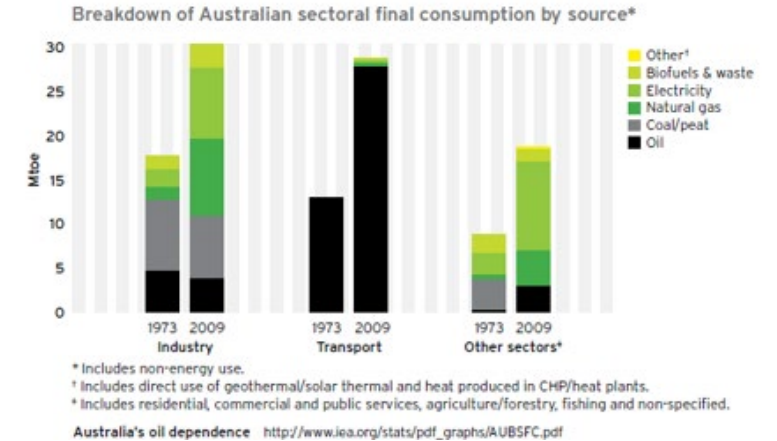
Unsustainable mindset: go it alone/do nothing, black price parity, >15% hurdle rates

Opaque waste industry: lack of formal contracts, thin margins, logistics focus

Planning ambiguities: costs and timeframes, lack of harmonization and experience

Low deployment: only handful of advanced plants optimized for energy and resource recovery, lack primary data and first-hand experience

Traditional engineering delivery model is not viable: “pass the risk parcel”, mark ups on top of mark ups, litigious, adversarial, requires a lean integrated delivery, “Plug & Play”



Australia's transport systems are wholly oil dependent. The lack of diversity significantly impacts our resilience.

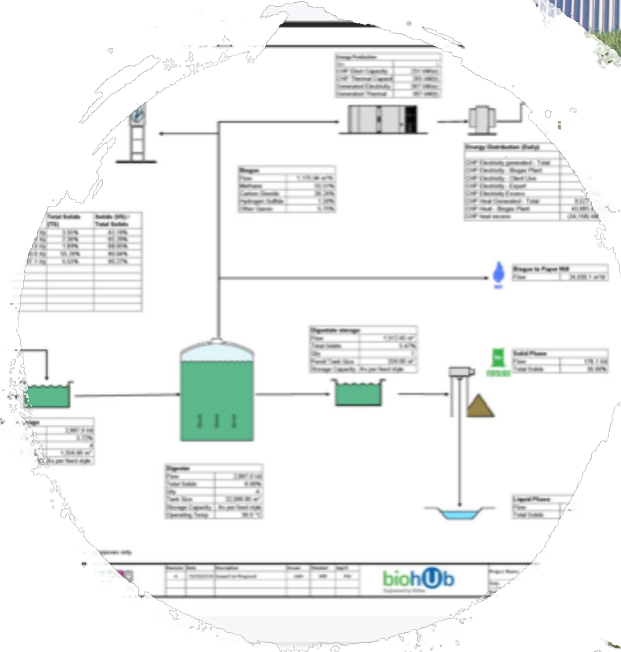
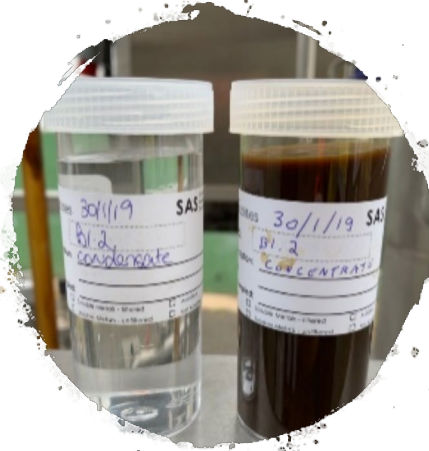
Like conventional natural gas, RNG can be used as a transportation fuel in the form of compressed natural gas (CNG) or liquefied natural gas (LNG).

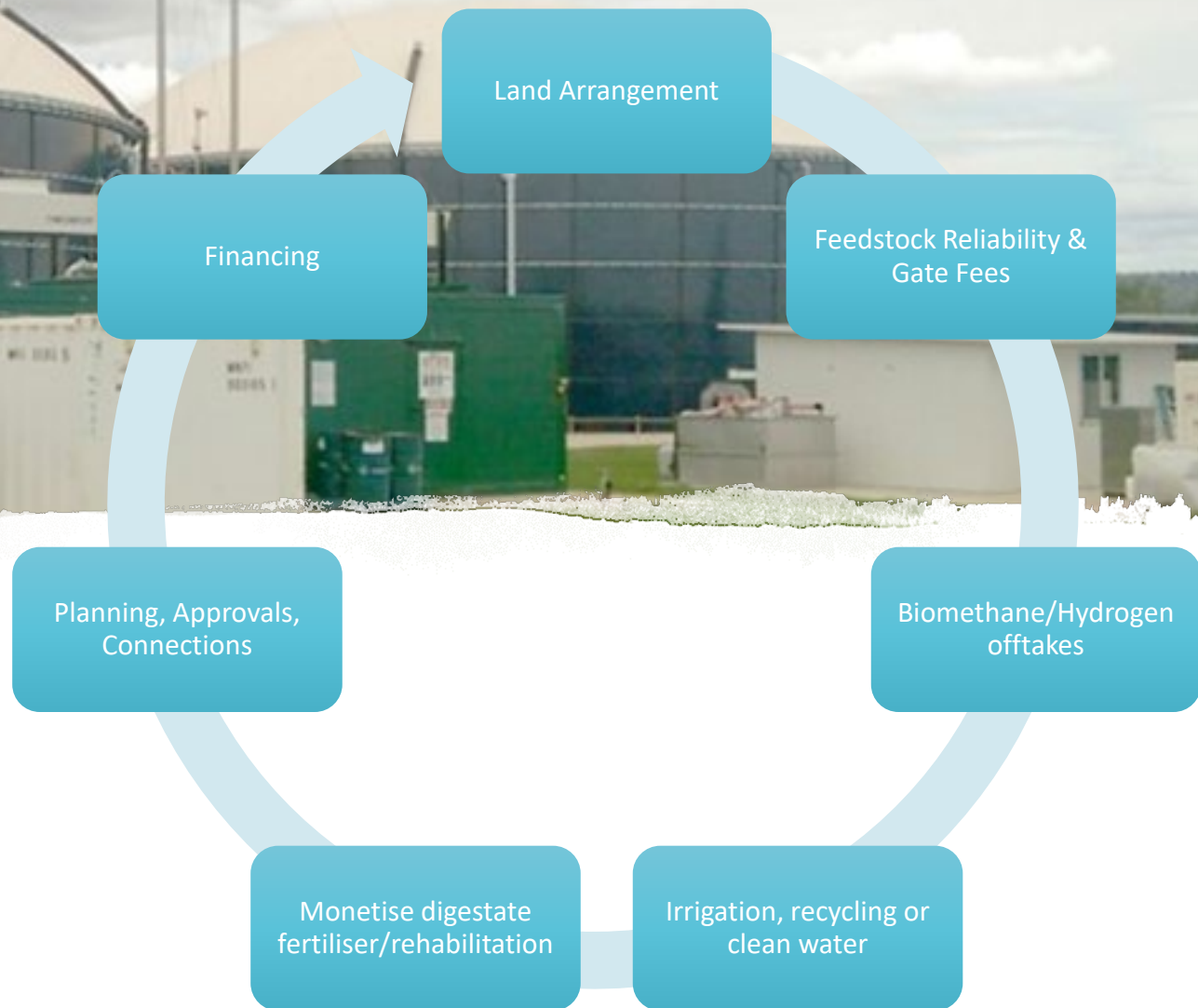


Utilitas bioHubs secure local fuel, water, fertiliser and food

We use proprietary software to originate, design, manage and optimise biogas plants that digest organics to produce renewable gas, precision liquid fertilisers and clean water.

Decarbonising the natural gas grid, diverting industrial and commercial organic waste from landfill, displacing imported chemical fertilisers and strengthening local employment





Joining up the “golden circle” is key to renewable gas projects



Bundaberg bioHub Renewable Gas Project #1/100

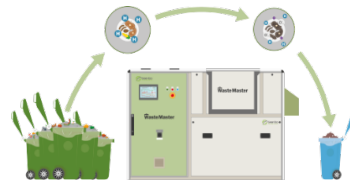
Utilitas Group is repurposing the former Bundaberg East Wastewater Treatment Plant with a masterplan in place to build the site out as a biomanufacturing precinct including a biogas plant for energy and resource recovery from local food and beverage waste streams.

Utilitas Group
Bundaberg bioHub site owner - Specialist biogas developer:
Originate, design, manage and optimise



Green Eco Technologies

Wastemaster food waste dehydrator for hospitality, supermarket and food retailers.
Aggregate food waste for bioHub feedstock



ENGV

Local leaders in sustainable gas technology integration, deployment, service & maintenance



Utilitas Group

Grenof

Joint development of project.
Construct, operate and maintain



Bundaberg Regional Council

Operational lease of CNG vehicle
Offtake CNG for trial 2020-21; bioCNG end 2021*
*Target 30 Truck/bus refills per day



Scania

Global sustainability leader. Fuel standards, gas vehicle (via lease to BRC) validate vehicle performance



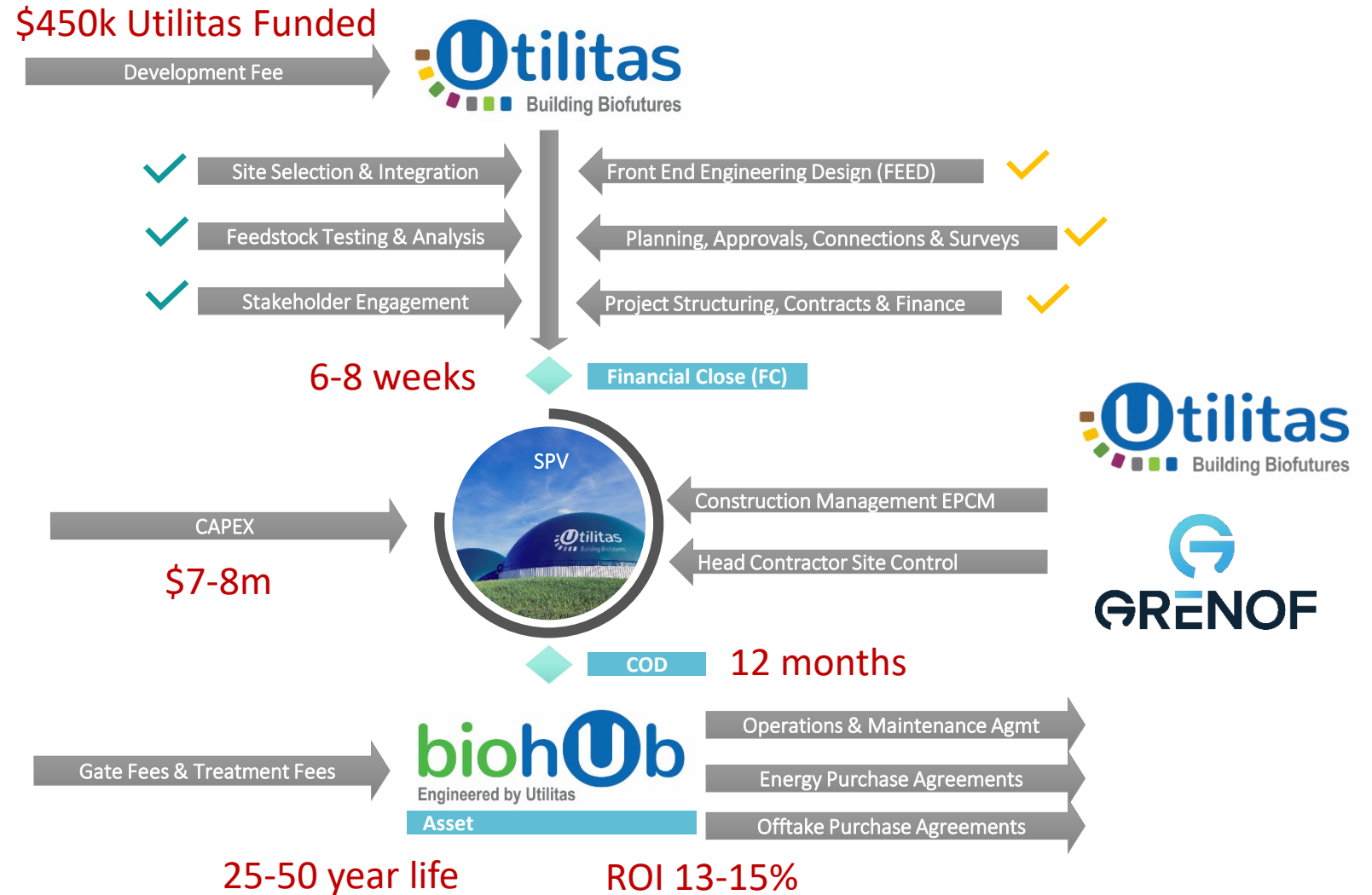
ReCarbon

Carbon emissions conversion technology (microwave plasma) company based in Silicon Valley, USA.
Biogas to hydrogen at utility scale in Australia with Utilitas Group





Bundaberg bioHub Renewable Gas Project Status





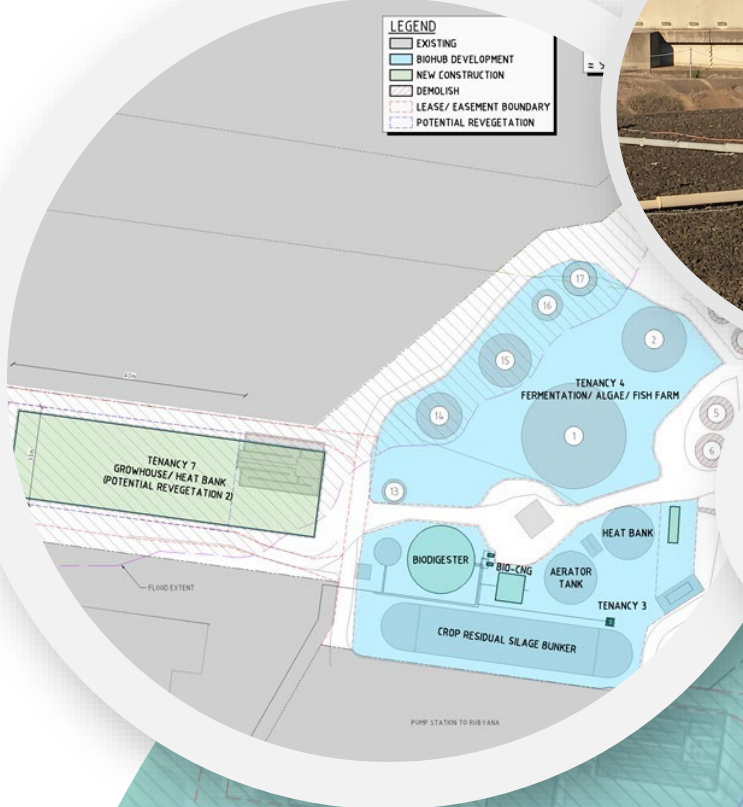
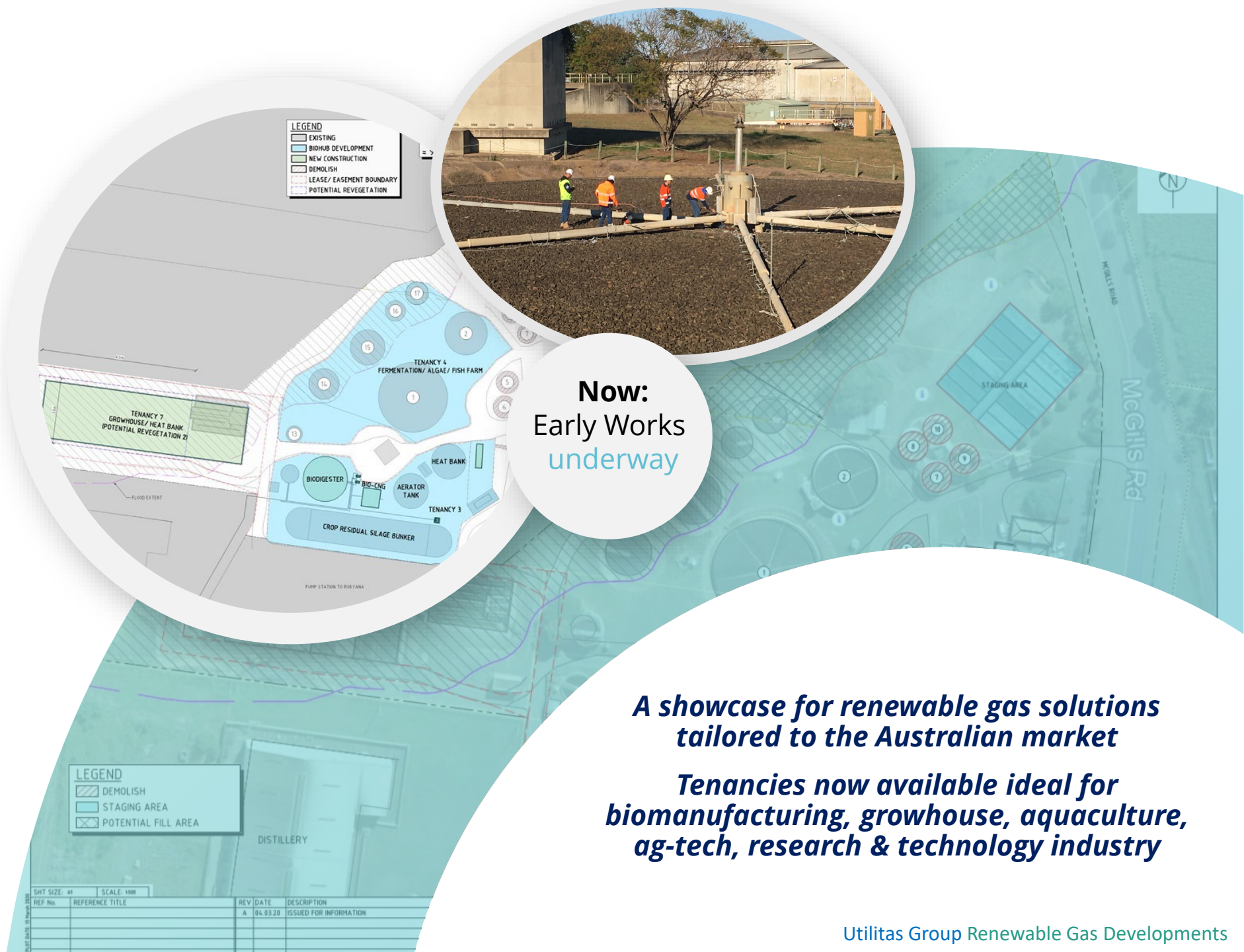
Bundaberg bioHub open for business



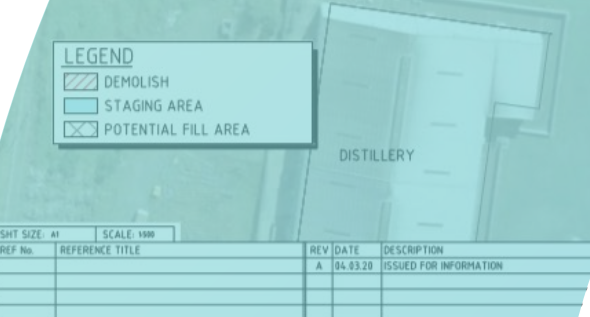
Inaugural Bioeconomy Bundaberg 2020
1st & 2nd October 2020

Inaugural Field Day/Trade Display
Launch Green Transport Fuel Pilot
Utilitas 10th Birthday Celebration

55 Alexandra Street, East Bundaberg, QLD



Now:
Early Works
underway




A showcase for renewable gas solutions tailored to the Australian market

Tenancies now available ideal for biomanufacturing, growhouse, aquaculture, ag-tech, research & technology industry

THANK YOU QUESTIONS

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Utilitas Group Renewable Gas Developments

