Sugarcane Bioenergy Inquiry 2025

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27 October 2025

Primary Industries and Resources Committee
Parliament House
George Street
Brisbane Qld 4000

Dear Chair,

Inquiry into sugarcane bioenergy opportunities in Queensland

Introduction

Australian Gas Infrastructure Group (AGIG) welcomes the opportunity to provide this submission to the Primary Industries and Resources Committee inquiry into sugarcane bioenergy opportunities in Queensland.

AGIG delivers gas to more than two million homes and businesses every day. We own and operate gas distribution networks, transmission pipelines and renewable gas projects across Australia. In Queensland, AGIG's Australian Gas Networks operates distribution and transmission networks in Brisbane and Central Queensland, including primary cane growing areas such as Bundaberg and Maryborough.

AGIG's customers include homes, businesses, and major industrial operations. These customers choose gas connections for their reliability, affordability and performance.

Our vision is to deliver infrastructure essential to a sustainable energy future. This vision underpins our investment in renewable gases such a hydrogen and biomethane, repurposing existing networks for low-emissions energy. We recently commenced operations at Hydrogen Park Gladstone, developed in partnership with the Queensland Government with funding support of $2.72 million. The facility is Australia's first city-wide renewable gas project, supplying up to 10% renewable hydrogen blended with natural gas to homes and businesses in Gladstone.

AGIG is also working to connect renewable gas suppliers to our network and is actively progressing opportunities to integrate biomethane and hydrogen supply from projects across Queensland. These projects demonstrate AGIG's commitment to building the foundations for a low carbon future and supporting Queensland's broader net zero goals.

Sugarcane processing generates significant biomass residues capable of being converted into biomethane. Chemically identical to natural gas, biomethane can be delivered directly into existing gas infrastructure as a 'drop-in fuel'. This compatibility provides an immediate pathway to emissions reduction without the need for appliance replacement or network modification. Biomethane presents a credible and scalable route to supporting net zero, with additional benefits for energy system resilience, as biomethane can be stored and dispatched to balance seasonal demand.

Australia has an estimated 400 petajoules (PJ) per year of recoverable biomethane potential[1], more than twice the annual gas consumption of Australian households.[2] Despite this substantial technical potential and established feedstock base, the Australian biomethane industry remains in the early stage of development.

[1] Recoverable biomethane potential refers to the share of total organic material that is both technically suitable for conversion into biomethane and practically accessible for recovery and use at a reasonable cost. It represents the subset of technically viable resources that can be feasibly captured under existing policy settings, collection and processing practices, infrastructure availability, and market conditions.

[2] Bioenergy Australia (2025). Media Release: Unlocking Renewable Natural Gas. [online] Bioenergyaustralia.org.au. Available at: https://www.bioenergyaustralia.org.au/news/media-release-unlocking-renewable-natural-gas-

Australia's energy transition has reached a pivotal stage, requiring coordinated progress across all energy sectors to ensure reliability, affordability, and emissions reduction. Transforming the gas sector through the development of renewable gases is an essential complement to ensuring a reliable, low-carbon energy supply across a broad range of users. Developing sugarcane-derived biomethane would advance these objectives by creating a renewable gas supply that strengthens Queensland's energy security and underpins key industrial use cases central to the state's economic and regional development.

Biomethane Potential in Queensland

Australia has an estimated 400PJ per year of recoverable biomethane potential[3], more than twice the annual gas consumption of Australian households.[4] Queensland has significant untapped bioenergy potential, with an estimated recoverable biomethane potential of up to 84PJ per year[5], equivalent to around 72% of the state's current natural gas consumption.

Feedstocks such as sugarcane and cereal residues, food organics, and livestock waste are well suited to anaerobic digestion technologies that produce biogas and biomethane. These processes are technically mature and do not directly compete with food production. Queensland's sugarcane industry is well placed to play a central role in the state's renewable energy and bioenergy future. The crop and its processing residues provide a consistent, high yield feedstock capable of supporting the production of biogas, biomethane, and low-carbon liquid fuels.[6]

Market, Regulatory, and Infrastructure Challenges to Increased Biomethane from Sugarcane

Despite strong technical viability, the commercial deployment of sugarcane-derived biomethane in Queensland has yet to materialise due to economic, regulatory, and structural barriers. From a cost perspective, biomethane production remains more expensive than natural gas. Without policy mechanisms to bridge this price gap, early projects are unlikely to reach commercial viability despite offering significant environmental and energy security benefits.

High upfront capital costs associated with constructing anaerobic digestion and upgrading facilities to convert biogas into biomethane[7] further increase investment risk and discourage private sector participation. These challenges are compounded by the limited availability of long-term offtake arrangements although progress has been made around biomethane certification and safeguard mechanism credits.

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[4] Bioenergy Australia (2025). Media Release: Unlocking Renewable Natural Gas. [online] Bioenergyaustralia.org.au. Available at: https://www.bioenergyaustralia.org.au/news/media-release-unlocking-renewable-natural-gas-

[5] Blunomy (2025). Biomethane Opportunities to Decarbonise Australian Industry: Converting waste into grid-injectable biomethane. [online] Available at: https://www.energynetworks.com.au/assets/uploads/Blunomy-%E2%80%93-2025-%E2%80%93-Biomethane-Opportunities-to-Decarbonise-Australian-Industry.pdf

[6] Blunomy (2025). Biomethane Opportunities to Decarbonise Australian Industry: Converting waste into grid-injectable biomethane. [online] Available at: https://www.energynetworks.com.au/assets/uploads/Blunomy-%E2%80%93-2025-%E2%80%93-Biomethane-Opportunities-to-Decarbonise-Australian-Industry.pdf

[7] Biogas is a raw mixture of gases produced through the anaerobic digestion process. It typically contains methane, carbon dioxide, and small amounts of other gases like hydrogen sulphide and water vapour. Biomethane is the purified form of biogas. After impurities and non-methane components are removed through an upgrading process, the resulting gas is nearly pure methane and has the same properties and energy content as natural gas, making it suitable for injection into gas networks.

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Regulatory and policy factors also contribute to investor hesitation. Policy uncertainty and the absence of a defined support framework have created a high-risk environment for early projects that could otherwise establish technical and operational feasibility. Without clear and enduring policy settings, commercial banks and institutional investors remain reluctant to back first-mover projects. Establishing a stable and transparent policy environment will be essential to build confidence and attract the long-term investment required to scale biomethane production across Queensland.

Alignment of Biomethane Production with Individual Use Cases

AGIG supports an agnostic approach to bioenergy use cases. At this early stage of industry development, it would be premature to prioritise one end-use over another. Achieving net zero will require multiple low-carbon energy solutions operating in parallel, each suited to the distinct needs of different customer groups and regions.

Biomethane can support a variety of applications including electricity generation, industrial heat, transport fuel, or direct delivery into gas networks, reaching multiple end users across business and industry — many of whom are unable to reduce emissions via renewable electricity. Each pathway provides unique emissions reduction benefits, and flexibility in end-use allows the market to determine the most efficient deployment over time.

Queensland Government can focus on enabling policy settings that facilitate the production and commercialisation of biomethane, while allowing diverse market applications to emerge organically. Establishing a viable biomethane industry would also complement the development of low-carbon liquid fuels by building shared supply chains, infrastructure and technical capability within an existing energy market. This use-agnostic approach will ensure the most efficient allocation of resources and foster innovation across the energy sector.

Policy and Funding Mechanisms to De-risk Investment

Supporting Queensland's early biomethane industry requires a balanced mix of policy support and funding mechanisms designed to reduce risk for participants. The objective should be to create stable and predictable investment conditions that give the private sector confidence to commit capital and develop commercially viable projects.

The Queensland Government can play a pivotal role by acting as anchor customer. Long-term offtake agreements for biomethane use in government facilities would guarantee demand, demonstrate public sector confidence, and de-risk early-stage investment. In addition to offtake arrangements, upfront capital support through grants or subsidies would help reduce the significant capital expenditure associated with first-mover projects and accelerate project commissioning. Revenue support mechanisms, such as feed-in tariffs or production-linked payments, could further assist by closing the price gap between biomethane and natural gas during the early stages of market development.

The Queensland Government already provides investment support for emerging industries through the Sovereign Industry Development Fund administered by the Department of State Development, Infrastructure and Planning. While this is a strong starting point for renewable gas in Queensland, more targeted support focused on biomethane, including long term offtake support mechanisms, will be needed to unlock early projects at commercial scale and maximise regional benefits.

It will also be important to foster the development of complementary markets, such as those for digestate, which can provide valuable revenue streams and overall project economics. Over time, as production capacity expands and secondary markets mature, the need for ongoing financial support will naturally diminish.

Australian Gas Infrastructure Group

International examples

International experience demonstrates that clear policy frameworks are instrumental in scaling biomethane production:

- In the European Union, countries such Denmark have advanced biomethane integration through guaranteed feed-in tariffs and investment grants.[8,9]
- In the United Kingdom, the Renewable Heat Incentive (RHI) was instrumental for providing early market stability. Under the RHI, biomethane injection plants received per kWh payments for 20 years, resulting in 95 plants injecting ~13PJ per year.[10]
- California, through its Low Carbon Fuel Standard, monetises the environmental benefits of renewable gases, enabling biomethane to command a market premium.[11] This approach allows industrial gas users to offset compliance costs while driving investment in low-carbon gas supply.

Conclusion

Queensland's sugarcane industry presents a significant and strategic opportunity to lead Australia's biomethane development. Harnessing sugarcane residues for renewable gas production would deliver economic diversification, reduce emissions and enhance regional energy security, while creating additional revenue streams for growers and strengthening the resilience of Queensland's agricultural sector.

With appropriate policy support, early investment, and a use-agnostic framework, biomethane can become an integral part of Queensland's renewable energy mix. AGIG encourages the Queensland Government to adopt enabling measures that facilitate early project development and allow flexibility in market applications.

If you have any questions regarding this submission or would like to discuss AGIG's views in more detail, please contact Owen Sharpe, Strategy and Policy Manager, at [redacted].

Kind regards,

[redacted]

Cathryn McArthur

Executive General Manager, Customer and Strategy

[8] Hunt, O.B. (2025). Repurposing the grid: Territorialized assets and reconfiguring ties in gas production networks in Denmark. *Energy Research & Social Science*, 120, p.103925.

[9] Biocycle (2019). *Deep Dive Into Danish Biogas*. [online] BioCycle. Available at: https://www.biocycle.net/deep-dive-danish-biogas/

[10] Parliament.uk. (2021). *House of Lords - Fourteenth Report - Secondary Legislation Scrutiny Committee*. [online] Available at: https://publications.parliament.uk/pa/ld5802/ldselect/ldsecleg/76/7604.html

[11] California Air Resources Board (n.d.). *Low Carbon Fuel Standard | California Air Resources Board*. [online] ww2.arb.ca.gov. Available at: https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard

Biomethane Potential in AGIG's Network Catchment and Associated Co-benefits

Final Report

Contents

1

Executive Summary

Executive Summary (1/2)

Context

- AGIG owns and operates infrastructure that delivers gas to more than two million Australian homes and businesses. The combined distribution, transmission and storage assets make AGIG one of the largest gas infrastructure businesses in Australia.
- In 2022, the AGIG Board endorsed a 'Low Carbon Vision' that includes targets to deliver at least a 10% (by volume) renewable gas (e.g., biomethane or hydrogen) blend across the distribution networks by 2030 and a stretch target to achieve the full decarbonisation of the networks by 2040, or by 2050 at the latest.
- Biomethane features strongly as one of the key pillars in driving renewable gas supply for AGIG's networks. AGIG appointed Blunomy to support the assessment of biomethane potential in the vicinity of AGIG's networks across SA, VIC and QLD in order to develop a view of the supply possibilities for the networks.

Approach

- Blunomy developed an approach to granularize the anaerobic digestion feedstock streams available using land-use datasets to support AGIG's view of the biomethane potential of feedstocks within the catchment of their network assets.
- Leveraging public and internal datasets[1] on bioenergy resources from various waste streams in the three states[2] and tapping on expert interviews on recovery rates of those waste streams, the team developed relevant heatmaps as part of the project.

Outcomes

- Heatmaps reflecting the potential of feedstock available across the states were developed with visualization on the catchment (within 50km) of AGIG's network assets.
- Biomethane potential results from the heatmap and catchment calculations were used to work out further co-benefits arising from these biomethane supply projects.
- Levelised Cost of Energy (LCOE) based on the biomethane from various categories of feedstock were also modeled.

[1] ABBA dataset, combined with updated MSW data from Recycling Victoria Data Hub and drawing on an internal database of biomethane yields [2] As part of the catchment for AGIG's assets in Victoria, part of NSW's biomethane feedstock potential is considered, but the state-level study does not include NSW.

Executive Summary (2/2)

Insights from results

Potential outcomes from policy-enabled scenario modelled in this study

88.3 PJ per annum

10,100 new jobs

49% Waste Reduction

4.4 Mt per annum digestate

- Within AGIG's network catchment area, there is 44.4 (88.3)[1] PJ per annum of biomethane potential; and this translates to 0.53 (1.77)[1] Mt of waste[2] that could be diverted towards anaerobic digestion to produce that.
- Majority of feedstock streams contributing to AGIG's networks are agriculture, urban, and C&I waste with some state-level variations
- If the projects around AGIG's networks are realised, capturing all of the potential feedstocks, it could unlock 2,083 (4,136)[1] direct jobs, and contribute 2.34 (4.36)[1] Mt per annum of digestate to the agriculture sector, which could help displace inorganic fertilisers produced from fossil gas
- LCOE modelling suggests that cost of biomethane from landfill gas capture ($10.2/GJ) and wastewater treatment plants ($ 9.4/GJ) could be competitive with natural gas price (~$10.7[3])

[1] BAU (PE) Potential. [2] Urban and C&I Waste. [3] Average gas market prices of VIC, Adelaide, and Brisbane as of 1 Jan 2024, AER.

2

Methodology

Definitions used

- **Theoretical biomethane potential**: The maximum quantity of organic residues considered available for anaerobic digestion biomethane production based on current organic residue production levels. Considers organic residues from agricultural, urban waste, commercial and industrial (C&I), food processing, forestry, tertiary services, and municipal sectors.
- **Recoverable biomethane potential**: The proportion of theoretical potential suitable for anaerobic digestion and available after considering non-energy competing uses and capturing constraints. Two scenarios were used to quantify the recoverable biogas potential.
  - **Business-as-usual ("BAU")**: Based on the assumption that current trends, practices, and policies continue without a significant change in capture constraints.
  - **Policy-enabled ("PE"):** Based on the assumption that favourable policy and regulatory changes are made, which reduce the capture constraints, e.g., stubble burning ban, no organics in landfill.
- **Catchment area**: A 50km AGIG's distribution and transmission assets in SA, VIC and QLD.
- **Type of feedstocks**
  - **Agriculture** waste consists of cropping, livestock, and horticulture.
  - **Urban and Commercial & Industrial ("C&I")** consists of the organic waste (food and green waste) from households in urban areas and from restaurants, hotels, and broader commercial and industrial establishments.
  - **Food processing** consists of waste only from that industry, excluding upstream (i.e., agriculture) and downstream (e.g., homes, restaurants) value chain steps.
  - **Landfill** considers biomethane availability in landfill sites.
  - **Wastewater Treatment Plant ("WWTP")** considers biomethane availability in such plants.

Notes: [1] This has been agreed in consultation with AGIG; this value was used as the collection radius for a biomethane plant in Future Fuels CRC's study on bioenergy hubs in Australia

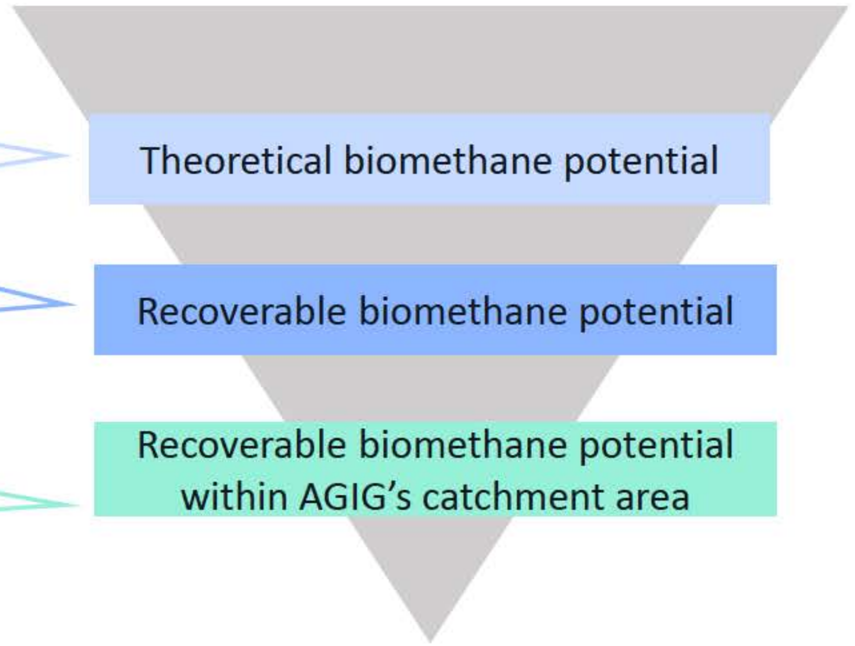
A funnel approach was used to estimate the biomethane potential in AGIG's catchment areas

We used a funnel approach to estimate the biomethane potential, consisting of two intermediate outputs, followed by the figure for AGIG's catchment areas.

1
Calculated the theoretical biomethane potential = Feedstock (dry tonnes) x Biomethane yield x Calorific value of methane

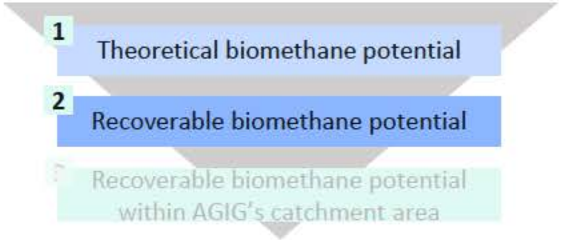
2
Applied recovery rates (% of available feedstock that can be retrieved) on the theoretical potential to calculate recoverable potential.

3
Considered land-use and point sources in the catchment areas



The following slides explain the steps in detail ->

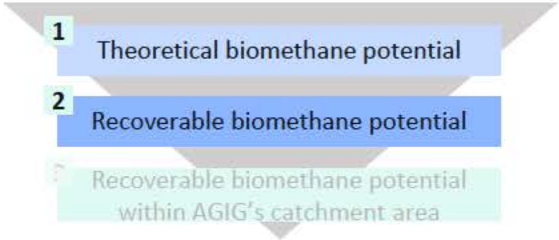
Our approach begins with calculating the theoretical potential, followed by recoverable potential based on recovery rates



Steps	Activities	Inputs
1 **Theoretical biomethane potential**	• Quantified the theoretical biomethane potential in the three states. • It includes organic residues[1] from agricultural, urban waste, commercial and industrial (C&I), food processing, forestry, tertiary services, and municipal sectors.	• Literature review • Data sources: – ABBA feedstock data[2] – Blunomy's inhouse database
2 **Recoverable biomethane potential**	• Applied recovery rates on theoretical potential to calculate recoverable potential • Based on the proportion of organic residues suitable to anaerobic digestion and available after considering non-energy competing uses and capture constraints. We analysed two scenarios to quantify the recoverable biogas potential: Business-As-Usual (BAU), Policy-Enabled (PE)	• Interviews with Subject Matter Experts[3] • Literature review • Internal technical expertise

[1] Organic residues sourced only from sustainable feedstock streams are considered in the analysis, e.g., energy/cover crops biomass is not considered; [2] There are limitations of the ABBA data, which are explained further in the description of methodology's limitations in the Appendix. [3] We interviewed nine experts with deep knowledge in the following areas: Agriculture, dairy, livestock, urban waste, C&I waste, wastewater, and biomass-to-biofuel conversion.

There are four main feedstock streams where recovery rates affect the biomethane potential in the PE scenario



Category	Stream	Recovery rates[1]	Rationale
Urban waste	C&I - Organics	BAU 20% PE 80%	• **BAU**: Partial recovery of food organic waste. Garden organics with relatively higher lignin content are sent to landfills or composting. • **PE**: National waste management policy for source separation of food waste, which is then diverted from landfills.
	MSW – Organics	BAU 23% PE 80%	
	MSW – Biosolids	BAU 50% PE 65%	• **BAU**: Considers competing use of biosolids for land application and soil conditioning. However, there is limited recovery of what remains. • **PE**: Water and other utilities commitments to achieve 100% recovery by 2030–2050 can drive uptake for anaerobic digestion. Further improvements are possible by optimising retention time and volume of bacteria in the AD process.
Agricultural Residues	Cropping	BAU 35% PE 75%	• **BAU**: Competing uses, such as land cover, animal bedding, and animal feed. Still, farmers leave substantial stubble on the field for burning later. • **PE**: Policy ban on stubble burning increases incentives to collect, improving recovery rate.

[1] Further details on BAU and PE recovery rates and rationale is in the Appendix

The third step considers AGIG's catchment area and quantifies the biomethane potential (1/2)

1 Theoretical biomethane potential
2 Recoverable biomethane potential
3 Recoverable biomethane potential within AGIG's catchment area

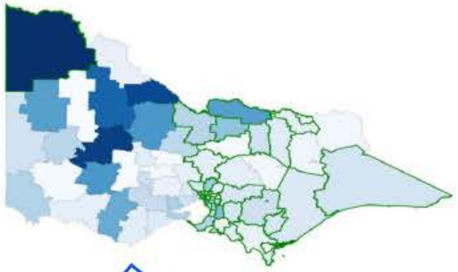
Legend
AGIG distribution assets
AGIG transmission assets
AGIG distribution catchment area
AGIG transmission catchment area

Step

3A

Mapped the recoverable biomethane potential to a state's regions, calculated it per land use unit, and created heatmaps of that potential by LGA and feedstock category

Recoverable Biomethane Potential within VIC by LGA



Using the recoverable biomethane potential from step 2, map it to the LGAs or SA4 regions[1].

Illustrative example of calculating Biomethane Potential (BMP) per land-use in an LGA

Feedstock	Total BMP [TJ]	Allocated Land-use	BMP per Land-use
Agriculture	1,000.00	70.00	14.29
Food Processing	-	-	-
Urban Waste	5.00	1.00	5.00
C&I Waste	100.00	10.00	10.00

Assign each feedstock to a land-use type (e.g., Agricultural – Cropping feedstock to land use category Irrigated Cropping) and calculate the recoverable biomethane potential per unit of land use[2] in each LGA or SA 4 region.

VIC Agricultural Feedstock Heatmap by Land-use

Create a heatmap of the calculated BMP per unit of land-use by LGA and feedstock category.

Maps and Tables are for illustrative purposes only. Landfill and WWTP potential are point-sourced data from AGIG and does not follow the same methodology as other feedstock streams from the external datasets. [1] ABBA data for QLD and VIC has feedstock data available at the LGA level, SA and NSW feedstock data is only available at the SA4 region level for certain feedstock streams, therefore, only SA4 regions are used. This step is optional but is used to visualise the dataset. [2] The unit of land use is a 250*250m area.

1 Theoretical biomethane potential
2 Recoverable biomethane potential
3 Recoverable biomethane potential within AGIG's catchment area

Legend: AGIG distribution assets | AGIG transmission assets | AGIG distribution catchment area | AGIG transmission catchment area

The third step considers AGIG's catchment area and quantifies the biomethane potential (2/2)

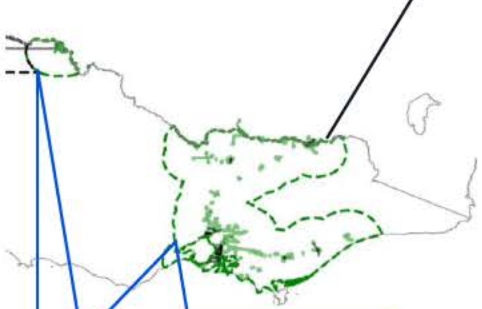
Step

3B

Mapped the catchment area, overlaid it on heatmaps, and aggregated recoverable potential across feedstock categories[2].

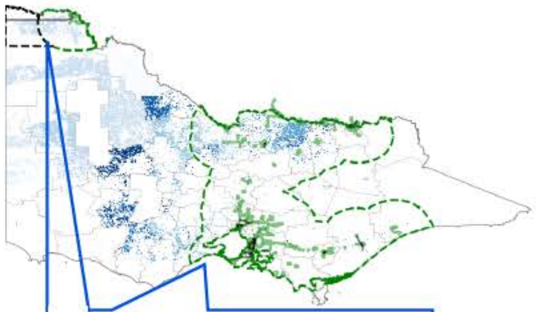
The catchment areas are not confined to the state boundary[1]

Map of AGIG Catchment Area within VIC[3]



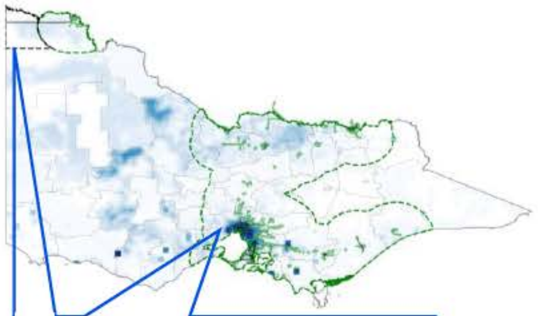
Map the catchment area, which is a 50km perimeter on AGIG's assets[1].

VIC Agricultural Feedstock Heatmap Overlayed with Catchment Area[3]



Layer the catchment area on top of the heatmaps created from step 3.1.

VIC Total Recoverable Potential Overlayed with Catchment Area[3]



Calculate the recoverable potential that is inside of the catchment area, aggregate it across all feedstock categories to create final heatmap.

[1] The catchment perimeter considers areas in the contiguous states. This applies to VIC, where the catchment area of AGIG's assets in the North reaches to NSW. These maps are for illustrative purposes only, recoverable potential from NSW are included in the final heatmaps and calculations. See Summary Results – AGIG's network catchment for details. [2] The inclusion of point sources (landfill and WWTP) is based on inputs from AGIG because the catchment area radius is a guideline for transporting feedstock and it may not apply to extending gas network.

The methodology adopted in this study provides a conservative estimate of biomethane potential, limited by the data available

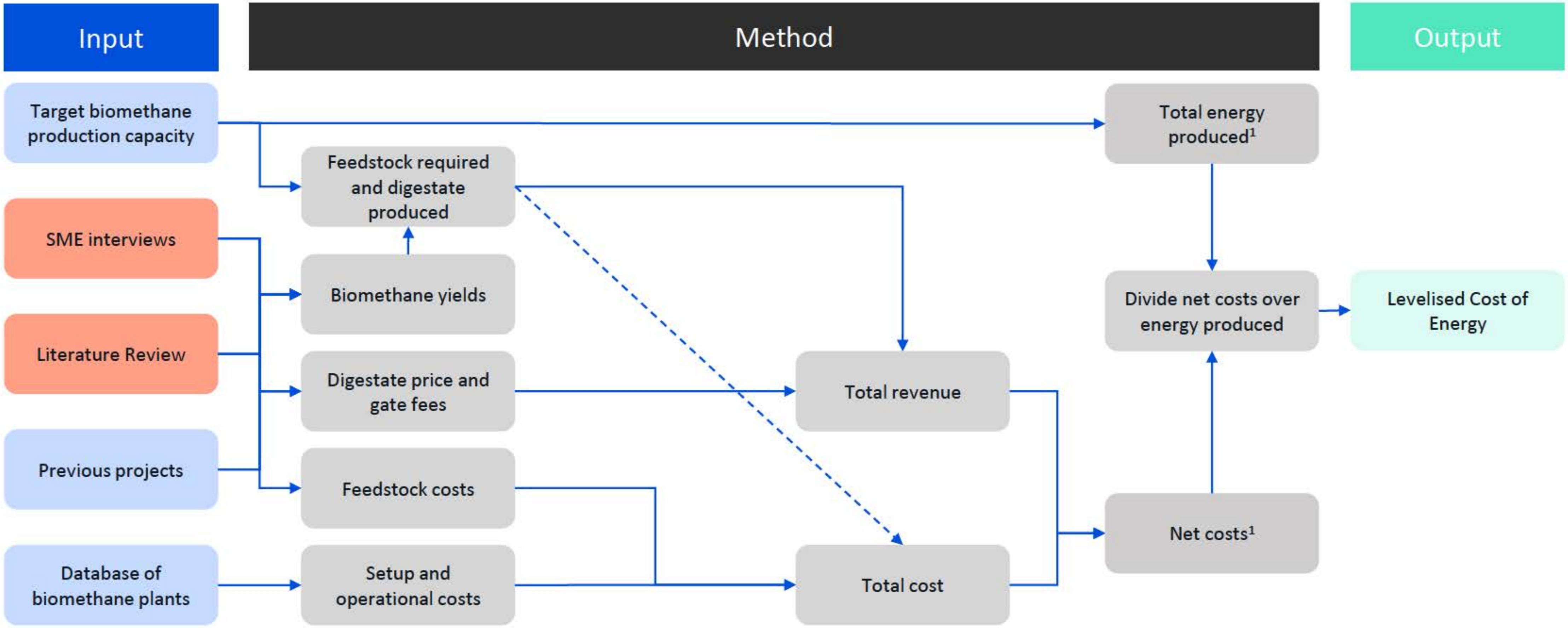
Limitations of the ABBA Dataset	• The Australian Biomass for Bioenergy Assessment (ABBA) dataset was used for some feedstock streams to compute the biomethane potential. The uncertainties and limitations in the ABBA data, which are explained in the Appendix[1] would therefore apply to this study as well. • Despite constraints, the dataset is the best available fit for purpose as it has the most extensive coverage in Australia and is relevant to the study.
PE scenario does not represent an upper limit on biomethane potential	• The estimated biomethane potential of the PE scenario assumes the implementation of favourable policy and regulation that reduce current capture constraints. Policy actions such as stubble-burning ban and the prohibition of organics in landfills can enhance feedstock recovery amongst the streams covered. • The feedstock streams covered includes organic residues and waste from the urban, commercial, industrial and agriculture sector, but excludes biomass from cover crops, dedicated energy crops and other feedstocks not specified. • Future work considering other feedstock streams beyond the ABBA dataset may significantly increase the biomethane potential assessed.

[1] Refer to Appendix - Methodology notes on ABBA data

The LCOE calculation uses data from various sources to calculate costs, revenue and the total energy produced

External data source

Internal data source



Note: A target 307.8 TJ/year biomethane production capacity is set, with a 20-year lifespan of 8100 production hours per year. An 85% and 95% production ramp up factor is used for the first two years of production. 1. In calculating total energy produced and biomethane production, a discount rate of 7.50% and inflation rate of 2.77% is used. Full sets of assumptions are provided in the Appendix.

3

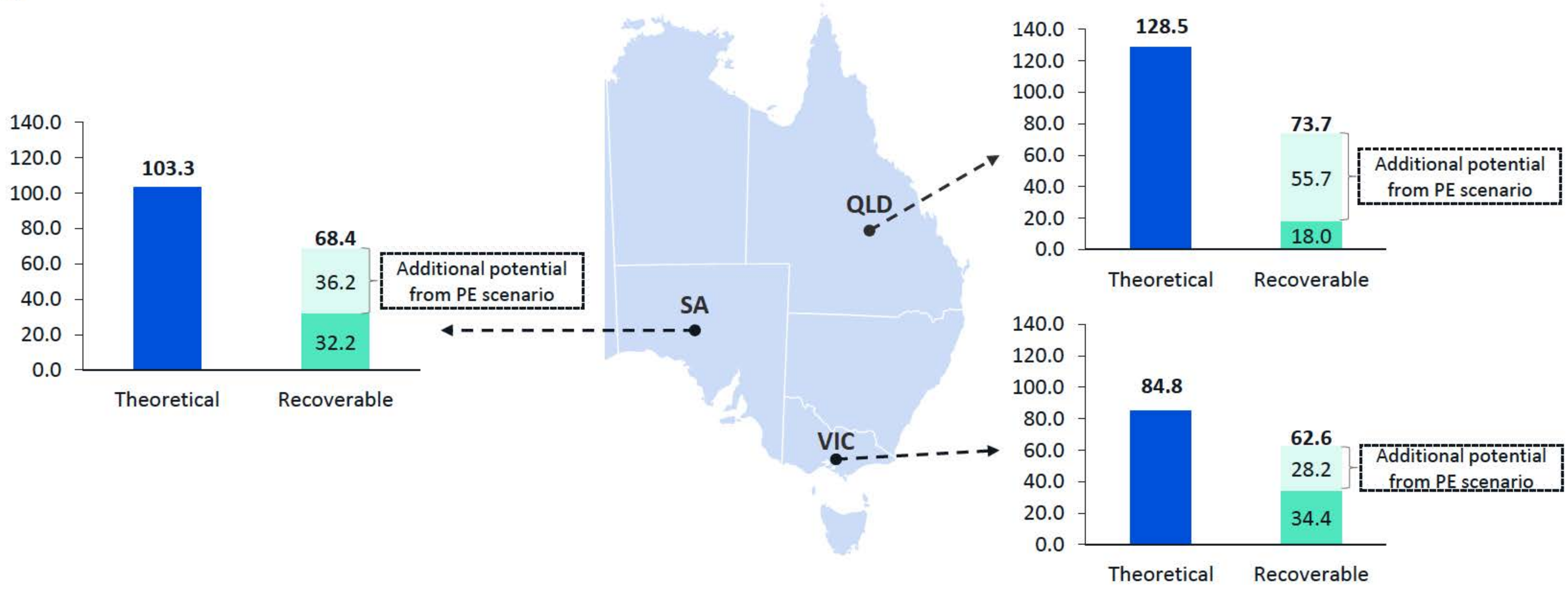
Summary Results – State-wide Biomethane Potential

Legend: Theoretical | BAU Scenario | Additional from PE

Theoretical biomethane potential in the three states is 323.5 PJ, with 84.6 PJ recoverable under the BAU scenario and 204.7 PJ recoverable under the PE scenario

Theoretical and recoverable biomethane potential by state

PJ

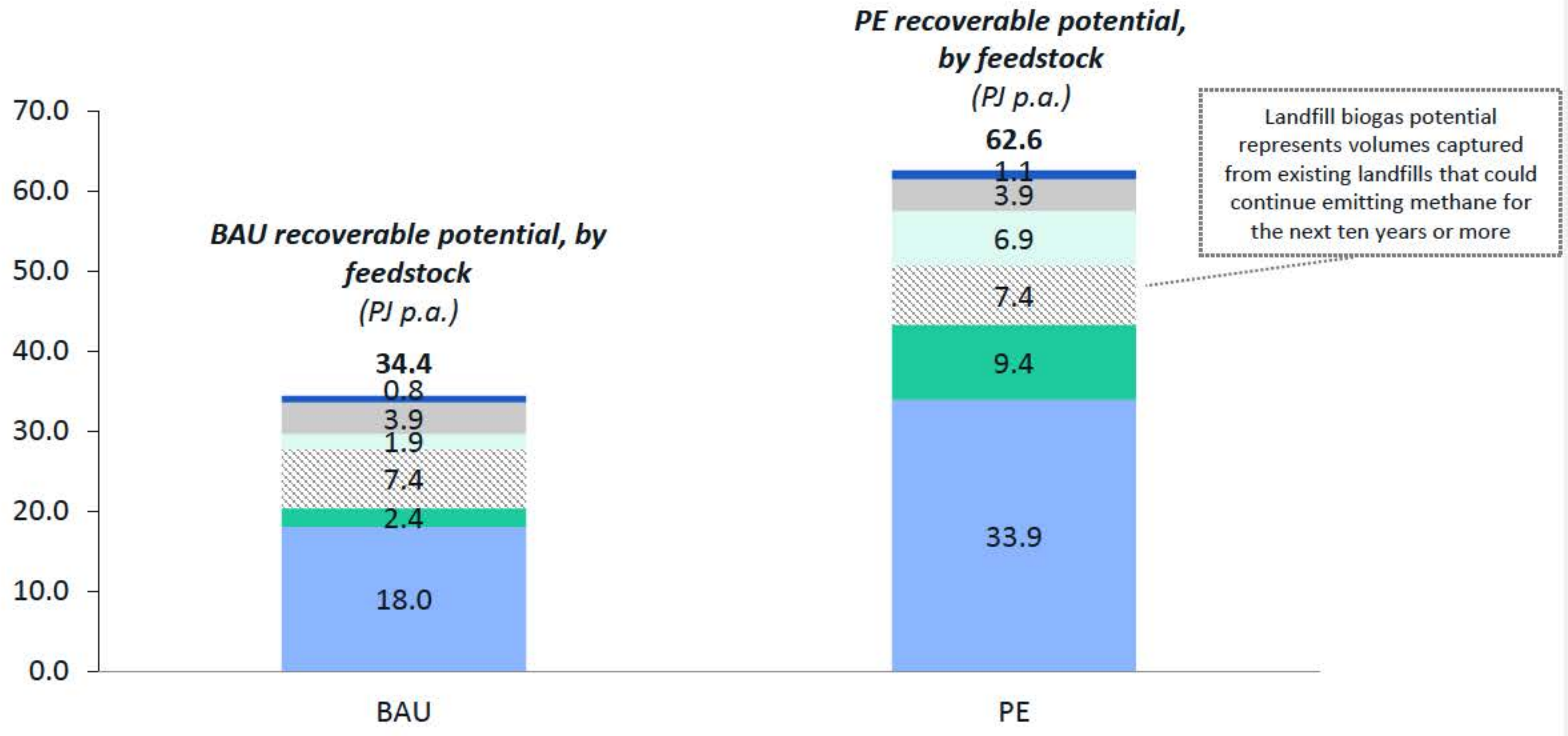


Note: The theoretical potential has been updated from the previous potential for the state of VIC (86.6 PJ) submitted as part of the Victoria Renewable Gas Consultation. This is due to the adoption of more conservative biomethane yields for urban and C&I waste. AGIG has marginal access to some of NSW's biomethane potential – this was considered when studying AGIG's asset catchment in Victoria but not included into these state-level figures

In the PE scenario two-thirds of Victoria's statewide potential can be captured, with agriculture contributing more than half of it

Legend	Agriculture	C&I waste	Urban waste
	Landfill gas	WWTP	Food processing

Victoria – Recoverable biomethane potential by feedstock



- Under the business-as-usual (BAU) scenario, Victoria's recoverable biomethane potential is 34.4 PJ[1], which is 38% of Victoria's theoretical biomethane. However, it can reach up to 62.6PJ, representing 68% of the state's theoretical biomethane potential.
- Agriculture is the dominant feedstock, responsible for over 50% of the potential in the state under both scenarios.
- Landfill gas and wastewater treatment plants provide the next highest potential in the state, which remains the same in the two scenarios.
- Urban and C&I waste represents a relatively low potential in the BAU scenario, which increases by more than three-fold in the PE scenario due to policy-driven initiatives promoting the separation and collection of organic materials destined for landfills.

Note: this exercise focusing on state-level feedstock potential was only completed for Victoria. [1] The BAU recoverable potential has now been updated from the previous recoverable potential provided for the state of VIC (41 PJ). As part of this project, SMEs were consulted to provide updates to the recovery rates which resulted in the lower recoverable potential. Refer to the Appendix for details on the updated recovery rates.

4

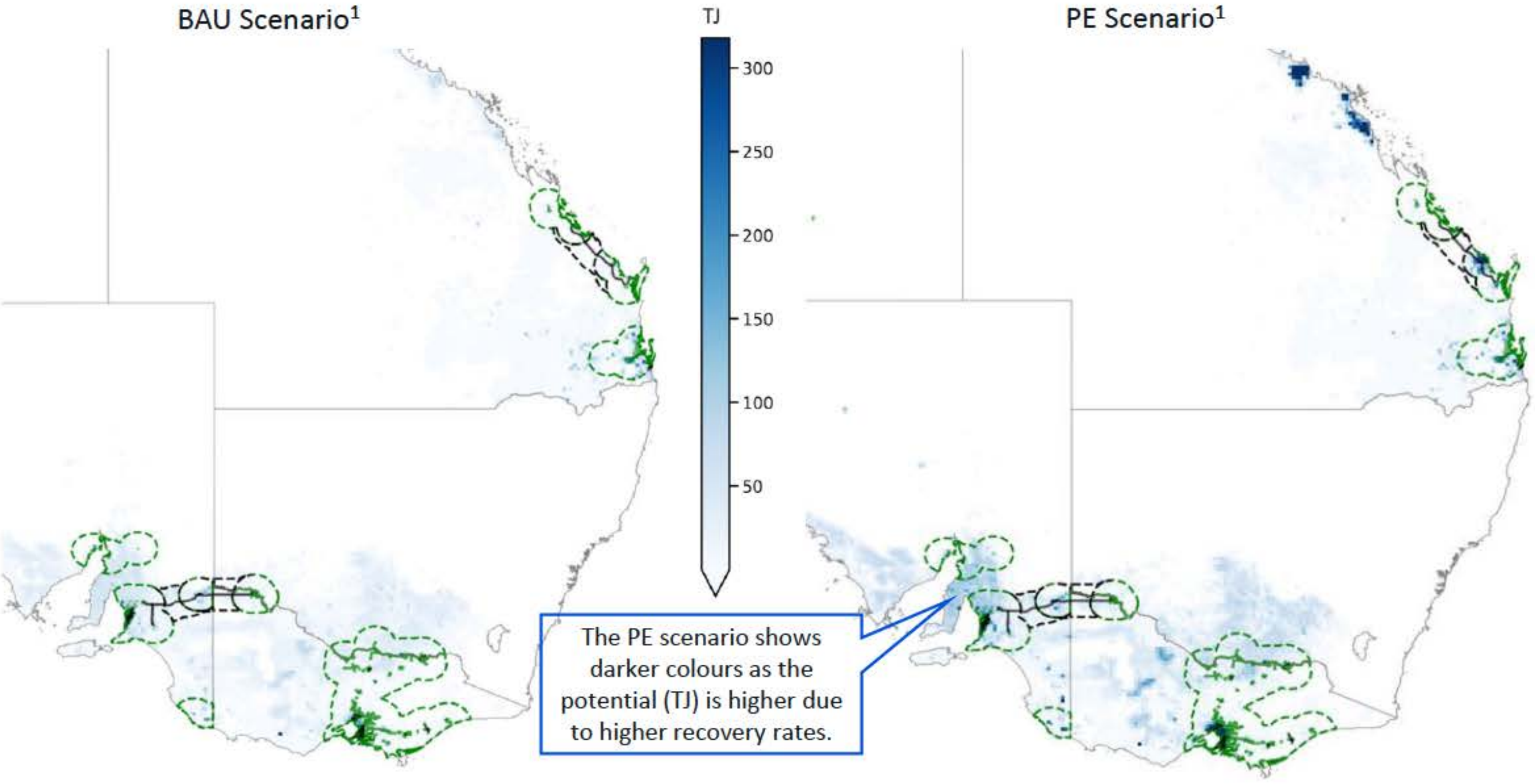
Summary Results – Biomethane Potential of AGIG's Network Catchment

AGIG's catchment areas include the major urban locations and some agriculture production areas in the three states

Legend

AGIG distribution assets	AGIG transmission assets
AGIG distribution catchment area	AGIG transmission catchment area

Land-use heatmaps showing Agriculture, Urban and C&I potential



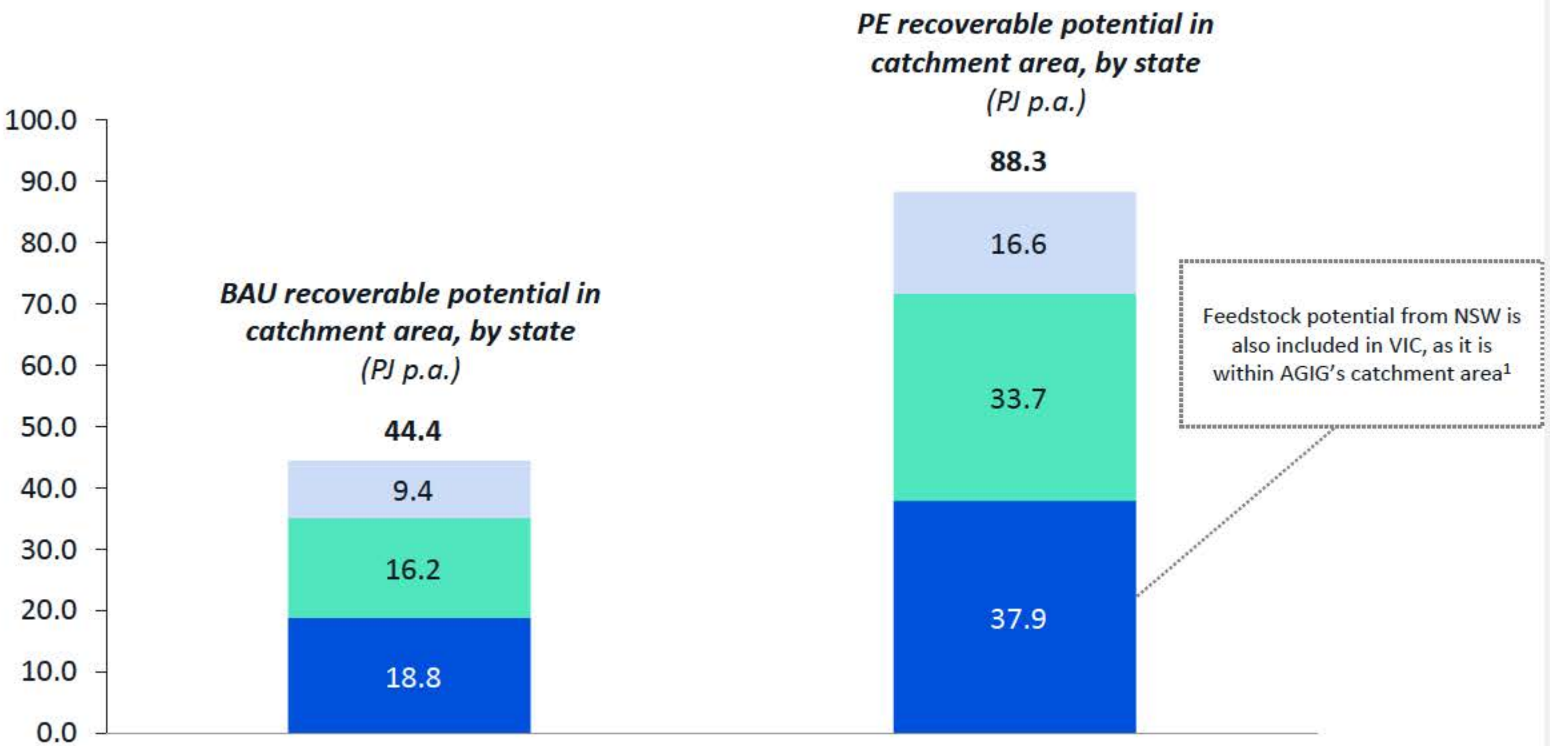
Key Insights:

- Agriculture is primarily in the rural areas of the three states. It is predominant along the coast in QLD and SA, while it is more evenly spread across the rural areas of VIC. AGIG's catchment areas have a high availability of agricultural feedstock, especially in SA and VIC[2].
- Urban waste is clustered around the three states' metropolitan areas of Brisbane, Adelaide and Melbourne. C&I waste is in metropolitan areas but also spreads to peri-urban areas. As AGIG's assets are present in metropolitan areas, Urban and C&I feedstocks are a significant source of biomethane potential for AGIG.

[1] The project's focus is the states of VIC, SA and QLD. Hence, the heatmaps are blank in NT and only a partial mapping of regions close to AGIG's catchment in NSW is done. More detail on this in the Appendix. [2] AGIG's catchment area in VIC includes NSW, where it also has a high availability of agricultural feedstock

VIC has the highest biomethane potential in AGIG's catchment areas, followed by SA, and QLD

Legend: Victoria | South Australia | Queensland



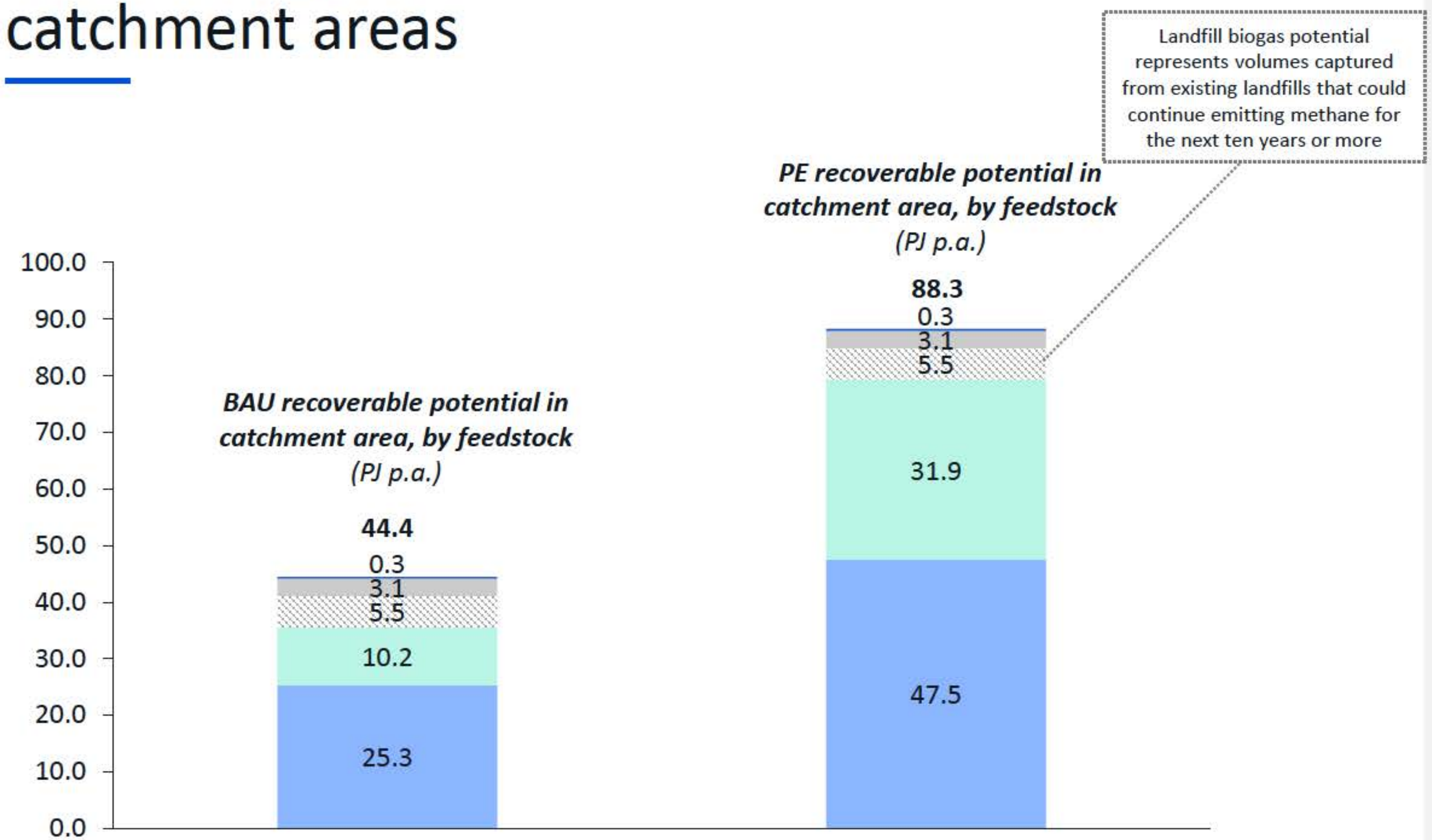
[1] If the NSW feedstock potential in AGIG's VIC Catchment area is excluded for the analysis, SA would have the highest biomethane potential, followed by VIC (BAU: 14.59, PE: 29.19) and SA.

Key Insights:

- PE recoverable biomethane potential in AGIG's catchment areas in the three states is nearly double that of BAU.
- The potential is highest in VIC, due to AGIG's catchment area covering key urban areas as well as some agriculture production regions within the state and in NSW.
- SA has the second highest potential, due to the state's high agricultural feedstock availability. Agricultural feedstock and AGIG's catchment area are near the coast and overlap significantly.
- The state-wide feedstock availability in QLD is high because of its significant sugarcane production. However, AGIG's catchment areas in the state lies outside the major production regions.

Summary Results – Recoverable Potential in AGIG's Network Catchment

Agricultural, Urban, and C&I feedstocks are the primary sources of biomethane in AGIG's catchment areas



Key Insights:

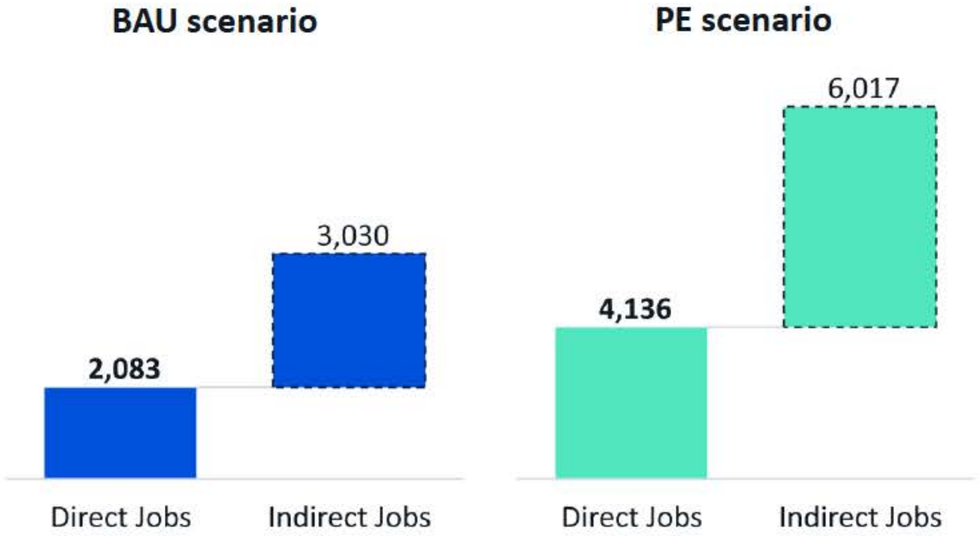
- Agriculture remains the dominant feedstock for biomethane potential in the BAU scenario having over 50% of the overall potential in AGIG's catchment areas. This could be further increased with regulatory measures against stubble burning and if farmers are offered more incentives to gather feedstock.
- Urban and C&I waste also represents substantial potential. In the PE scenario, its biomethane potential increases three-fold due to policy-driven initiatives promoting the separation and collection of organic materials destined for landfills.

Note: These figures include feedstock potential from NSW as it is within AGIG's catchment area in VIC (BAU: 4.24 PJ, PE: 8.74PJ). For further breakdown by feedstock category, please see appendix. [1] "Urban and C&I" is specific to Queensland, where no breakdown is given whether the feedstock is from C&I or from Urban Waste/MSW. Further breakdown of Urban & C&I will be presented in Detailed Results.

Biomethane production can create up to ~4,100 direct jobs and contribute to circular economy in AGIG's catchment areas

The increase in jobs due to the biomethane industry represents 11.3%[1] of employment in the three states' energy, water and waste services sector

Job creation from the biomethane industry based on job ratios (jobs/GJ biomethane produced) from various sources[2]



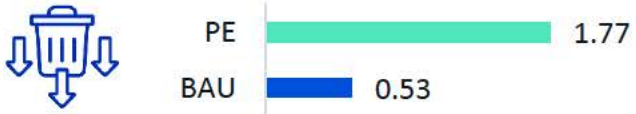
Realising the PE recoverable potential on AGIG's network catchment can create up to ~10,100 jobs for the three states. The lower-bound PE figure (~4,100 jobs) considers only direct and ongoing jobs (e.g., full-time employment at bioenergy plants).

Enhancing biomethane production can reduce carbon emissions, divert waste from landfills, and contribute towards a circular economy

Annual carbon emission reduction from displacement of natural gas [million tonnes]

Up to ~4.5 Mt of CO_2 emissions can be reduced in AGIG's catchment areas from the displacement of fossil natural gas in pipelines with biomethane[5].

Annual urban and C&I waste diverted from landfill [million tonnes]



Up to ~1.8 Mt of annual waste reduction can be achieved in AGIG's catchment areas from the diversion of Urban and C&I waste for biomethane production.

Annual digestate produced from AD of agricultural feedstock [million tonnes]

Up to ~4.4 Mt of digestate can be produced in AGIG's catchment areas, capable of returning nutrients to the soil. This could also help displace inorganic fertilisers produced from fossil gas[4].

Notes: [1] The three states' electricity, gas, water, and waste services account for 90,200 jobs as of November 2023 (ABS Labour Force) [2] Direct Jobs are based on job ratio derived from the Australian Bioenergy Roadmap, ARENA (2021). Indirect Job Creation: Job creation by scaling up renewable gas in Europe, by Navigant for Gas for Climate (2019); Beyond energy – monetising biomethane's whole-system benefits, by Guidehouse for EBA (2023). [3] Dry tonnes of urban waste diverted and recovered. [4] Digestates are not a 1:1 replacement for fertilisers due to the different nutrient density and release, further work required on the benefits of digestate vs. inorganic fertilisers. [5] Only based on Scope 1 emissions from the combustion of gaseous fuels from the the Australian national greenhouse accounts factors, DCCEEW (2023). This figure does not account for additional carbon emission reductions resulting from the diversion of feedstock into AD, which would otherwise emit greenhouse gases.

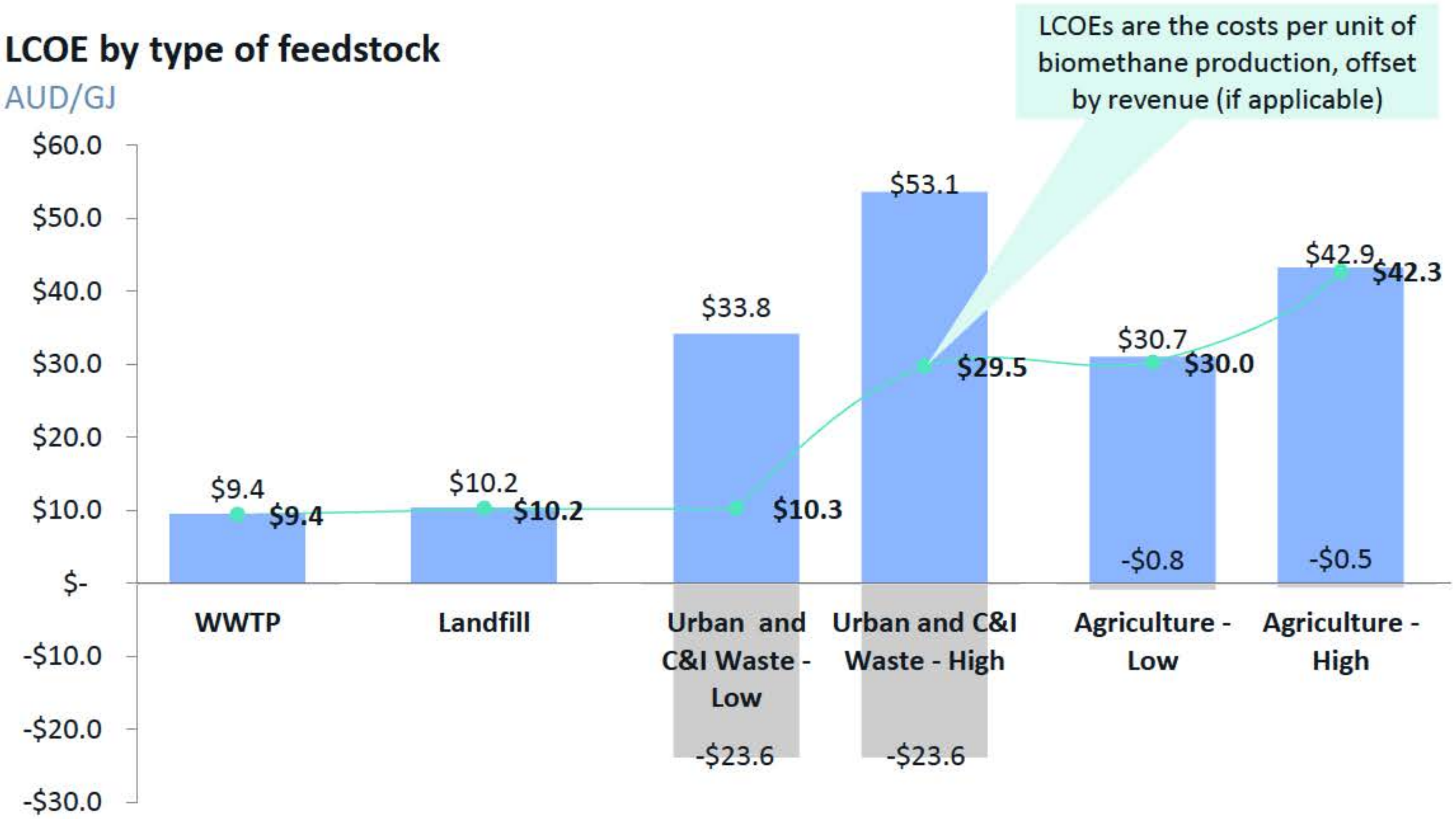
WWTP and Landfill Biomethane projects offer competitive LCOEs with current gas market prices[1]

Legend	Costs	Revenue	LCOE

Note: LCOE figures are derived from a preliminary modelling exercise that employs generalised assumptions about cost structures. Figures do not consider potential opportunity costs and may vary based on local conditions. LCOEs do not assume revenues from biogenic carbon dioxide from the biogas upgrading process.

LCOE by type of feedstock

AUD/GJ



Key insights

- Landfill and WWTP[2] projects offer competitive LCOE compared to other feedstock-type projects as their CapEx is mainly on biomethane upgrading.
- Urban and C&I Waste projects can also be competitive, depending on whether the digestate is applied to land (low) or disposed (high)[3]. Despite the high costs, these projects have a significant revenue component from gate fees earned from receiving and processing the waste.
- Agriculture projects have the highest LCOE due to high feedstock costs. The LCOE ranges from high to low depending on the mix, yields, and costs of the feedstock. A small revenue component can be gained from the sale of digestate.

[1] The average gas market prices of VIC, Adelaide, and Brisbane as of 1 Jan 2024 is $10.7/GJ, AER. [2] WWTP can receive revenue through the sale of digestate, depending on state-specific regulations. It is excluded from this analysis as it would have been received from current operations. [3] Certain states/EPAs do not allow AD digestate of certain projects to be spread on land due to contamination risks, in which case it has to be disposed. Disposing digestate is a significant OPEX that increases the LCOE, due to the high costs associated with digestate from urban waste facilities.

5

Detailed Results

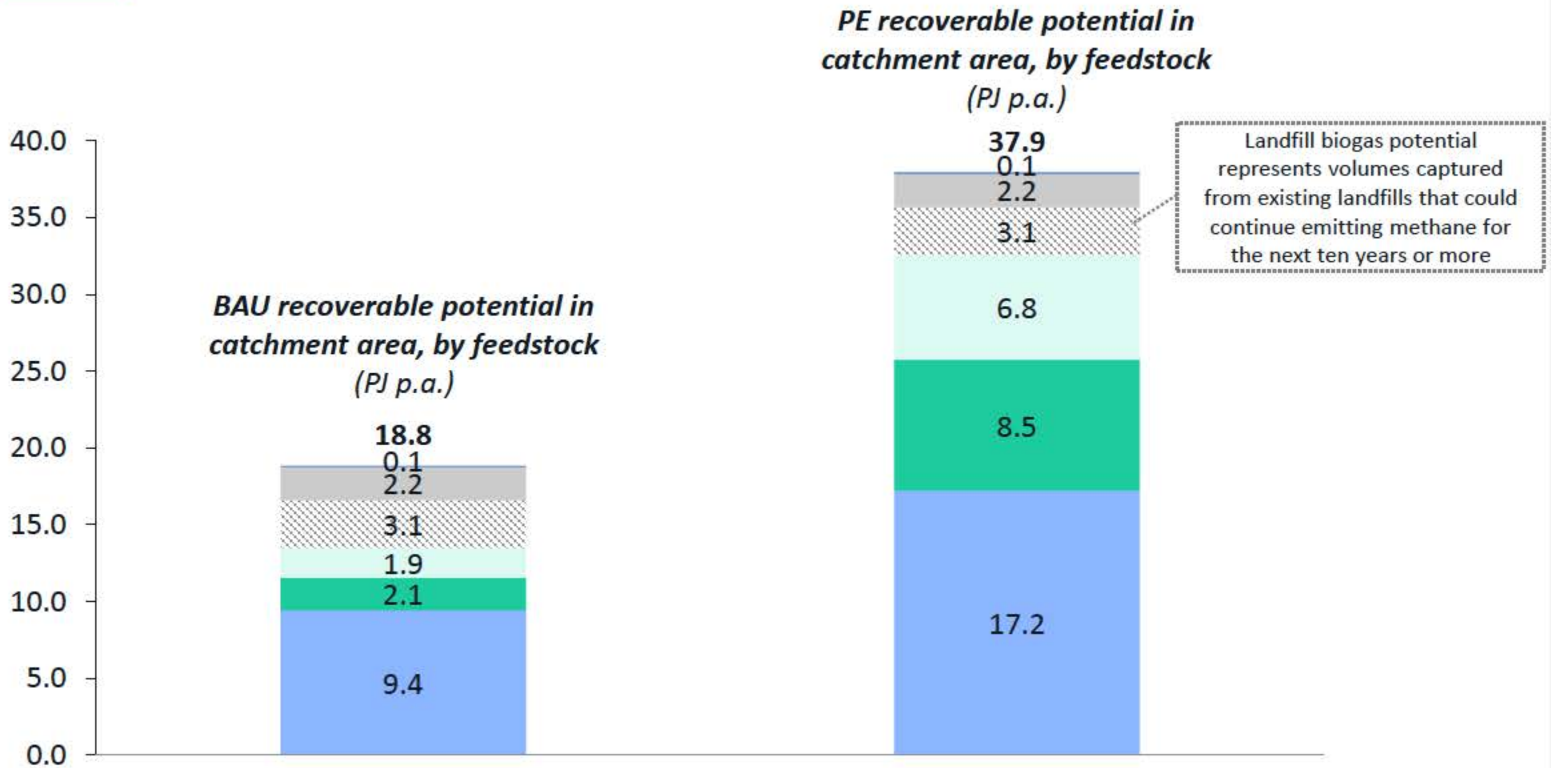
5

Detailed Results

Victoria

Agriculture, Urban and C&I waste are the key feedstock sources in AGIG's catchment areas[1]

Legend: Agriculture | C&I waste | Urban waste | Landfill gas | WWTP | Food processing

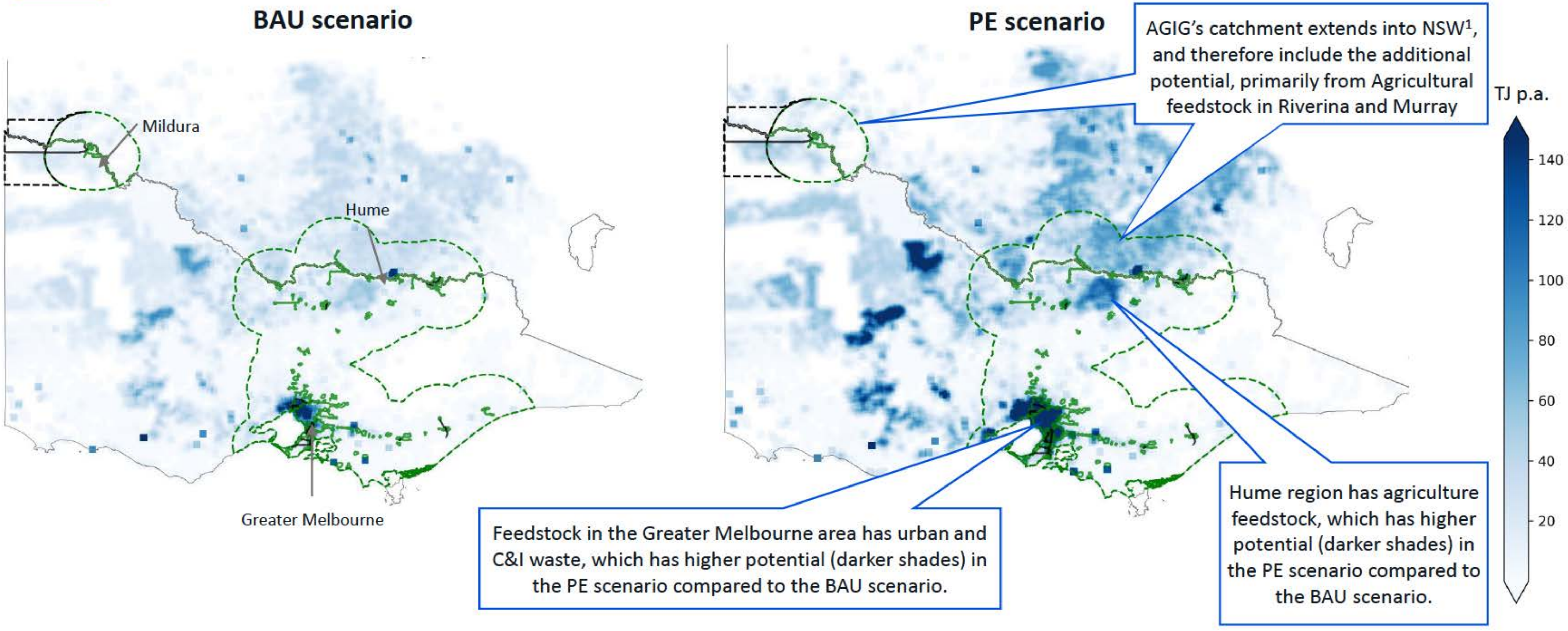


Key insights

- PE recoverable biomethane potential (37.9 PJ p.a.) in AGIG's catchment areas in VIC is double the BAU potential (18.8 PJ p.a.).
- AGIG's catchment area covers the central regions of VIC, including the Greater Melbourne area up to Hume. This allows AGIG to capture most of VIC's urban and C&I waste and a significant portion of its agricultural feedstock.
- These figures also include recoverable potential from feedstock in the Riverina and Murray region of NSW, as it falls under AGIG's catchment area in VIC.
- The increase in the PE scenario is primarily driven by the significance of the urban and C&I feedstock stream in VIC, contributing to 60% of the increase in recoverable potential.

[1] The analysis considers feedstock in the south of NSW as it falls under AGIG's catchment area in VIC. The recoverable potential coming from NSW feedstock is 4.24 PJ and 8.74 PJ for the BAU and PE scenarios respectively. A detailed breakdown is provided in the Appendix

Melbourne metropolitan area and the Hume region are the key locations with biomethane potential in AGIG's catchment

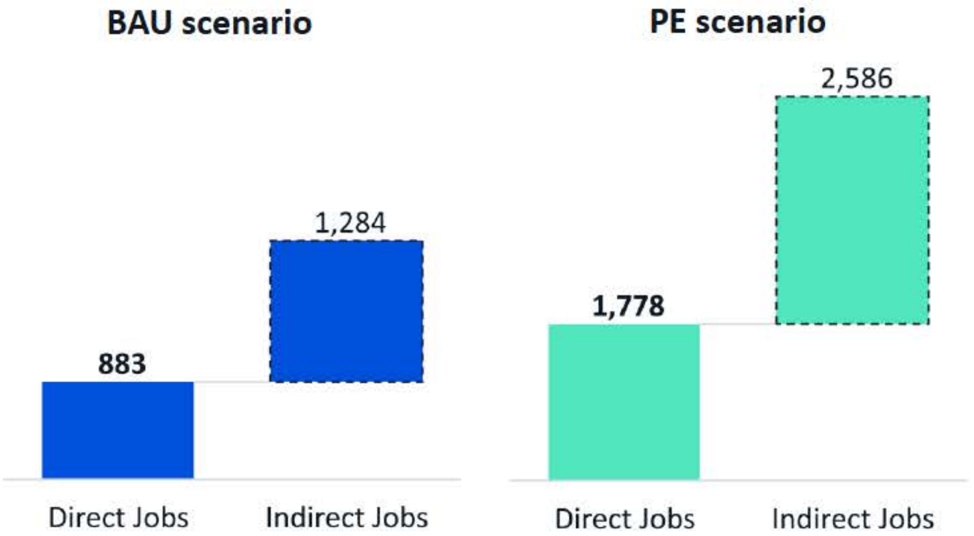


[1] The analysis considers feedstock in the south of NSW as it falls under AGIG's catchment area in VIC. The recoverable potential coming from NSW feedstock is 4.24 PJ and 8.74 PJ for the BAU and PE scenarios respectively.

Biomethane production in AGIG's catchment areas can create up to ~1,700 direct jobs and contributes towards a circular economy

The increase in jobs due to biomethane industry represents 10.9%[1] of employment in VIC's energy, water and waste services sector

Job creation from the biomethane industry based on job ratios (jobs/GJ biomethane produced) from various sources[2]



Realising the PE recoverable potential on AGIG's catchment can create up to ~4,300 jobs in VIC. The lower-bound PE figure (~1,700 jobs) considers only direct and ongoing jobs (e.g., full-time employment at bioenergy plants).

Enhancing biomethane production can reduce carbon emissions, divert waste from landfills, and contribute towards a circular economy

Annual carbon emission reduction from displacement of natural gas [million tonnes]

Up to ~2.0 Mt of carbon dioxide emissions can be reduced in AGIG's catchment areas from the displacement of fossil natural gas in pipelines with biomethane[5].

Annual urban and C&I waste diverted from landfill [million tonnes]

Up to ~0.5 Mt of annual waste reduction can be achieved in AGIG's catchment areas from the diversion of Urban and C&I waste for biomethane production.

Annual digestate produced from AD of agricultural feedstock [million tonnes]

Up to ~1.6 Mt of digestate can be produced in AGIG's catchment areas, capable of returning nutrients to the soil. This could also help displace inorganic fertilisers produced from fossil gas[4].

Notes: [1] The Victorian electricity, gas, water, and waste services account for 40,175 jobs as of November 2023 (ABS Labour Force) [2] Direct Jobs are based on job ratio derived from the Australian Bioenergy Roadmap, ARENA (2021). Indirect Job Creation: Job creation by scaling up renewable gas in Europe, by Navigant for Gas for Climate (2019); Beyond energy – monetising biomethane's whole-system benefits, by Guidehouse for EBA (2023). [3] Dry tonnes of urban waste diverted and recovered. [4] Digestates are not a 1:1 replacement for fertilisers due to the different nutrient density and release, further work required on the benefits of digestate vs. inorganic fertilisers. [5] Only based on Scope 1 emissions from the combustion of gaseous fuels from the the Australian national greenhouse accounts factors, DCCEEW (2023). This figure does not account for additional carbon emission reductions resulting from the diversion of feedstock into AD, which would otherwise emit greenhouse gases.

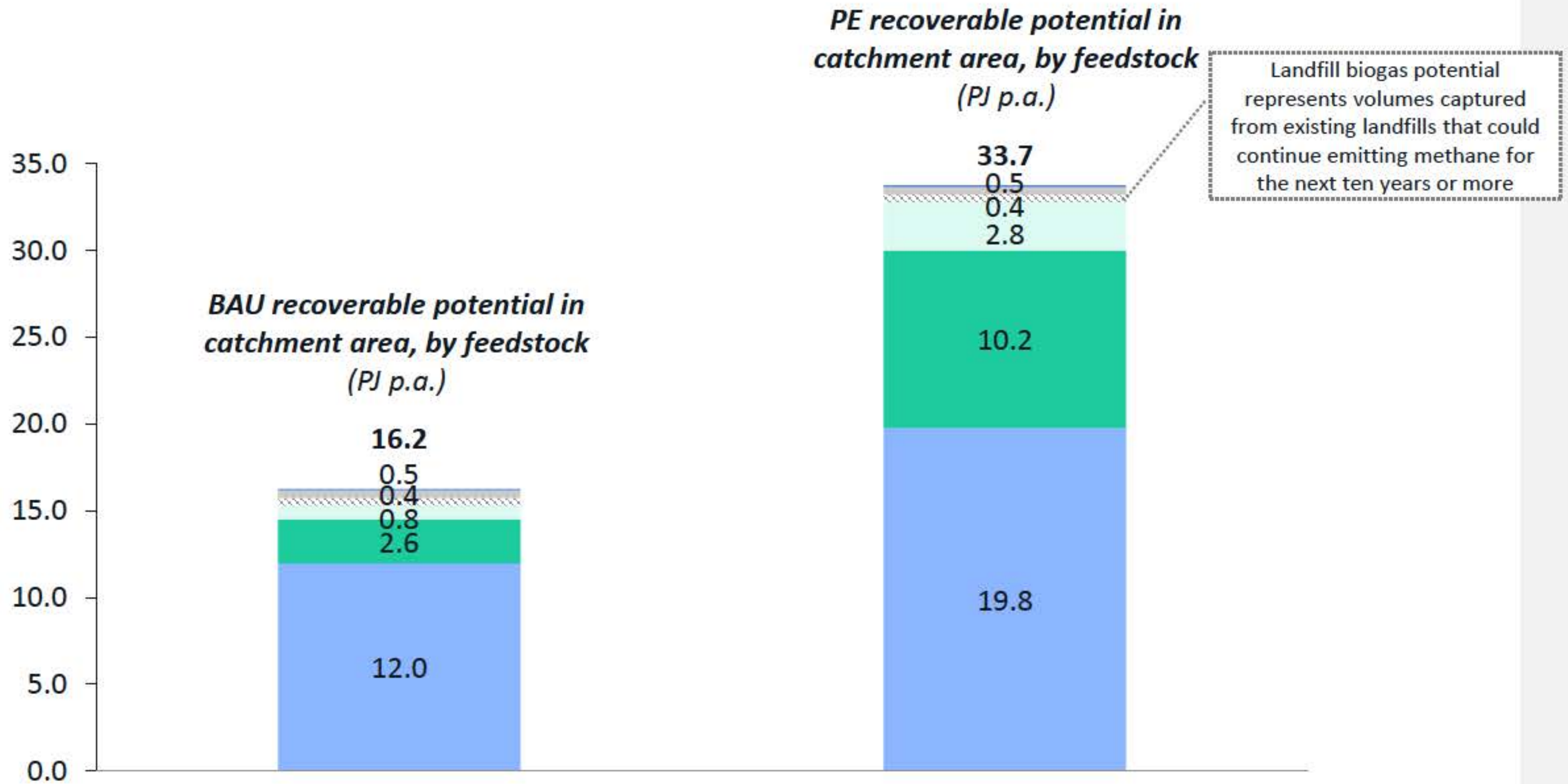
5

Detailed Results

South Australia

Legend	Agriculture	C&I waste	Urban waste
	Landfill gas	WWTP	Food processing

Agriculture and C&I waste are the key feedstock sources in AGIG's catchment areas[1] in SA



Key insights

- SA holds the highest recoverable potential among the three states within AGIG's catchment areas, with the PE recoverable potential (33.7PJ p.a.) being over double the BAU recoverable potential (16.2PJ p.a.).
- SA has abundant agricultural feedstock available, a significant portion of which is under AGIG's catchment area.
- AGIG's catchment area also covers nearly all areas producing urban and C&I waste in the state.
- Landfill and WWTP only have a marginal contribution to the totals[2].

Note: Food Processing contributes to 0.034 and 0.056PJ for the BAU and Recoverable potential respectively, this was included in the graph but is not labelled due to the small value. [1] The analysis considers catchment area within SA, feedstock availability in contiguous states are not considered; [2] A major landfill in SA is ~40km from AGIG's network but not considered as the connection is not being considered by AGIG. As a principle, point sources are only considered when they are sufficiently close to AGIG's network assets (determined in consultation with AGIG) even if they are in the catchment area.

Greater Adelaide, other urban areas in the state, and agriculture production areas around them overlap with AGIG's catchment

Legend

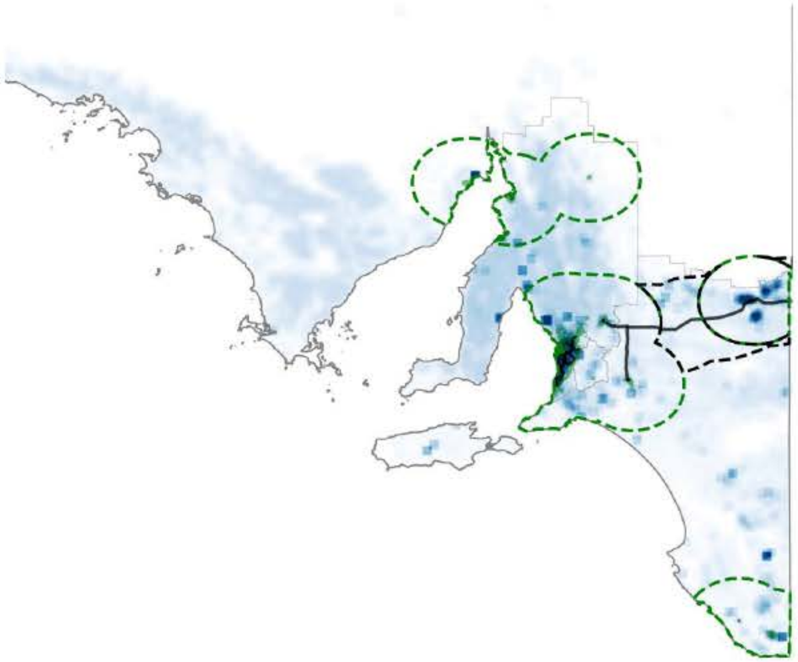
AGIG distribution assets

AGIG transmission assets

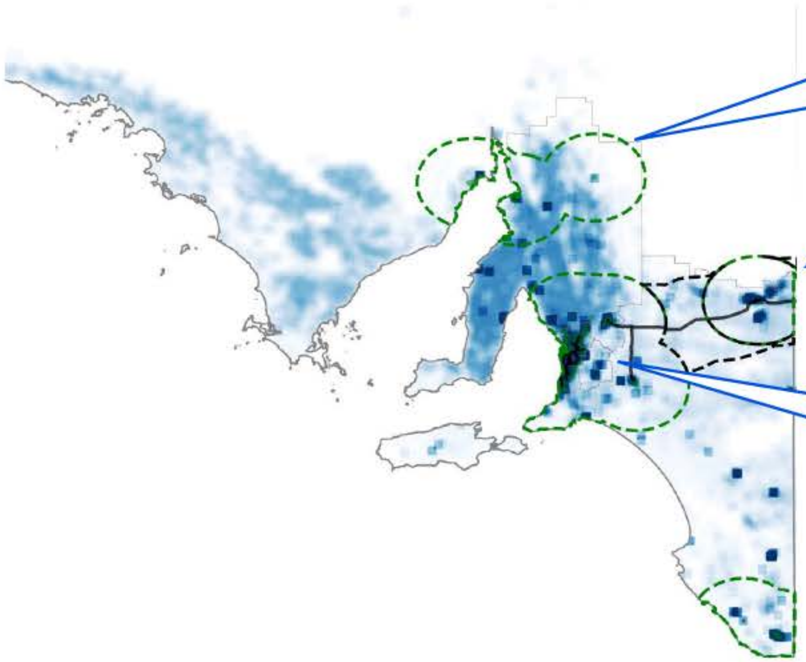
AGIG distribution catchment area

AGIG transmission catchment area

BAU scenario



PE scenario

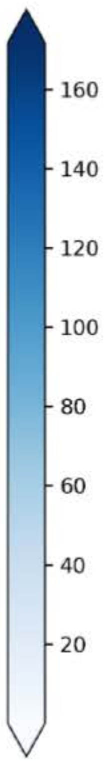


Mix of urban, C&I waste as well as agriculture in the areas of Port Augusta, Port Pirie and Whyalla

Distribution catchment areas in Adelaide and Renmark as well as transmission catchment area between them have a mix of urban, C&I and agriculture waste.

Main feedstock in the Greater Adelaide area is urban and C&I waste

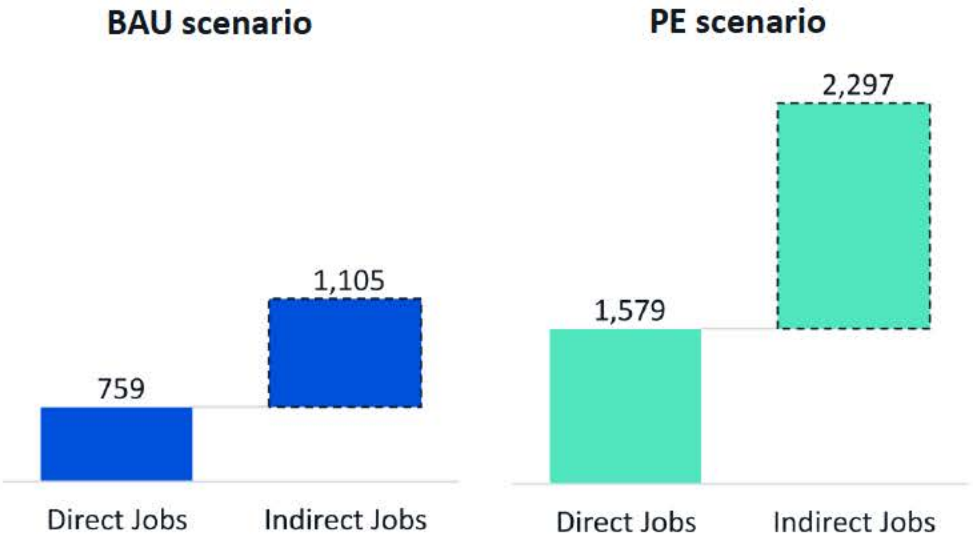
The analysis considers only the catchment area within SA. Feedstock availability in the contiguous states is not considered



Biomethane production in AGIG's SA catchment areas can create up to ~1,600 direct jobs and contributes towards a circular economy

The increase in jobs due to the biomethane industry represents 23.4%[1] of employment in SA's energy, water and waste services sector.

Job creation from the biomethane industry based on job ratios (jobs/GJ biomethane produced) from various sources[2]



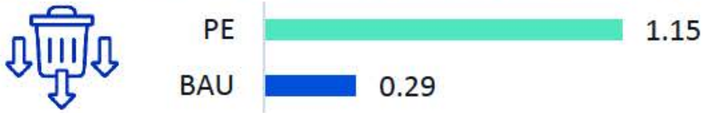
Realising the PE recoverable potential on AGIG's catchment can create up to ~3,900 jobs in SA. The lower-bound PE figure (~1,600 jobs) considers only direct and ongoing jobs (e.g., full-time employment at bioenergy plants).

Enhancing biomethane production can reduce carbon emissions, divert waste from landfills, and contribute towards a circular economy

Annual carbon emission reduction from displacement of natural gas [million tonnes]

Up to ~1.7 Mt of carbon dioxide emissions can be reduced in AGIG's catchment areas from the displacement of fossil natural gas in pipelines with biomethane[5].

Annual urban and C&I waste diverted from landfill [million tonnes]



Up to ~1.1 Mt of annual waste reduction can be achieved in AGIG's catchment areas from the diversion of Urban and C&I waste for biomethane production.

Annual digestate produced from AD of agricultural feedstock [million tonnes]

Up to ~1.9 Mt of digestate can be produced in AGIG's catchment areas, capable of returning nutrients to the soil. This could also help displace inorganic fertilisers produced from fossil gas[4].

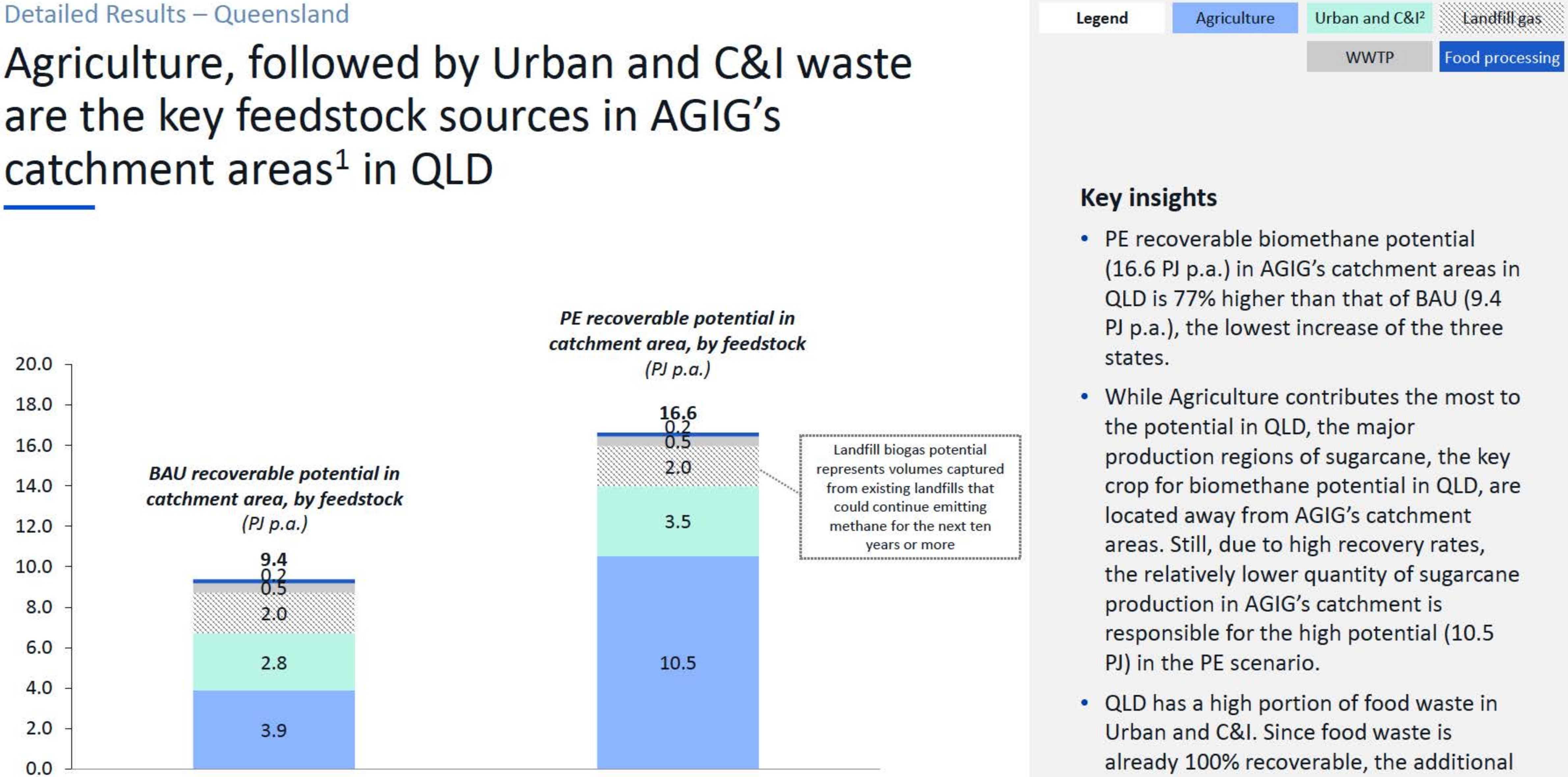
Notes: [1] The South Australian electricity, gas, water, and waste services account for 16,589 jobs as of November 2023 (ABS Labour Force) [2] Direct Jobs are based on job ratio derived from the Australian Bioenergy Roadmap, ARENA (2021). Indirect Job Creation: Job creation by scaling up renewable gas in Europe, by Navigant for Gas for Climate (2019); Beyond energy – monetising biomethane's whole-system benefits, by Guidehouse for EBA (2023). [3] Dry tonnes of urban waste diverted and recovered. [4] Digestates are not a 1:1 replacement for fertilisers due to the different nutrient density and release, further work required on the benefits of digestate vs. inorganic fertilisers. [5] Only based on Scope 1 emissions from the combustion of gaseous fuels from the the Australian national greenhouse accounts factors, DCCEEW (2023). This figure does not account for additional carbon emission reductions resulting from the diversion of feedstock into AD, which would otherwise emit greenhouse gases.

5

Detailed Results

Queensland

Agriculture, followed by Urban and C&I waste are the key feedstock sources in AGIG's catchment areas[1] in QLD

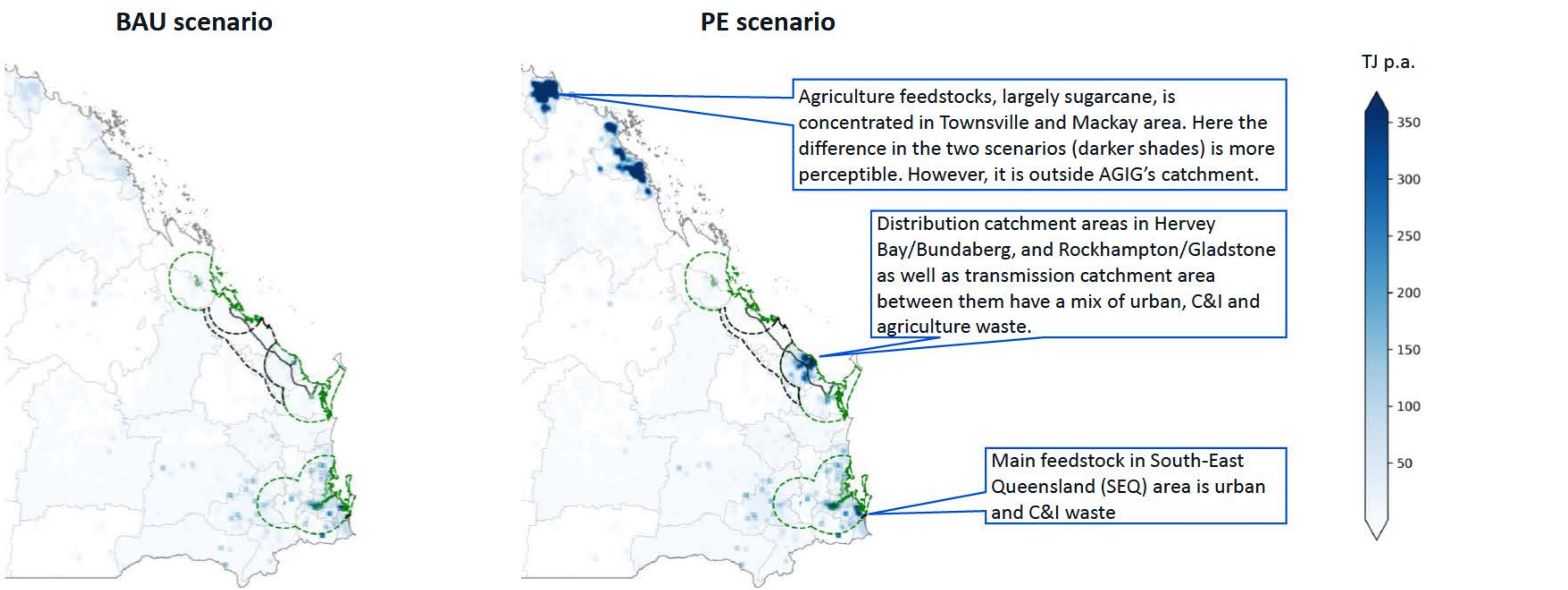


Key insights

- PE recoverable biomethane potential (16.6 PJ p.a.) in AGIG's catchment areas in QLD is 77% higher than that of BAU (9.4 PJ p.a.), the lowest increase of the three states.
- While Agriculture contributes the most to the potential in QLD, the major production regions of sugarcane, the key crop for biomethane potential in QLD, are located away from AGIG's catchment areas. Still, due to high recovery rates, the relatively lower quantity of sugarcane production in AGIG's catchment is responsible for the high potential (10.5 PJ) in the PE scenario.
- QLD has a high portion of food waste in Urban and C&I. Since food waste is already 100% recoverable, the additional biomethane production from Urban and C&I (from 2.8 to 3.5 PJ) is limited.

[1] The analysis considers catchment area within QLD, feedstock availability in contiguous states are not considered. [2] Urban Waste and C&I waste data are not further segregated in QLD.

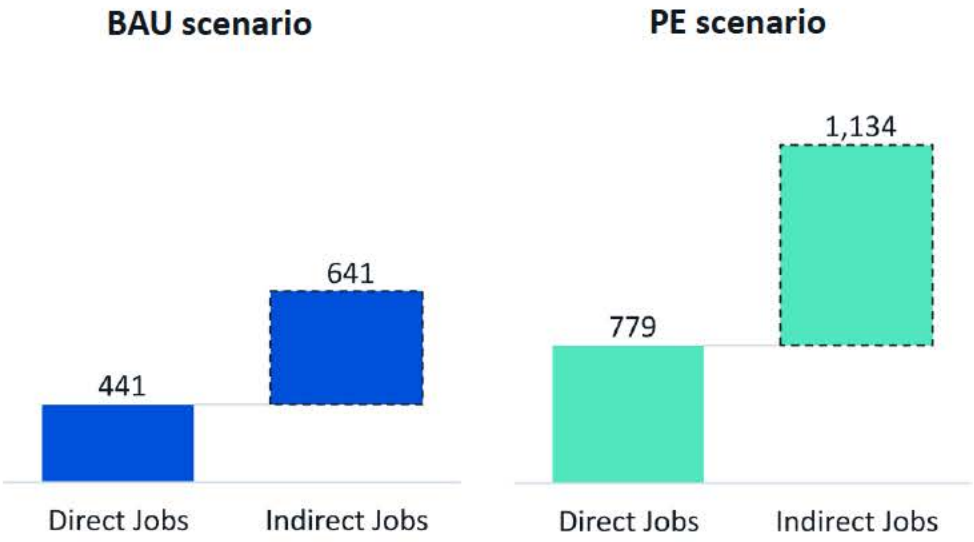
SEQ, other urban areas on the coast, along with agricultural production areas between them are part of AGIG's catchment



Biomethane production in AGIG's QLD catchment areas can create up to ~800 direct jobs and contributes towards a circular economy

The increase in jobs due to the biomethane industry represents 5.7%[1] of employment in QLD's energy, water and waste services sector.

Job creation from the biomethane industry based on job ratios (jobs/GJ biomethane produced) from various sources[2]



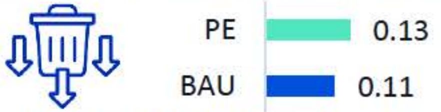
Realising the PE recoverable potential on AGIG's catchment can create up to ~1,900 jobs in QLD. The lower-bound PE figure (~800 jobs) considers only direct and ongoing jobs (e.g., full-time employment at bioenergy plants).

Enhancing biomethane production can reduce carbon emissions, divert waste from landfills, and contribute towards a circular economy

Annual carbon emission reduction from displacement of natural gas [million tonnes]

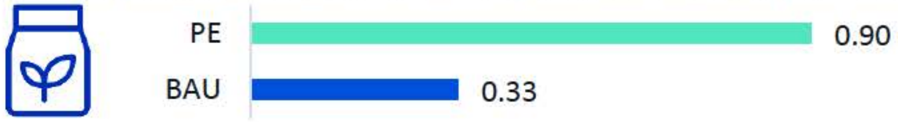
Up to ~0.9 Mt of carbon dioxide emissions can be reduced in AGIG's catchment areas from the displacement of fossil natural gas in pipelines with biomethane[5].

Annual urban and C&I waste diverted from landfill [million tonnes]



Up to ~0.1 Mt of annual waste reduction in AGIG's catchment can be achieved from the diversion of Urban and C&I waste for biomethane production.

Annual digestate produced from AD of agricultural feedstock [million tonnes]



Up to ~0.9 Mt of digestate can be produced in AGIG's catchment, capable of returning nutrients to the soil. This could also help displace inorganic fertilisers produced from fossil gas[4].

Notes: [1] The Queensland electricity, gas, water, and waste services account for 33,436 jobs as of November 2023 (ABS Labour Force) [2] Direct Jobs are based on job ratio derived from the Australian Bioenergy Roadmap, ARENA (2021). Indirect Job Creation: Job creation by scaling up renewable gas in Europe, by Navigant for Gas for Climate (2019); Beyond energy – monetising biomethane's whole-system benefits, by Guidehouse for EBA (2023). [3] Dry tonnes of urban waste diverted and recovered. [4] Digestates are not a 1:1 replacement for fertilisers due to the different nutrient density and release, further work required on the benefits of digestate vs. inorganic fertilisers. [5] Only based on Scope 1 emissions from the combustion of gaseous fuels from the the Australian national greenhouse accounts factors, DCCEEW (2023). This figure does not account for additional carbon emission reductions resulting from the diversion of feedstock into AD, which would otherwise emit greenhouse gases.

6

Summary Insights

Unlocking biomethane supply could bring significant co-benefits and help to decarbonise AGIG's gas networks cost-effectively

Conclusions

- **There is significant biomethane potential for AGIG's gas networks.** Within AGIG's network catchment area, there is 44.4 (up to 88.3 in the PE scenario)[1] PJ per annum of biomethane potential; and this translates to 0.53 (up to 1.77 in the PE scenario)[1] Mt of waste[2] that could be diverted towards anaerobic digestion to produce that.
- **Further co-benefits from this emerging industry are compelling.** Realising projects on AGIG's networks, capturing all of the potential feedstocks in this study could:
  - Unlock 2,083 (4,136)[1] direct jobs, and
  - Contribute 2.34 (4.36)[1] Mt per annum of digestate to the agriculture sector, which could help displace inorganic fertilisers produced from fossil gas
- **Biomethane is also a cost-effective renewable gas for decarbonising gas networks.** LCOE modelling suggests that cost of biomethane from landfill gas capture (\$10.2/GJ) and wastewater treatment plants (\$9.4/GJ) could be competitive with natural gas price (~\$10.7[3]).

Outcomes from realising feedstock potential for biomethane[4]

88.3 PJ per annum

10,100 new jobs

49% Waste Reduction

4.4 Mt per annum digestate

Notes: [1] BAU (PE) Potential. [2] Urban and C&I Waste. [3] Average gas market prices of VIC, Adelaide, and Brisbane as of 1 Jan 2024, AER. [4] Based on the PE scenario modelled

Paris
London
Singapore
Hong Kong
Melbourne
Sydney

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Appendix

Appendix

Methodology notes on ABBA data

Appendix – Methodology notes on ABBA data

The Australian Biomass for Bioenergy Assessment (ABBA) dataset was used for some feedstock streams identified and included in the biogas potential calculations. The report "Australian Biomass for Bioenergy Assessment 2015-2021" lists several caveats and challenges with the ABBA dataset, which are provided below.

- "Australian Bureau of Statistics (ABS) datasets that include cropping, horticulture and livestock are displayed at a relatively fine scale, but considerable manipulation and derived calculations were needed to achieve this"
- "Data is often held by industry and not publicly available at a scale suitable to create biomass residue data"
- "Industry bodies and government agencies, such as the Australian Bureau of Agricultural Resource Economics and Sciences (ABARES), publish tabular data in annual and quarterly reports, but the information is presented as state figures or figures for large, merged regions of states, and lacks detail at a smaller regional scale"
- "Industry organisations tend to hold most finer-scale raw data, and confidentiality issues can mean they are unwilling to share the data. As a result, much of the data uploaded to the AREMI platform was extrapolated from publicly available information"
- "Sourced data was often messy, difficult to interpret and not available in the same format or a singular table"
- "The ABS REACS and Agricultural Census survey data is the most reliable annual agricultural data publicly available, but issues were encountered when working with the datasets, as labelling and naming conventions changed from year to year, and some commodities were removed in some years."
- "The varied experience and skills in data collection and GIS influenced the methodologies used to collect data. This resulted in datasets with non-uniform file formats being uploaded to the AREMI platform."

Specifically for Victoria, there are challenges associated with the Victorian dataset as mentioned in the ABBA final report – as part of its data continuity plan, ABBA is "working with a consultant to correct the LGA level data anomalies, provide an update of prioritised biomass datasets and upgrade the Victorian biomass estimates model and manual."

Despite the limitations of the ABBA data, it still represents one of the most comprehensive collections of data on feedstock location and availability in Australia. The biogas potential derived from ABBA data is likely a conservative estimate due to gaps in the knowledge of the full scale of waste and residue potentials in Victoria.

Appendix

Methodology notes on co-benefits

Appendix – Methodology and further notes on co-benefits

Increase in jobs due to the biomethane industry
Jobs created due to the biomethane industry are projected from analysing job ratios against the recoverable biomethane potential within AGIG's catchment areas. This estimate spans the entire operational lifespan of a biomethane facility and takes into account the cumulative biomethane production.

Employment opportunities are categorised into direct and indirect jobs. Direct jobs are created in the planning, construction, as well as the operation and maintenance of the plants. Indirect jobs include jobs created along the value chain, including logistics (feedstock and digestate collection, storage, pre-processing and transport) and farming activities (growing feedstock and spreading digestate).

Annual urban and C&I waste diverted from landfill
Urban and C&I waste diverted from landfill is calculated from the total amount (in dry tonnes) of the feedstock captured in AGIG's catchment areas to be used for biomethane production. This is subject to the limitations of ABBA data.

Annual digestate produced from AD of agricultural feedstock
The production volume of digestate, a byproduct of the AD process of agricultural feedstock, is estimated based on the input weight of the feedstock and an assumed 19% dry matter content in the AD process. 75% of the feedstock weight is converted into solid digestate based on the assumed dry matter content.

It's important to note that digestate's nutrient composition and release profile differ from traditional inorganic fertilisers, therefore it will not be a 1:1 replacement. Further research is required to fully understand its agronomic benefits.

Annual carbon emission reduction from the displacement of natural gas
The reduction in carbon emission is calculated based on the Scope 1 emission of carbon dioxide that would have resulted from natural gas consumption. This is determined by the recoverable potential within AGIG's catchment areas and the CO_2 reduction per unit of energy, derived from DCEEEW's Australian National Greenhouse Accounts Factors (51.4 kg CO_2-e/GJ).

The figure focuses solely on the emission mitigated through the substitution of natural gas in pipelines. It excludes additional reduction from feedstock diversion to AD processes, which also contribute to carbon emissions reduction.

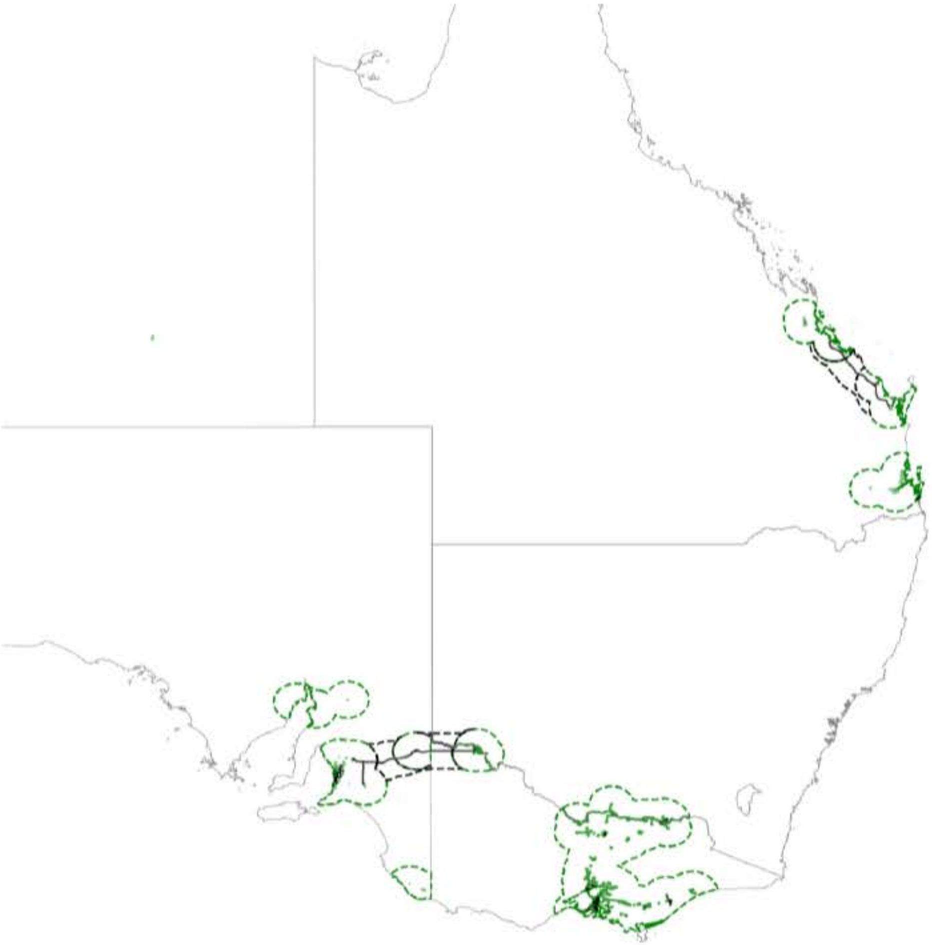
Appendix

AGIG Catchment Area and Heatmaps – Overview

Legend

AGIG distribution assets	AGIG transmission assets
AGIG distribution catchment area	AGIG transmission catchment area

AGIG Catchment Area



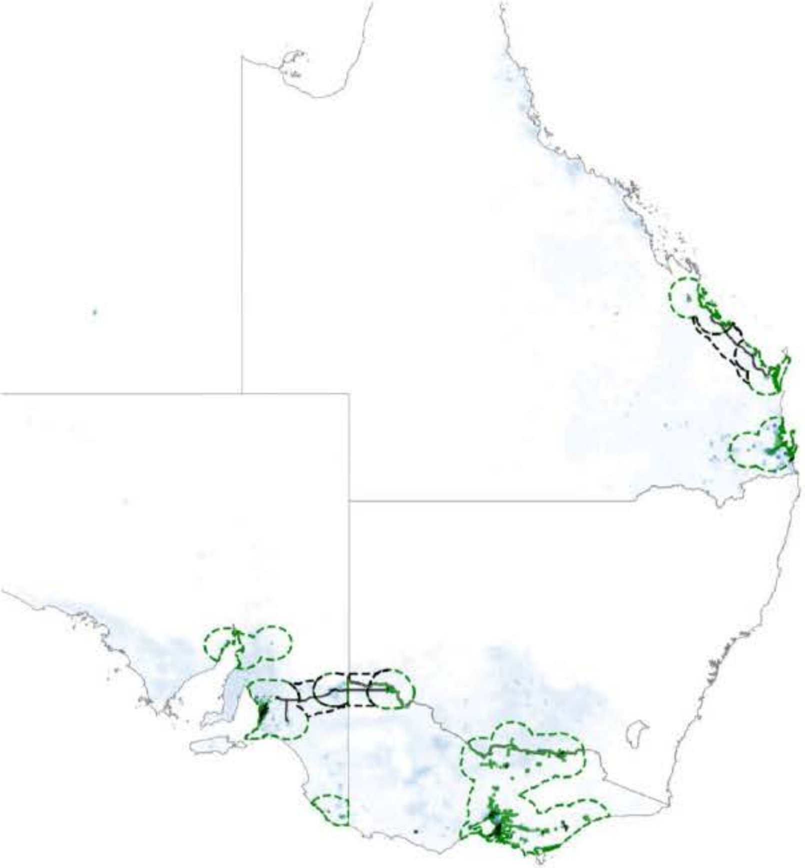
Note: AGIG catchment is mapped to only include AGIG's asset in VIC, QLD, and SA. Some areas in NSW fall within the 50km radius of AGIG's assets in VIC, these areas are considered for the purposes of this report.

Total Biomethane Potential Heatmap [TJ]

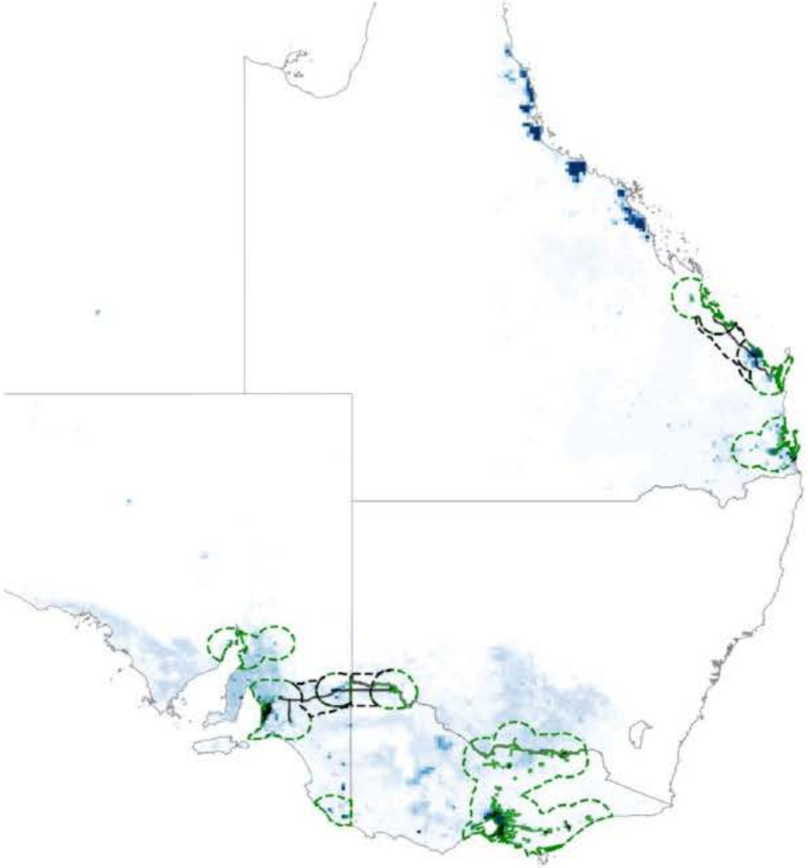
Legend

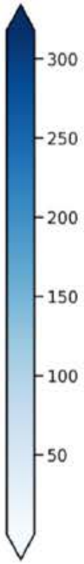
- AGIG distribution assets
- AGIG transmission assets
- AGIG distribution catchment area
- AGIG transmission catchment area

BAU Scenario



PE Scenario





Note: Heatmap values represent the total recoverable amount of biomethane potential available within a 10*10km grid. Heatmaps from VIC, QLD, SA and certain parts of NSW are created. Certain NSW regions were mapped due to its proximity to AGIG's catchment in VIC (SA4 Regions mapped: Murray and Riverina). NT is out of scope and therefore were not mapped.