

City of Sydney-Submission to 2022 RGC Pilot Consultation

Which renewable gases will be included in the pilot?

Consultation questions

1. Do you agree with the definitions outlined above? If not, what should they be?

The definitions for biogas, biomethane and renewable hydrogen are appropriate.

2. Do you agree with an initial focus on biomethane? If not, why not?

Yes. Biomethane is the most abundant source of renewable gas that is able to be directly injected into the gas grid without significant modifications to the gas network and appliances. A focus on biomethane is critical given this is the type of renewable gas that will be delivered by the Sydney Water Malabar plant into the grid.

3. Should the pilot be open to other renewable gases, if so, which and why?

Renewable hydrogen should be a later focus of this pilot, if at all, as there are other certificate of origin schemes being developed. Renewable hydrogen is better suited to higher order purposes like industrial feedstocks and heavy transport, rather than grid injection for consumers - refer to the 'hydrogen ladder' by Michael Leibreich.

Producer eligibility criteria

Consultation questions

4. Do you agree with the above eligibility criteria? If not, why?

Agree with proposed criteria a, b, c.

Item d: Replace 'displace network gas' with 'displace fossil fuel gas'. This would allow for renewable gas to displace high emissions gas via or outside of the grid (e.g. onsite reuse for industry). It would also remove a barrier for smaller projects to participate and receive renewable accreditation.

Item e: 'Ecological Sustainable Development principles' is a dated term. It is recommended to be more specific - projects must not pollute the land, atmosphere or water and the costs of externalities or remediation cannot be passed onto future generations, for example.

Item f: This is a renewable gas standard, the use of offsets as proposed is confusing and should likely be removed. This standard is to reduce the inherent emissions of

gas, based on the definitions for zero emissions renewable gas outlined in the previous section. The emissions associated with renewable gas including from production, storage, transport, energy use and upstream fugitive emissions do need to be quantified as outlined in question 12. However, the priority should be to require that these processes use accredited renewable gas and/or GreenPower to reduce emissions at source. Only fugitive emissions (i.e. direct release of biomethane with much higher GWP than CO₂) should be considered eligible for offsetting.

Item g: Requiring 'best practice with compliance and planning approvals etc' is not recommended. These are mandatory legal, regulatory, and technical standards or requirements, and must be complied with by all participants. It should be rephrased for example 'must comply with compliance and planning approvals...' or removed.

5. Are there other eligibility criteria that should be included, and what would they achieve?

A requirement to displace fossil fuel gas, as outlined in question 4 above.

In addition to the comments above, the following text from page 10 of the consultation paper should be integrated as eligibility criteria: *"criteria include a renewable energy input, a requirement that the project must displace natural gas, must have a net environmental benefit, positive consumer perception and meet required local, state, and federal planning and regulatory approvals."*

6. Which technologies and production processes should be included in the pilot?

Initial focus should be on biomethane (grid and off-grid).

7. What factors do you consider essential when defining best practice planning compliance and environmental management?

'Best practice' should be replaced with a mandatory requirement to comply with relevant legislation and standards as outlined in question 4 above.

Displacing network gas use as a requirement for the pilot

Consultation questions

8. Do you agree that only projects that displace network gas use should be eligible to participate in the pilot? If not, why not?

The majority of fossil fuel gas displacement is likely to occur for customers that are grid connected. However, there is no reason why suppliers and customers that displace bottled fossil fuel gas should be excluded from this certification. For example, there may be a large market opportunity to provide renewable gas to regional areas which are largely supplied by bottled gas, as well as 'green gas' bottles for barbecues, outdoor heaters etc in urban areas. Further, some projects may commence as off-grid until reaching sufficient economies of scale for grid injection. New companies providing these products may not be incumbents with an existing grid connection. Opportunities like these should not be excluded from

renewable gas accreditation. An assessment of total gas volumes potential delivered outside of the grid should be assessed for materiality before deciding to exclude these sources.

9. Should behind the meter production and use projects without a network connection be able to participate in the pilot, and why?

Yes, as outlined in questions 4 & 8, renewable gas that meets the criteria and is used in any application should be recognised. It would enable a greater participation in the scheme by reducing barriers to entry.

10. If behind the meter projects without network connection were eligible, how could metering and other verification activities be done?

Where the renewable gas is provided by a third party there will be billable volumes. Where an applicant produces and uses the renewable gas directly, the national greenhouse accounts and other sources can be used to convert tonnages of waste into energy potential in a scenario where the renewable gas is unmetered. Specialist consultancies can be engaged by the proponent, and or government to substantiate claims. This should be done on a risk basis, based on the materiality of claims. For example, Climate Active have removed the requirement for participants to undergo annual independent verification, replacing it with paid verification of randomly selected 5-10% of participants each year.

11. Are there any barriers to injecting renewable gas into the network in your jurisdiction that GreenPower should be aware of for the pilot?

No, other than the physical and technical limitations of injecting renewable hydrogen into the gas grid. These do not apply to biomethane, which should be the initial focus of this pilot.

Network boundary

Consultation questions

12. Do you agree with the proposed national network boundary approach and if not, why?

Careful consideration needs to be made to avoid double counting of emissions savings.

For electricity, a market-based approach is emerging as best practice, whereby the purchaser claims the reduced emissions by purchasing renewable energy. Those who do not invest in renewable energy do not receive the emissions benefit beyond the mandatory renewable energy target. Yet, double counting still exists. For example, electricity users in the ACT are now 100% renewable due to actions of the ACT Government to purchase renewable energy certificates. However, much of the renewable energy comes from projects in South Australia, and many entities in South Australia also claim the same emissions savings by using a location-based method based on all energy sources that feed into the state grid.

This double counting issue needs to be avoided for the renewable gas pilot at the outset. If an entity invests to claim the emissions result, it cannot be attributed to another entity.

The National Greenhouse Factors have the same scope 1 direct emissions nationally for combustion of natural gas. However, the scope 3 emissions from the extraction, processing, and transport (including fugitive losses from the grid) differ substantially between states and territories. The renewable gas certification pilot should be based on the 'full fuel cycle' (i.e. scope 1 plus scope 3) as the complete emissions to the atmosphere which may be avoided. The pilot should use state-based emissions to avoid material under or over accounting of emissions that would occur under a national network boundary. A national network boundary would also cause confusion and undermine trust in the scheme given that a physical national gas network does not exist.

Eligible feedstocks for biomethane

Consultation questions

13. Do you agree with the pilot aligning eligible feedstocks with the ERF methodology?

Yes. The exclusion of forest biomass is supported, especially after the vast and devastating impacts of the black summer fires.

14. Should any other feedstocks be included? Which ones, and why?

Gas from any origin that is able to be converted into biomethane should be eligible for this pilot.

15. Do you see any risks of unintended consequences from incentivising anaerobic digestion of waste-derived feedstocks and landfill gas capture? If so, which risks and are there any risk mitigation options?

A perverse outcome may be to encourage organic waste to be sent to landfill. This needs to be avoided as there are far more efficient and environmentally beneficial processes for creating renewable gas from organic waste. Landfill gas from existing projects may be eligible, but new projects should be anaerobic digestion.

16. Should the use of energy crops be permitted? Why or why not?

The exclusion of energy crops during this pilot phase is supported, given the marginal energy balance and ecological impacts of monocultures etc.

17. If energy crops were eligible, what conditions and considerations would ensure these projects still adhere to the principles of Ecological Sustainable Development?

No comment.

18. Should methane produced using hydrogen methanation of the carbon dioxide in biogas be included?

It may be included, however, in addition to the emissions result, the pilot should consider the overall merit or order of renewable gas priorities, akin to the hydrogen ladder referred to in question 3. Processes which utilise a higher percentage of primary energy should be prioritised.

Project scope and life cycle analysis

Consultation questions

19. Do you agree that, for project assessment, the pilot should use the cradle to gate approach? Why or why not?

The pilot should simply use the NGA Factors for natural gas, by state, for scopes 1 and 3 (i.e. full fuel cycle) as the assumed avoided emissions of the renewable gas, on the proviso that renewable gas operations and transport are powered by renewable gas and or electricity, and fugitive emissions (if material) are offset.

The emissions savings must be attributed to the purchaser and cannot be double counted, for example by government reducing the emissions intensity of the grid which is then claimed by all users connected to the grid. This is in line with the best practice market-based accounting framework.

20. Do you agree with the definition of the gate being the gas network injection point? If not, why not?

Yes.

21. Are there any other LCA standards or requirements that should be considered?

No comment.

22. Should there be different requirements for biomethane and hydrogen projects? If so, what should they be?

No comment, however, the pilot should focus on biomethane given there are other government processes for assessing certification of origin for green hydrogen underway.

Fugitive emissions

Consultation questions

23. Do you agree with this approach? If not, how should fugitive emissions be treated?

This pilot should focus on biomethane. For grid connected projects, the fugitive emissions should incorporate gas network losses reported by the network utilities. This should be as localised as possible, for example, where a renewable gas supply is closer to a customer it is unlikely to be losing as much as the network as a whole. Renewable hydrogen will be subject to much higher losses, however of much lower emissions impact than methane. The emissions losses of hydrogen should be assessed by the other government programs underway.

Offsetting emissions

Consultation questions

24. Do you agree with the proposed approach? If not, why?

The emissions associated with renewable gas including from production, storage, transport, energy use and upstream fugitive emissions need to be quantified in the first instance and offset if deemed material. However, accreditation should first require operations to use renewable gas and or renewable electricity, and thereby reduce these emissions at source. If offsets are used, transparent communications to avoid confusions between offsets and renewable gas products is supported.

25. Should other carbon offsets be permitted to offset upstream emissions?

If offsets are used, the use of ACCUs is supported. Additional criteria should be added such as requiring nature-based offsets that support sustainable land management by Indigenous communities.

Baseline emissions

Consultation questions

26. Do you agree with the proposed approach? If not, why?

Projects which currently capture landfill gas and generate electricity should not be eligible to inject biomethane into the grid as the emissions savings would be negligible or may actually increase. Projects which flare landfill gas should be eligible for RGCs as that can displace fossil fuel gas for energy. However,

consideration should be given to the cumulative revenue to landfill practices from ACCUs, LGGs, and potentially renewable gas credits, when the practice of avoided emissions might be more efficiently regulated.

Interaction with other schemes

Consultation questions

27. Are there any other new schemes not mentioned here that GreenPower should be aware of?

To avoid duplication, this pilot should focus on biomethane (grid and non-grid) and grid injected renewable hydrogen (as a secondary priority).

28. What linkages between these schemes and the pilot should be considered?

The assertion on page 15 of the discussion paper is not supported: *"including the recognition of renewable hydrogen made from natural gas combined with RGCs."*

Renewable hydrogen simply cannot be made from fossil fuel gas - refer to the definitions for green hydrogen. Fossil gas causes climate change. Offsetting emissions from increased use of non-renewable fossil gas is not economically feasible or consistent with the aims of this renewable gas certification pilot.

Recognition of RGCs by existing schemes

Consultation questions

29. What recognition is needed for the pilot to provide value for customers?

30. What design elements of the pilot are most crucial for recognition by other programs and schemes?

The major scheme that this pilot must integrate with is the Australian Government Climate Active Program. It is critical that this renewable gas certification pilot be recognised as zero emissions for organisations which purchase renewable gas, to incentivise uptake at this nascent stage. The City of Sydney has been certified carbon neutral since 2011 and is unlikely to invest in renewable gas unless it is recognised by Climate Active as zero or low emissions. If the renewable gas certification is not recognised, it will encourage organisations towards electrification with renewable electricity and away from gas. As renewable gas provides a significant decarbonisation opportunity in the short term, it needs to be officially recognised from the outset.

NGERS uses the antiquated location-based method which effectively double counts emissions savings resulting in underreported emissions of major polluting entities which are not investing directly in renewable energy. In addition to this renewable gas certification pilot, the GreenPower program administrators need to advocate to the Federal Government for consistent market-based emissions accounting across all programs and reporting frameworks, especially NGERs, for both renewable electricity and renewable gas. Until such time, there will be double counting of emissions savings from renewable energy.

Transaction steps for pilot certificates

Consultation questions

31. Do you agree with the proposed approaches for non-ERF and ERF projects? If not, which step should be changed and why?

For non-ERF participants:

- Clause f) should be adjusted to include 'producer or trader'.
- Clause g) Climate Active needs to confirm that the renewable gas certification pilot will be recognised for carbon neutral reporting as a matter of priority.

32. Do you agree that any displacement ACCUs should be surrendered before an RGC is created? If not, why not?

For ERF participants, the proposed approach or similar is supported to avoid double counting of emissions savings.

33. Do you see any risks with the alternative approach of the displacement ACCU being surrendered at the same time as the RGC is surrendered?

It is complicated but would result in perceived double counting of emissions savings.

Chain of custody

Consultation questions

34. Do you agree with the decoupled approach being applied for the pilot?

Both approaches have benefits and limitations. The decoupled approach is supported for consistency with the GreenPower scheme, however, on the proviso that both schemes apply market-based emissions accounting. In this way, the

renewable energy 'rights' are attributed to the purchaser, rather than the market as a whole. Any mandatory or government led renewable aspects are attributed to all energy users. For electricity, the renewable energy target should be taken into account meaning that GreenPower consumers require fewer LGCs to be 100% renewable (i.e. the NSW grid was 24% renewable in the 12 months to March 2022 meaning GreenPower customers should only be required to purchase 76% of their consumption equivalent as LGCs rather than the current requirement for 100% - a significant cost saving that could lead to greater demand). The GreenPower review underway should move to market-based accounting. The same approach should be applied to the renewable gas certification, noting that the gas grid today is 100% fossil gas.

35. Please specify why you think one or the other is more suitable, and if any other options should be considered.

The coupled approach is likely to be unfeasible in most situations.

Registry functionality

Consultation question

36. Do you agree with the proposed approach of using an existing registry? If not, why not?

Yes, and the intent to operate similarly to the LGC registry by the CER is supported for consistency and future integration potential.

37. Is it important for customers to be able to access the registry and manage their own surrenders?

Yes. A limitation of the current ANREU (Australian National Registry of Emissions Units) is that it doesn't have a public-facing registry. This makes it less transparent and onerous for organisations to provide evidence of emissions reductions. The ANREU should be improved and/or the pilot should use a different system which is user friendly with transactions that are publicly accessible.

38. Is there a particular registry functionality you think should be included in the pilot, and why?

As above, the pilot should use a system which is user friendly and publicly accessible.

Gas attributes captured in the registry certificates

Consultation questions

39. Do you agree with the proposed attributes?

Yes, however refer to question 4, item f. Use of renewable electricity and gas in processes should be prioritised before carbon offsets. This is to grow the domestic renewable energy (gas and electricity) market and reduce emissions at source as a more efficient way to reduce net emissions.

40. Are there any other attributes that should be included?

No comment.

Functional unit of measurement

Consultation questions

41. Do you agree with GJ as the functional unit? If not, why?

Yes, it is the standard measure for reporting gas consumption.

42. How important is it that the registry is based on GJ in addition to using this unit on the certificate?

The registry should also be based on avoided emissions in tonnes CO₂ equivalent.

43. Should a certificate be issued for each 1 GJ of renewable gas produced, or should certificates be issued incrementally for any volume chosen by the producer?

It would be logical for 1 RGC to be equal to a defined unit like 1 GJ of gas, similar to how 1 LGC is equivalent to 1MWh of electricity.

Certificate period of validity

Consultation questions

44. Do you agree with the proposed validity period? If not, why?

Agree with the pilot to be run without a validity period, with an intention to enact a validity period after the pilot stage. Alignment with the LGC validity period in future would help to streamline reporting/surrendering processes for reporting entities.

45. Are there other schemes or programs that the pilot should align with regarding the certificate validity period?

No comment.

Governance

Consultation question

46. Which organisations should be represented on the project steering committee?

The list of proposed participants is appropriate. The various stakeholders involved with the Malabar Biomethane Project should also be involved including Sydney Water and proposed offtake customers such as the City of Sydney.

Bottled gas providers, in regional and urban areas, should also be invited in addition to the gas network and pipeline operators.

Auditing

Consultation question

47. Do you agree with the proposed approach for auditing? If not, why not?

Yes.

Participation fees and certificate price

Consultation questions

48. What price would you expect for a renewable gas certificate?

The price should reflect supply and demand. For example, the City of Sydney entered into a 10-year renewable electricity deal saving approximately half a million dollars a year on our previous contract. Given that renewable gas sources often have multiple income streams and prices are less volatile than fossil gas (due to export markets), it is anticipated that the price of renewable gas will be competitive with fossil gas in the short and longer term.

49. Do you agree with the proposed approach not to set price caps or minimum prices? If not, why?

No comment.