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Page 3

Q1

Privacy Information

Respondent skipped this question

Page 3

Q1

Privacy Information

Respondent skipped this ques

Page 4: Submitter information

Q2

Name

Q3

Organisation and role (if submitting on behalf of a company or organisation)

Toitu Envirocare, Sector Coordinator - Government and Energy

Q4

Email Address

Q5

Are you happy for MBIE to contact you, if we have questions about your submission?

Yes

Q6

Please clearly indicate if you are making this submission as an individual, or on behalf of a company or organisation.

Company/Organisation

Page 4: Submitter informati

Q2

Name

Q3

Organisation and role (if s

Environmental Defence Societ

Q4

Email Address

s

Q5

Are you happy for MBIE to

Yes

Q6

Please clearly indicate if y company or organisation.

Company/Organisation

Page 5: Transitioning our gas sector

Q7

How can New Zealand transition to a smaller gas market over time?

Aotearoa New Zealand has made significant progress on decarbonisation and specifically electrification. We think continuing on this path, using tools such as the GIDI fund and complementary government policy are effective tools. A stable and increasing NZU price also provides an incentive for some emitters to move away from fossil gas.

Page 5: Transitioning our ga

Q7

How can New Zealand trar

Respondent skipped this ques

Q8

Respondent skipped this question

Q9

What factors do you see driving decisions to invest or wind down fossil gas production?

These decisions are largely driven by economics and policy. If the cost of fossil gas use plus the combined NZU cost increase to the point where the payout for a clean energy investment (e.g. switch to electric) meets investment criteria of the emitter then switching will occur.

Q10

Does the Government have a role in enabling continued investment in the gas sector to meet energy security needs?

Respondent skipped this question

Q11

Could you explain why you gave that answer?

Respondent skipped this question

Q12

Does the Government have a role in supporting vulnerable residential consumers as network fossil gas use declines?

Yes

Q13

Could you explain why you gave that answer?

Infrastructure may need to be developed so that energy security does not decline in any areas where previous resources (e.g., LPG) are phased out.

Q14

What role do you see for gas in the electricity generation market going forward?

Respondent skipped this question

Q15

What would need to be in place to allow gas to play this role in the electricity market?

Respondent skipped this question

Q16

Do you think fossil gas can play a role in providing security of supply and/or price stability in the electricity market? Why / Why not?

Respondent skipped this question

Q17

Do you see alternative technology options offering credible options to replace fossil gas in electricity generation over time? Why / Why not?

Yes, we do see alternative technology options offering credible options to replace gas in electricity generation over time. Gas currently plays a role in power generation in Aotearoa New Zealand especially in dry years to provide supplemental power supply. Government initiatives such as the Government Investment in Decarbonising Industry programme (GIDI) and the NZ Battery Project can provide a way to solve the dry year problem. Over time it may be possible to reduce our reliance on gas as the battery project and other new technologies mature. Significant current global investment in energy storage technology solutions may also find their way to Aotearoa New Zealand.

Q18

If you believe additional investment in fossil gas infrastructure is needed, how do you think this should be funded?

Respondent skipped this question

Page 6: Key Issues and Opportunities

Q9

What factors do you see d

Respondent skipped this ques

Q10

Does the Government hav energy security needs?

Respondent skipped this ques

Q11

Could you explain why you

Respondent skipped this ques

Q12

Does the Government hav fossil gas use declines?

Respondent skipped this ques

Q13

Could you explain why you

Respondent skipped this ques

Q14

What role do you see for g

Respondent skipped this ques

Q15

What would need to be in

Respondent skipped this ques

Q16

Do you think fossil gas car electricity market? Why / V

Respondent skipped this ques

Q17

Do you see alternative tec electricity generation over

Respondent skipped this ques

Q18

If you believe additional in should be funded?

Respondent skipped this ques

Page 6: Key Issues and Opp

Q19

How important do you thir

Respondent skipped this ques

Q20

(no label) Very Important

Q20

Why did you give this rating?

Biogas is a very viable option to substitute for fossil gas with much lower associated emissions and carbon intensity than fossil gas. It can be produced from existing organic waste which can recover associated waste emissions and avoid methane emissions. It can be easily processed to meet pipeline specifications for commercial and residential use, but there is a cost to this upgrading. There is significant potential in Aotearoa New Zealand to marry biogas with reducing agriculture emissions, which is a priority for the emissions reduction plan. There are a large number of projects existing in the EU and North America in particular with many years of experience that feed biomethane directly into the gas transmission pipelines. This has in turn provided a stimulus for using biomethane or Renewable natural gas as a fuel for example in heavy haul trucking with emissions reduced significantly in comparison to using diesel.

Q21

Do you see biogas being used as a substitute for fossil gas?

Yes

Q22

If YES, how?

Biogas can be upgraded to biomethane – processed to meet pipeline specifications, allowing it to be put into gas pipelines. As it can be blended into pipelines, we can transition to a more renewable gas market as more biogas development is encouraged. This is supported by small quantities having a small relative cost making blending more feasible for the short term. The higher cost of biogas wouldn't directly result in increased retail gas prices making it good for residential use. Biogas produced from purpose grown crops has its challenges: creation of new fugitive emissions, land use demand (competitive pressure), and market projections (size reductions) which do not arise with the use of existing waste for biogas production. However, there is significant agricultural waste (manure, waste crops) which combined with institutional, commercial and industrial (ICI) organic waste and municipal source separated organics (SSO) that could make significant feedstock. Generally, we need to have a viable mechanism for developers to make biogas projects economical. This includes producing biogas at enough scale and location close to waste sources and near the pipeline network. The cost to produce biomethane is generally greater than the current cost of fossil gas so the economic incentive to produce biomethane is currently missing unless customers are directly willing to pay the cost difference. To close the gap we can increase the penalty to burn fossil gas through the carbon price or we can put a value on biogas and look to legislation and regulations to help projects advance. For example, the Greenhouse Gas Reduction Regulation in British Columbia specifies what sources of RNG, natural gas utilities in British Columbia can use and also specifies price limits that utilities can pay to acquire these fuels. In British Columbia, California and the EU the low carbon fuel standard and renewable fuel certificates provide a mechanism to put a value on renewable fuels; we need a similar such mechanism in Aotearoa New Zealand.

Page 7

Q23

How important do you think hydrogen is for reducing emissions from fossil gas use?

(no label) Very Important

Q24

Why did you give this rating?

Hydrogen can be a zero emissions fuel if produced from renewable electricity which is generally the case in Aotearoa New Zealand.

Q25

Do you see hydrogen being used as a substitute for fossil gas?

Yes

Q26

If YES, how?

Hydrogen blending into fossil gas pipelines and to fuel consumers is viable and currently occurring in some places globally. This will reduce the carbon intensity of the fuel combusted. However, in the same way as we have discussed for biomethane there needs to be an economic incentive for project developers to generate hydrogen for fossil gas substitution. This could come in the form an enhanced value for the gas and/or help for the capital cost of the project to develop hydrogen.

Do you see biogas being u

Respondent skipped this ques

Q22

If YES, how?

Respondent skipped this ques

Page 7

Q23

How important do you thir

Respondent skipped this ques

Q24

Why did you give this ratin

Respondent skipped this ques

Q25

Do you see hydrogen being

Respondent skipped this ques

Q26

If YES, how?

Respondent skipped this ques

Q27

What else can be done to gases?

Respondent skipped this ques

Page 8

Q28

How important is a renewa

Respondent skipped this ques

Q29

Why did you give this ratin

Respondent skipped this ques

Q30

What role do you see for tl

Respondent skipped this ques

Page 9

Q31

How important do you thir fossil gas use?

Respondent skipped this question

Page 8

Q28

How important is a renewable gas trading scheme to supporting the uptake of renewable gases?

(no label) Very Important

Q29

Why did you give this rating?

Economic incentives for renewable gas are required to support developing the resources and supply. Establishing a trading mechanism and using markets is a commonly used way to support the production and use of these fuels. Book and claim models are widely used globally and due diligence is required to ensure the integrity of such mechanisms.

Q30

What role do you see for the Government in supporting such a scheme?

Supporting or endorsing a well-designed renewable gas trading scheme would push for further development for renewable gas in the market. Renewable gas trading schemes such as the low carbon fuel standard and certificates (e.g., RECs and RINs in the US) have been in place for many years. Renewable gas certificates are emerging in New Zealand and we have seen the announcement of renewable gas certificates to become available in 2024. The government could look to learn for other countries such as the UK green gas levy https://www.gov.uk/government/publications/green-gas-levy-ggl-rates-and-exemptions. The green gas certification scheme in the UK is an approved Certification Scheme for compliance with the UK government's Green Gas Levy.

Page 9

Q31

How important do you think carbon capture, utilisation and storage is for reducing emissions from fossil gas use?

Respondent skipped this question

Q32

Why did you give this rating?

Respondent skipped this question

Q33

What do you think are the most significant barriers to the use of carbon capture, utilisation and storage in New Zealand?

CCUS is expensive to implement and there is a lack of both funding and regulation.

Q34

Do you see any risks in the use of carbon capture, utilisation and storage in New Zealand?

There is currently no regulatory program for carbon dioxide storage especially regarding long term liability and risk.

Q35

In what ways do you think carbon capture, utilisation and storage can be used to reduce emissions from the use of fossil gas?

Respondent skipped this question

Q36

If you have any other views on the use of carbon capture, utilisation and storage , please comment here:

Other utilization methods such as horticulture or innovations such as removals using adsorbents or rock that can chemically take up the carbon dioxide (e.g Captivate Technology, Aspiring materials) have potential.

Respondent skipped this ques

Q33

What do you think are the storage in New Zealand?

Respondent skipped this ques

Q34

Do you see any risks in the

Respondent skipped this ques

Q35

In what ways do you think emissions from the use of

Respondent skipped this ques

Q36

If you have any other views comment here:

Respondent skipped this ques

Page 10: Options to increase

Q37

What role do you see for g

Respondent skipped this ques

Q38

How important do you thir supply?

Respondent skipped this ques

Q39

Why did you give it this rat

Respondent skipped this ques

Q40

What should the role for g

Respondent skipped this ques

Page 11

Q41

Our position is that LNG ir disagree with this position

Respondent skipped this ques

Q42

Please explain why you ch

Respondent skipped this ques

What role do you see for gas storage as we transition to a low emissions economy?

Respondent skipped this question

Q38

How important do you think increasing gas storage capacity is for supporting the security of gas supply?

Respondent skipped this question

Q39

Why did you give it this rating?

Respondent skipped this question

Q40

What should the role for government be in the gas storage market?

Respondent skipped this question

Page 11

Q41

Our position is that LNG importation is not a viable option for New Zealand. Do you agree or disagree with this position?

Agree

Q42

Please explain why you chose your answer?

New Zealand unique in its gas market as there are no imports apart from small amounts of LPG.

Q43

What risks do you anticipate if the New Zealand gas market was tethered to the international price of gas?

With LNG importation there is a risk of price fluctuations due to external international factors.

Page 12

Q44

Is there any other information you would like to provide to inform the development of the Gas Transition Plan?

Respondent skipped this question

Page 12

Q44

Is there any other informa
Transition Plan?

Respondent skipped this ques