



# Firstgas

## Broadlands Biomethane Project & Changes to the Firstgas CCMP

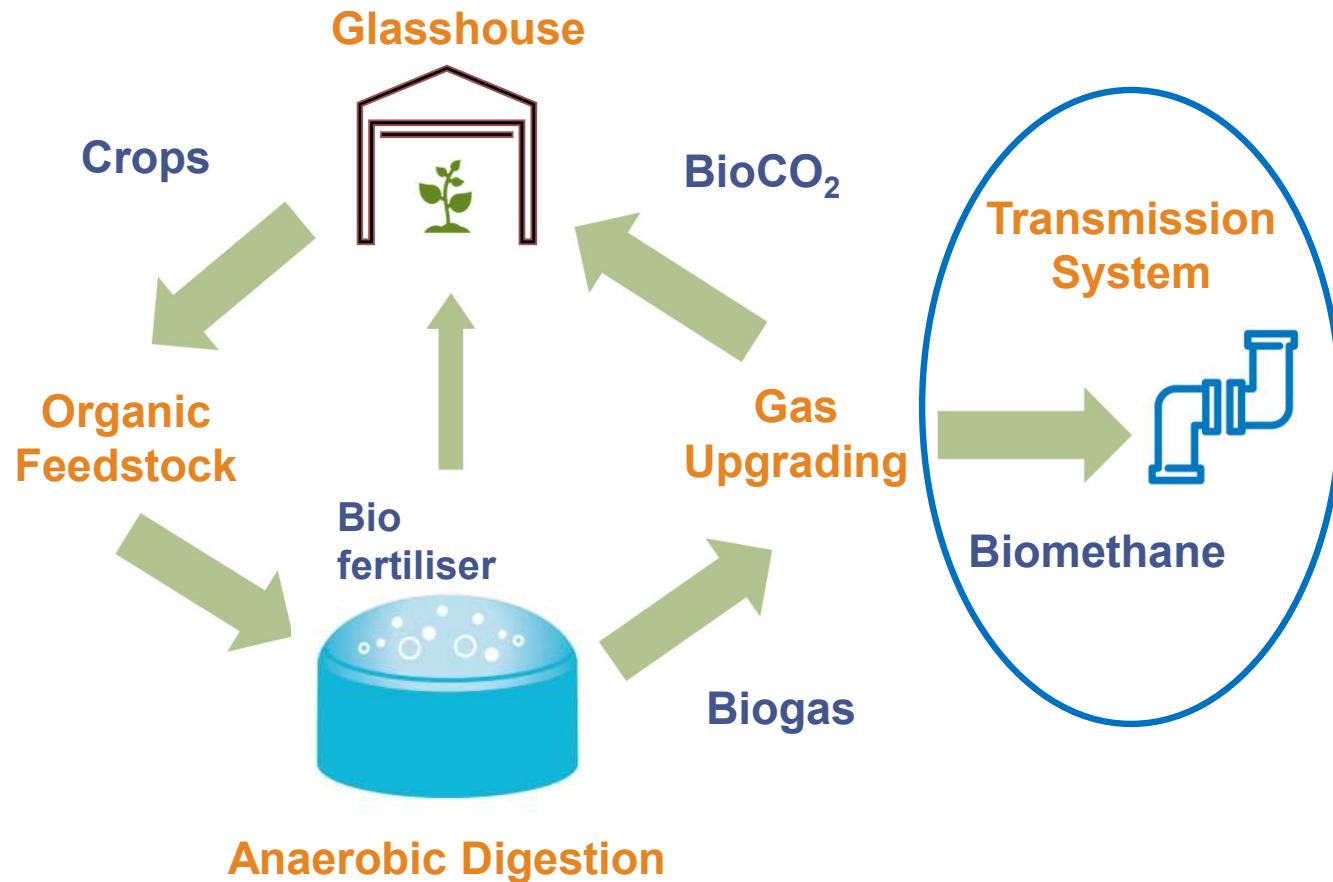


- Welcome and introductions
- Agenda
  - Broadlands Biomethane Project
  - Changes to the operation of the Transmission System
  - Required changes to the Critical Contingency Management Plan (CCMP) to support the injection of Biomethane
- Webinar format has no active guest microphones but a written Q&A function that participants are invited to use at any stage.
- The CCMP amendment process requests any written feedback from customers to be provided to [firstgas.transmission@firstgas.co.nz](mailto:firstgas.transmission@firstgas.co.nz) by **COB Thursday 08 February**



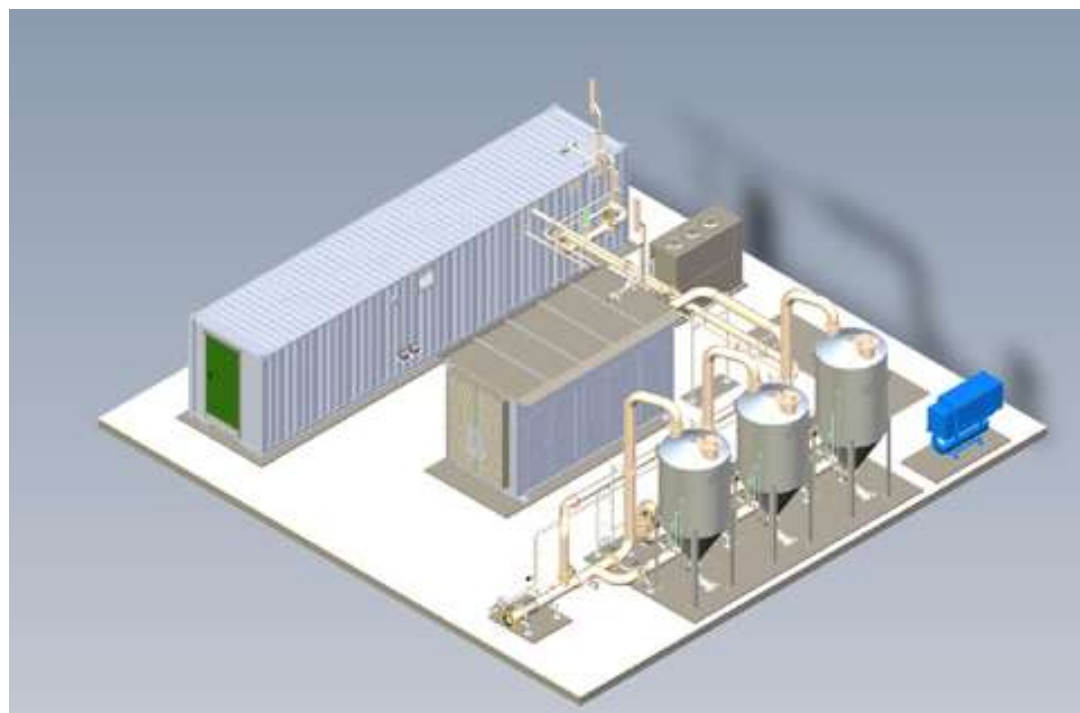
# Brief introduction to Biogas and Biomethane

- Biogas is the output from anaerobic digestion and Biomethane is Biogas that has been upgraded to pipeline specification. This presentation is focused on Biomethane that is to be injected into the transmission system





- A state-of-the-art Biomethane to Pipeline facility is being built at Ecogas' Organics Processing Facility near Firstgas' Broadlands Delivery Point
- Biomethane to Pipeline Facility will remove any contaminants and ensure that Biomethane injected meets the Gas Specification (NZS: 5442)
- Initial estimated production will supply enough Biomethane equivalent to supplying 7200 homes and avoiding about 11,000 tonnes of CO<sub>2</sub> / year
- First Biomethane injection into transmission system scheduled for Q2 2024



# Aerial view of construction

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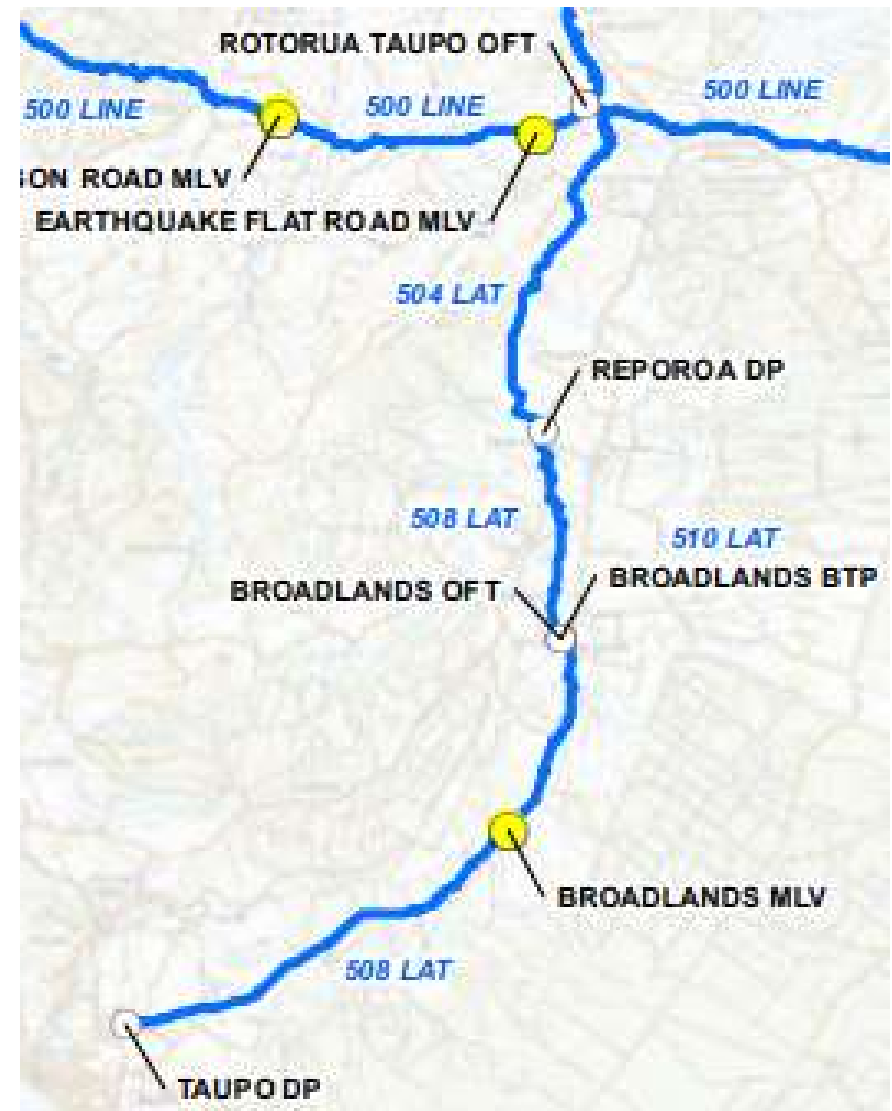


## Agenda:

- Broadlands Biomethane Project
- **Changes to the operation of the Transmission System**
- Required changes to the Critical Contingency Management Plan (CCMP) to support the injection of Biomethane

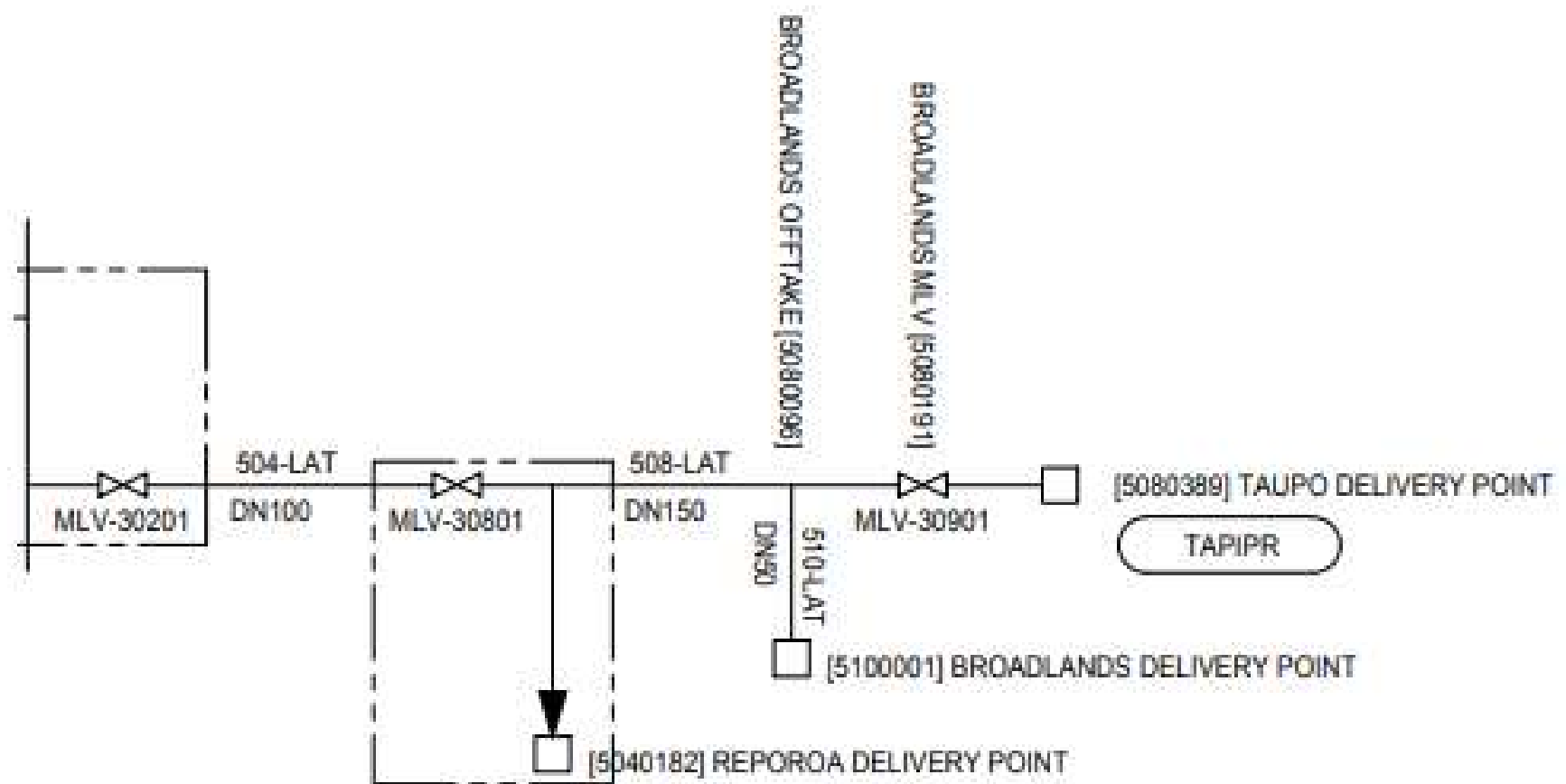
# Taupo laterals

- FGL own and operate the transmission pipelines delivering gas from the Taupo Offtake through to the Taupo Delivery Point (DP)
- This includes the 504 Lateral, Reporoa DP, 508 Lateral, 510 Lateral, Broadlands DP and Taupo DP
- Pressure in this section is currently between 55-60 barg due to the prevailing pressure of the 500 pipeline.
- Key existing consumers are the Reporoa Dairy Factory, Broadlands Hothouses, and Taupo Distribution System.

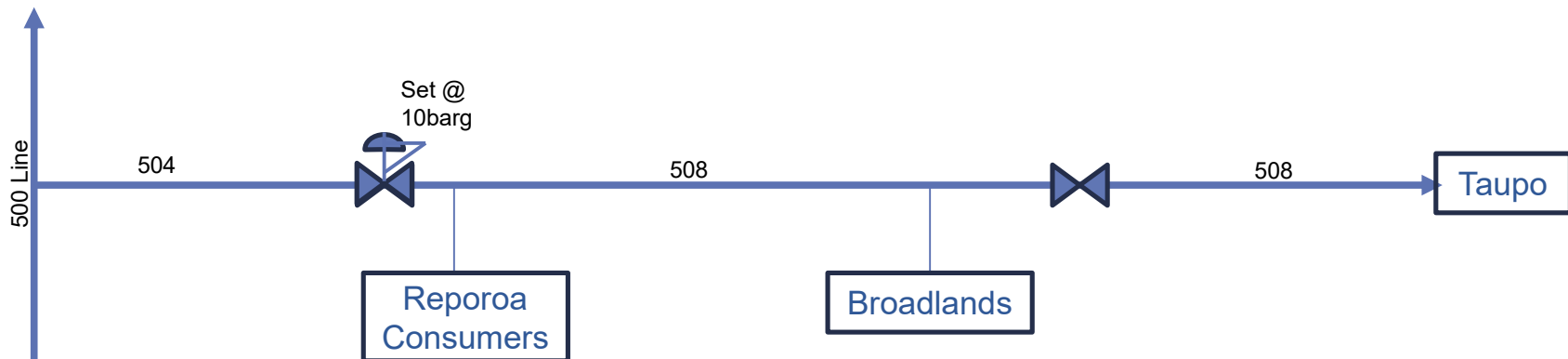




- Schematic showing existing 504/508 lateral branching off from BOP Pipeline (500 line) and ending with the Taupo Delivery Point



- Schematic shows the proposed future operating mode
- Pressure will be supplied by Broadlands Biomethane above 10 barg
- Should its supply be insufficient then the regulator upstream at Reporoa will flow gas from the transmission system into the 508 Lateral. This is designed for 100% of the downstream flow.
- Biogas will not be present upstream of Reporoa.

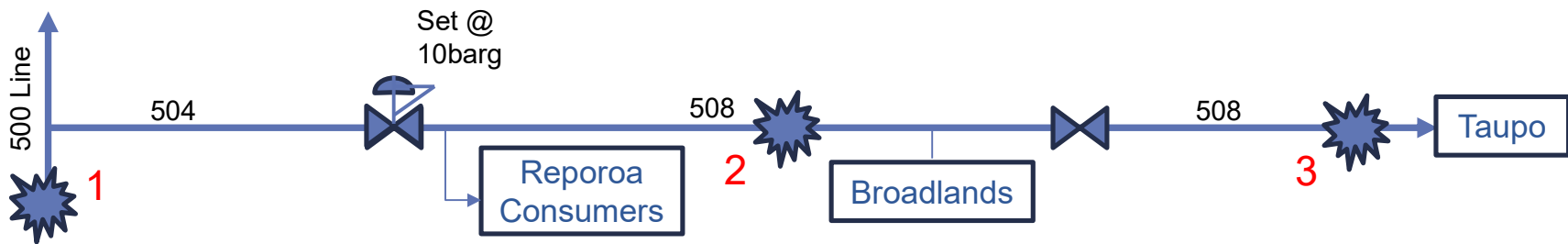


- Pressure in the lateral needs to be reduced to enable line inspections to occur, which required modifications at the Delivery points along the 508 lateral. This is required regardless of the Biomethane injection.
- The reduced pressure allows for simplification and optimization of the downstream delivery points, with the removal of infrastructure associated with reducing pressure from much higher pressures to delivery pressures, reducing long term CAPEX and annual OPEX.
- Limits the extent of changes to the 508 lateral, such that other changes further upstream are not required.



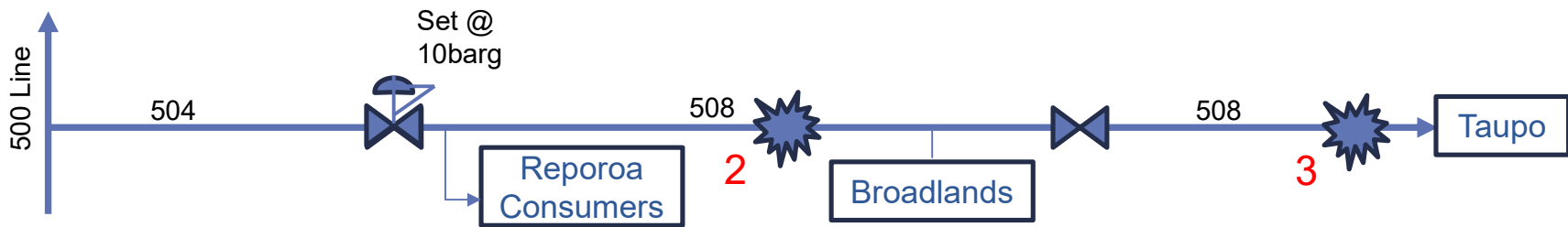
- The existing minimum operating pressure for the Taupo and Broadlands in Schedule 1 of the CCM Regulations is 30 barg
- Therefore, conditions for a critical contingency declaration would be reached if the 508 lateral were operated at ~10 barg
- FGL have requested that the Taupo gas gate be removed as a point of measurement in Schedule 1 of the CCM Regulations (and Broadlands as an 'any other gas gate' location)
- GIC has made an urgent recommendation to the Minister under section 43P of the Gas Act to remove these locations from Schedule 1 and avoid the declaration of unnecessary critical contingencies
- These changes can be made without a material impact on the purpose of the CCM Regulations or the operation of the Transmission System.

# Why no material impacts?



- The removal of these Gates only removes them from triggering a critical contingency event, they are still potentially subject to curtailment under the CCM Regulations.
- Firstgas have assessed there are only three distinct events which may drive a critical contingency on this section of the transmission system:
  1. An event upstream of the Reporoa DP would result in a critical contingency being declared at the Reporoa Gate. Note it is far more likely this event will be declared due to a pressure failure on the 500 system rather than at Reporoa. Therefore, there is no change for events upstream of Reporoa. Broadlands Biomethane provides additional security of supply to the 508 lateral in the event of any upstream event resulting in curtailment at Reporoa.
  2. An event between Reporoa and Broadlands MLV (downstream of Broadlands);
  3. An event between Broadlands MLV and Taupo.

# Why no material impacts?



For events down stream of Reporoa (item 2 & 3 previously):

- Reporoa consumers will be unaffected as can be isolated from downstream failure.
- Due to the reduced operating pressure, the only credible scenario is a line impact such that it no longer contains pressure (i.e rupture). All other events that today may reduce the allowable operating pressure and potentially result in a curtailment event (without complete loss of supply) are eliminated by reducing the operating pressure.
- While the reduced operating pressure does mean that the line would have a lower starting linepack (contingency amount), the only credible curtailment scenario in the lower operating pressure regime is a when the line is fully compromised (as linepack is likely to be lost via the compromised section in a line strike scenario).
- Firstgas will use existing Use of System Agreements with downstream distribution operators and Retailers to manage gas supply in this event



## Agenda:

- Broadlands Biomethane Project
- Changes to the operation of the Transmission System
- **Required changes to the Critical Contingency Management Plan (CCMP) to support the injection of Biomethane**

- GIC has recommended to the Minister that Schedule 1 of the CCM Regulations be amended to remove the Taupo and Broadlands DP's as required points of measurement from the FGL CCMP.
- GIC's recommendation, including further information on the process under the Gas Act, is available on their website.
- Recommendation is currently under consideration by the Minister and MBIE, who have been advised of the Biomethane Project Schedule.
- Within 6-months of any urgent regulations being made, GIC is required to comply with the assessment and consultation requirements of the Gas Act for regulatory amendments.
- FGL is proceeding with amendments to its CCMP to give effect to the urgent recommendation removing the Taupo and Broadlands DP from Schedule 1 of the CCM Regulations.

## **Revised CCMP Preparation**

Input from expert  
internal FGL personnel  
Copy of CCMP provided  
to GIC / CCO &  
Stakeholders

1

## **Expert Advisor Review**

CCO provides report to  
Expert Advisor  
Expert Advisor gives  
recommendation to  
GIC

3

## **Industry Consultation**

Submissions provided  
to GIC and  
amendments made to  
CCMP if required  
GIC appoints Expert  
Advisor

2

## **GIC Approval**

Expert Advisor may  
require amendments  
prior to GIC  
Approval  
Revised CCMP  
published

4



# CCMP Review and Approval Process



Week commencing Monday

CCMP Update Step	27-Nov-23	4-Dec-23	11-Dec-23	18-Dec-23	25-Dec-23	1-Jan-24	8-Jan-24	15-Jan-24	22-Jan-24	29-Jan-24	5-Feb-24	12-Feb-24	19-Feb-24	26-Feb-24	4-Mar-24	11-Mar-24	18-Mar-24
Firstgas to hold stakeholder webinar																	
If required make amendments to <b>draft</b> proposed CCMP arising from submissions																	
Submit the proposed CCMP to GIC for approval in accordance with r27-30																	
GIC to appoint expert advisor																	
GIC to provide expert advisor and CCO with copy of proposed CCMP																	
CCO to provide expert advisor with report on proposed CCMP																	
Expert advisor to provide GIC with recommendation on approval of proposed CCMP																	
GIC to approve proposed CCMP																	
GIC to publish approved amended CCMP																	
CCO to publish approved CCMP																	

- Please provide written feedback to [firstgas.transmission@firstgas.co.nz](mailto:firstgas.transmission@firstgas.co.nz) by **COB Thursday 08 February**



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Questions?