

28 May 2021

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Dear Andy

Firstgas response to open letter on fit for purpose regulation

First Gas Limited (Firstgas) welcomes the opportunity to provide our views on the Commerce Commission's (the Commission) "*Open letter – ensuring our energy and airports regulation is fit for purpose*". In this submission, we recommend some significant changes to the regulatory settings that will apply to gas pipeline businesses (GPBs) from 2022 – 2027 to better reflect the risks and uncertainties facing the gas sector. We encourage the Commission to advance these changes as part of the upcoming Default Price-Quality Path (DPP) reset for GPBs so that gas consumers and suppliers are better placed to manage the transition to net zero emissions.

Executive Summary

Firstgas agrees with the Commission's summary that the energy sector is in a period of change and uncertainty. Climate change policy is having profound impacts on the energy sector as the country grapples with how best to meet our legislated target of net zero emissions by 2050. In the face of these changes, we believe that the next DPP reset for GPBs (2022 – 2027) should focus on ensuring three outcomes:

1. Reducing the risk of future price escalation and economic asset stranding
2. Continuing to provide sufficient incentives to invest to maintain reliable gas infrastructure
3. Preserving the option of using gas infrastructure for zero carbon gases in the future.

Table 1 below summarises the regulatory changes that we believe should be considered to achieve these outcomes. We also provide a high-level assessment of the impacts of these changes on consumers and GPBs. We strongly believe that these issues need to be addressed in the upcoming gas DPP reset for 2022 – 2027, rather than waiting for the next Input Methodologies (IMs) review or subsequent price-quality resets. This is because a business-as-usual DPP reset for GPBs (following a similar approach to the 2017 DPP reset and simply applying the existing IMs) would exacerbate current risks and would not be fit for purpose.

Table 1: Outcomes sought through the next gas DPP reset

Outcome	Regulatory changes	Impacts on consumers	Impacts on GPBs
Reducing the risk of future price escalation and economic asset stranding	<ul style="list-style-type: none"> • Shorter asset lives • Accelerated depreciation • Non-indexation of RABs • Revenue uplift 	<ul style="list-style-type: none"> • Closer alignment between capital recovery and demand (improved fairness) • Higher near-term prices • More stable prices over time 	<ul style="list-style-type: none"> • Nearer-term recovery of capital • Higher near term cash flows to help fund transition investments • Greater assurance of NPV=0 outcomes

Outcome	Regulatory changes	Impacts on consumers	Impacts on GPBs
Providing sufficient incentives to invest in maintaining reliable gas infrastructure	<ul style="list-style-type: none"> Shorter lives for new assets Adjusting quality path expectations Non-indexation of new capital investments 	<ul style="list-style-type: none"> Continued level of quality and reliability during transition Lower economic losses from business interruptions Continued confidence in gas as a reliable energy source 	<ul style="list-style-type: none"> Confidence of capital recovery for new investments Alignment between economic regulation and other regulatory requirements (e.g., health and safety, ASNZ 2885)
Preserving the option of using gas infrastructure to transport zero carbon gases	<ul style="list-style-type: none"> Clarity on regulatory treatment Innovation allowance Accelerated depreciation Explicit allowance for renewable gas for compression 	<ul style="list-style-type: none"> Preserves future potential use of customer equipment (e.g., boilers, plumbing systems) Improves 'licence to operate' gas equipment Promotes consumer choice and future ability to continue to enjoy the features of gas appliances 	<ul style="list-style-type: none"> Reduces risks of future economic asset stranding (outcome 1 above) Provides important signal of regulatory support for decarbonising gas networks Additional funding helps to compensate for higher risk of innovation trials

The regulatory changes outlined above are not mutually exclusive and we think some combination of these measures will be needed for regulation to remain fit for purpose.

We believe that the need for regulatory change is highlighted by the actions we would expect GPBs to take if they were not regulated and operated in workably competitive markets. Specifically, we expect GPBs would:

- Continue to invest in reliability and growth where there is demonstrable support from customers to continue to use and fund their networks
- Set prices to recover their capital investments over reasonable time horizons, accelerating capital recovery when external changes increase the risk of decreased future usage
- Use available funding to investigate new and innovative ways to use their network assets to preserve future commercial opportunities.

To ensure that the Commission can enable robust debate on these substantive matters during the gas DPP reset and meet the regulatory deadline, we recommend that the Commission:

- Incorporates preliminary analysis of the emerging themes raised in response to this open letter in its DPP issues and process paper signalled for July 2021.** We believe this would enable early engagement with all interested parties and allow the Commission to scope a detailed timeframe for how proposed amendments could be introduced.
- Runs workshops with GPBs, customers and other stakeholders.** In conjunction with formal submissions and cross-submissions, we believe the use of workshops and direct engagement would enable the Commission to flesh out the issues in much greater detail and seek a broader range of perspectives.

We would welcome the opportunity to meet with the Commission staff to discuss this submission further.

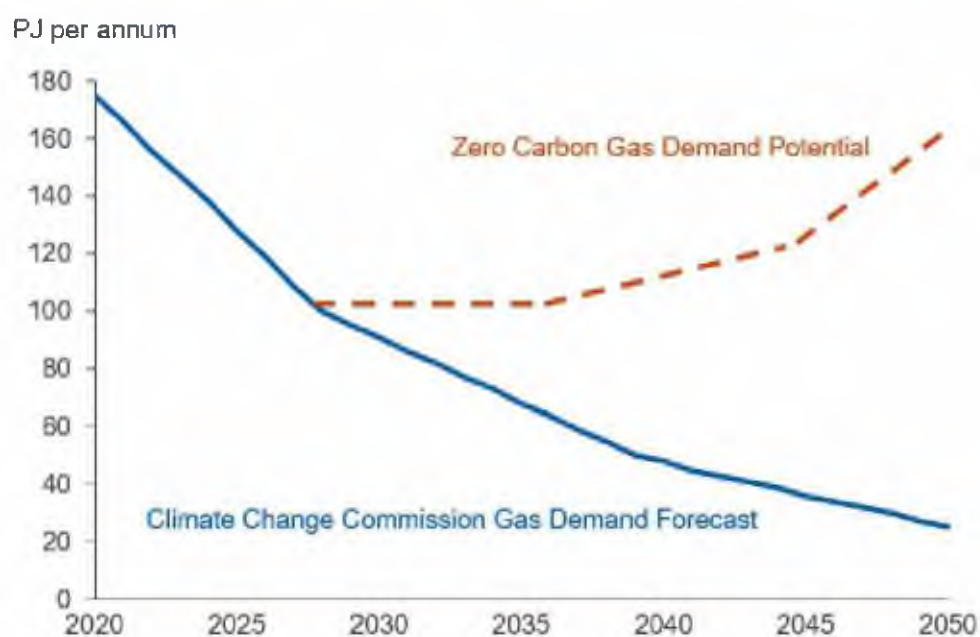
Introduction

Firstgas appreciates the Commission seeking views from regulated businesses, stakeholders, and energy customers, ahead of the DPP reset for gas pipeline businesses (GPBs) for 2022 – 2027, and the next IMs review that must be completed by December 2023. These two regulatory programmes of work will have a significant impact on both our gas transmission business (GTB) and gas distribution business (GDB) for the coming decade.

We agree with the view expressed in the Commission’s open letter that the “energy sector is in a period of change and uncertainty, and the pace of change may accelerate.”¹ The development and implementation of the Government’s climate change policy has, and will continue to have, a significant impact on our sector. Through the introduction of the *Climate Change Response Act 2020*, New Zealand now has a legislative target of net zero emissions by 2050² – which is less than 30 years away (or six regulatory periods).

The Climate Change Commission (CCC) was established in 2019 and released its draft advice in January 2021, setting out the first package of advice to Government on the actions it must take to reach 2050 target.³ The CCC forecasts a considerable drop in gas demand over coming years to help achieve New Zealand’s emission reduction targets (shown in the solid blue line in Figure 1). We are now awaiting the release of the CCC’s final advice (expected by 31 May 2021) and the Government’s policy response to this report by the end of the year.

Figure 1: Climate Change Commission’s gas demand forecast⁴



Firstgas is already seeing the release of several Government consultation documents on areas that directly impact on our businesses and the likely future demand for natural gas. For example:

- The Ministry for the Environment (MfE) has recently consulted on phasing out fossil fuels in process heat by using National Environmental Standards (NES) or National Policy Statements (NPS) under the *Resource Management Act 1991*.⁵
- MfE is also consulting on changes to the New Zealand Emissions Trading Scheme (ETS), which will enable carbon prices to better align with carbon budgets.⁶
- The Ministry of Business, Innovation and Employment (MBIE) is working with the Energy Efficiency and Conservation Authority (EECA) to improve process heat's energy

¹ Page 2, *Open letter –ensuring our energy and airports regulation is fit for purpose*, Commerce Commission, 29 April 2021.

² Section 5Q, *Climate Change Response Act 2020*.

³ *2021 Draft Advice for Consultation*, Climate Change Commission, 31 January 2021.

⁴ Figure 5.4, page 91, *2021 Draft Advice for Consultation*, Climate Change Commission, 31 January 2021.

⁵ *Phasing out fossil fuels in process heat*, Ministry for the Environment, April 2021, https://consult.environment.govt.nz/climate/phasing-out-fossil-fuels-in-process-heat/supporting_documents/phasingoutfossilfuelsinprocessheat.pdf

⁶ *Proposed changes to NZ ETS and SGG levy regulations 2021*, Ministry for the Environment, April 2021, https://consult.environment.govt.nz/comms/proposed-nz-ets-changes2021/supporting_documents/proposedchangestoNZETSandSGGLEvyregulations2021.pdf

efficiency and increase renewable energy.⁷ MBIE is expected to release the draft Emissions Reduction Plan for the heat, industry and power sector component of the energy sector later this year.

- The Gas Industry Company (GIC) is undertaking a market investigation into role of gas in supporting the energy transition and the fitness of current market, commercial and regulatory settings to support decarbonisation (at request of the Minister for Energy and Resources).⁸

These changes are happening alongside other gas market shifts such as the continued move away from baseload electricity generation to peaking that supports increasing renewables, the departure of major energy users due (in part) to high energy prices, and continued growth in household gas connections (both new builds and infills). There is also increasing interest in, and prospects for, repurposing gas pipeline networks to transport zero carbon gases, such as biogas and hydrogen. If these fuels become economic, then the associated demand for pipeline services would help to offset (at least in part) the projected decline in demand for natural gas (shown in the dotted orange line in Figure 1).

Regulatory approaches need to change for next gas DPP reset

We believe that the existing regulatory rules for GPBs are fit for purpose in a relatively stable gas sector, with high levels of certainty around the policy environment and the timeframes over which shareholders can expect to earn a reasonable return on investment (and having their capital returned). Price and revenue controls in such settings are themselves more stable. The existing regulatory regime is also focused solely on the transport of natural gas, with the transportation of other gases not explicitly addressed within the regulatory framework.

The Commission has an important opportunity at the upcoming DPP reset to ensure that regulatory settings remain fit for purpose. Firstgas does not think that is appropriate for the Commission to delay decisions around the gas DPP reset and the IMs review until there is more certainty around climate change policy and Government interventions. As the Commission notes in its open letter, the direction of climate change policy in New Zealand is clear and a decline in total emissions from the use of gas is required to achieve net zero by 2050.⁹ The Government's policy settings will also continue to evolve over the next 30 years, as the country makes emissions reductions and reviews the "emissions gap" that must be closed to meet the 2050 target.

Three outcomes recommended for inclusion in DPP issues paper

We encourage the Commission to include the three outcomes discussed in our submission, and the possible regulatory approaches to achieve these outcomes, in its DPP reset issues and process paper to be released in July 2021. Each of these issues is likely to involve amendments to the IMs¹⁰ that we believe are specific to GPBs and can be effectively dealt with as part of the DPP reset.

We note that at the last DPP reset for Electricity Distribution Business (EDBs),^{11,12} the Commission introduced several IMs amendments that were sector specific and necessary to give effect to the

⁷ Consultation on this was undertaken through *Discussion Document: Accelerating renewable energy and energy efficiency*, MBIE, December 2019, <https://www.mbie.govt.nz/dmsdocument/10349-discussion-document-accelerating-renewable-energy-and-energy-efficiency>

⁸ *Gas Market Settings Investigation consultation paper*, Gas Industry Company, May 2021, <https://www.gasindustry.co.nz/work-programmes/gas-market-settings-investigation/developing-2/consultation-3/document/7263>

⁹ Page 2 and 3, *Open letter*, Commerce Commission.

¹⁰ *Gas transmission services input methodologies determination 2012* (consolidated as at 3 April 2018) and *Gas distribution services input methodologies determination 2012* (consolidated as at 3 April 2018.)

¹¹ *Default price-quality paths for electricity distribution businesses from 1 April 2020: Issues paper*, Commerce Commission, 15 November 2018, https://comcom.govt.nz/_data/assets/pdf_file/0022/106078/Default-price-quality-paths-for-electricity-distribution-businesses-from-1-April-2020-Issues-paper-15-November-2018.PDF

¹² *Default price-quality paths for electricity distribution businesses from 1 April 2020 – Draft decision, Reasons paper*, Commerce Commission, 29 May 2019, https://comcom.govt.nz/_data/assets/pdf_file/0023/149801/Default-price-quality-paths-for-electricity-distribution-businesses-from-1-April-2020-Draft-Reasons-paper-29-May-2019.pdf

EDBs' DPP reset for 2020 – 2025. The Commission stated that while it intended to provide “a stable regulatory platform” for EDBs, it recognised:

“substantial changes [were] occurring in the electricity sector. In part, this is driven by an increasing focus on decarbonisation.....However, we recognise that there is uncertainty as to the extent, timing, and impact of these changes.”¹³

The Commission incorporated learnings from previous EDB resets and GPB resets and elected to make changes to areas that fall outside the major components of a DPP Determination, where it better promoted “the long-term benefit of consumers, consistent with the purpose of Part 4.” An example of an IMs amendment for EDBs was the introduction of a reopener for major new sources or generation.¹⁴ We consider that this provides a useful precedent for the Commission to take a similar approach to the GPB's DPP reset and incorporating consultation on suitable IMs amendments.

Alternatively, under section 53P of the *Commerce Act 1986*, the Commission could elect to roll-over current gas pipeline prices until after the full IMs review (rather than assess GPBs current and future profitability). While this has some appeal in gaining certainty on the Government's response to CCC's final advice and to consider any cross-sectoral issues through the full IMs review in 2023, the risk of this approach is that it results in regulatory settings that are constantly “chasing” policy shifts. We believe the better approach is to make “no regrets” changes to the regulatory settings now that provide better outcomes over the coming regulatory period and beyond.

Outcome 1: Reducing the risk of future price escalation and economic asset stranding

One of the key issues facing the gas sector is that as gas users exit New Zealand or switch to other fuels, pipeline tariffs will need to rise to recover fixed costs across fewer system users. The first-order impact of consistent decreases in demand for gas pipeline services is that future pipeline tariffs escalate. This would see the higher tariffs being paid by the users that remain on the gas networks. We consider that this situation would be unfair to these remaining users. It is better to spread the costs among all users that bear some responsibility for use of the network, from the time when the risk becomes clear (i.e., now).

This issue has also been identified in the electricity sector, where the Energy Networks Association in Australia has observed that:

“....tomorrow's electricity consumers could be penalised by being required to contribute to the return of capital of a proportion of assets which they do not derive benefits from. An example of this scenario arising is circumstances in which distributed generation and storage provides a significant proportion of network customers with an option to fully or partially bypass the grid. In this case, the existing regulatory approach would suggest the recovery of total depreciation charge from remaining grid customers. This would effectively represent a 'double penalty' likely to fall mostly upon customers with fewer options to bypass the grid.”¹⁵

There is also a potential second-order effect of economic stranding of pipeline assets, where it becomes impossible to pass all fixed costs through to remaining users without driving them to use other fuels. This is a risk that faces both gas transmission and distribution businesses and impacts the “regulatory compact” for regulated businesses.

¹³ Paragraph X15 of the EDB Draft Decision Reasons paper.

¹⁴ Paragraph X17.1 of the EDB Draft Decision Reasons paper.

¹⁵ Page 11, *Future network cost recovery and depreciation: Regulatory and policy options*, Energy Networks Association, August 2015, <https://www.energynetworks.com.au/resources/fact-sheets/future-network-cost-recovery-and-depreciation-regulatory-and-policy-options/>

The regulatory regime is based around the three economic principles¹⁶ that the Commission has developed that elaborate on its statutory purpose statement and which it uses to guide its decision-making. The relevant principle here is “financial capital maintenance” (FCM), where regulated providers should have the opportunity to earn a normal return on capital. Allowing regulated businesses the reasonable expectation, but not the guarantee, of earning normal returns is the minimum necessary incentive to support continued investment in infrastructure. The risk of economic stranding of gas pipelines detrimentally impacts this regulatory compact.

One way to think about the ability to continue to fund infrastructure from future revenues is to observe the relationship between an industry’s fixed assets and its expected future demand. For GPBs, this is captured by the ratio of RAB to demand (measured in Gigajoules, GJ). Figure 2 shows the value of our gas transmission regulated asset base (RAB) relative to demand (using the CCC’s forecast shown above in Figure 1) under two scenarios:

- Projecting RAB forward at historical growth rates (i.e., historic levels of capital expenditure (Capex) less current allowed depreciation rates). This RAB profile for our GTB is shown by the orange line below. In this scenario the ratio of RAB to demand grows from \$5.5/GJ today to \$28/GJ in 2050.
- Returning capital at a rate sufficient to maintain a RAB / demand ratio of \$5.50/GJ. This RAB profile for our GTB is shown by the blue line below. In this scenario, the transmission RAB falls to around \$350 million by 2035 and less than \$200 million in 2050.

Figure 2: Value of our gas transmission RAB relative to demand

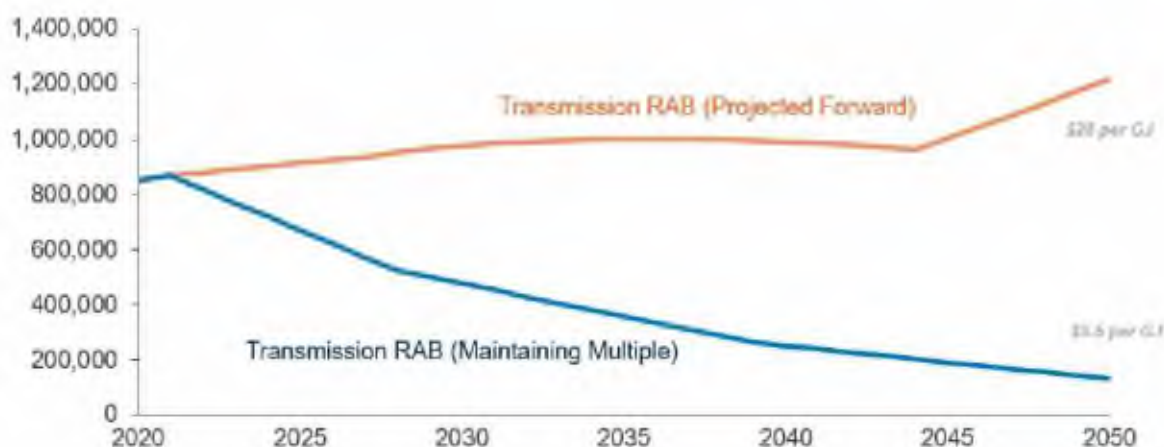
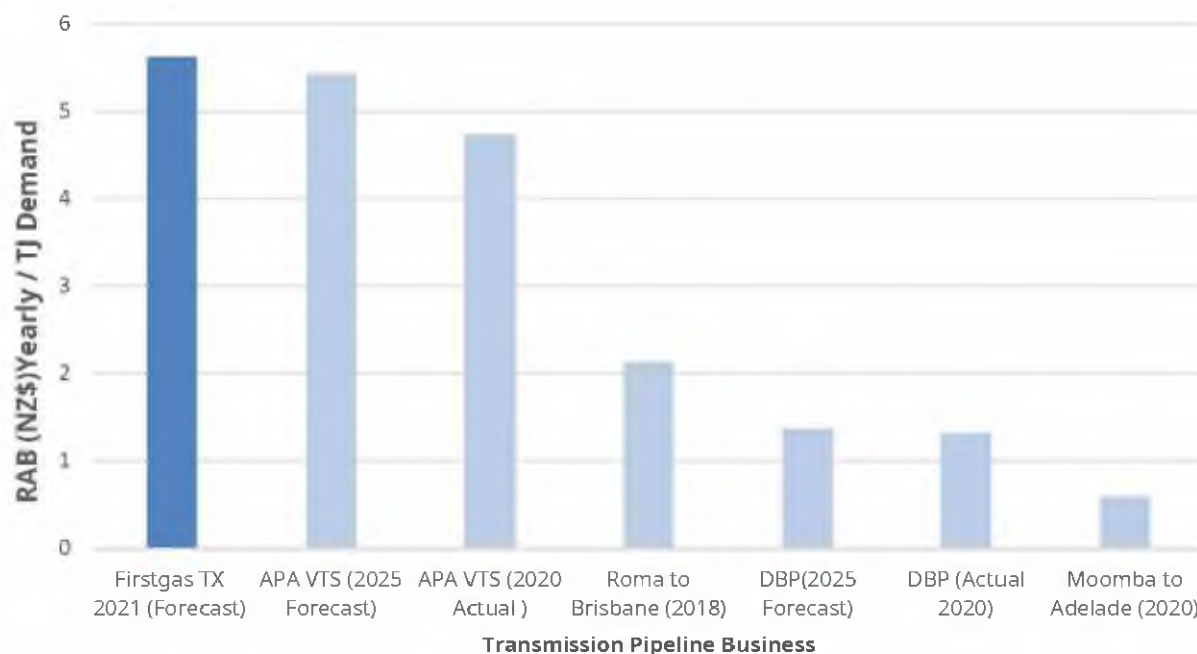


Figure 3 compares the RAB / demand ratio of our GTB against similar Australian gas transmission systems. This illustrates that a ratio of \$5.50/GJ is already at the upper end of other gas pipeline businesses. We believe that it is not in the best interest of pipeline users and pipeline owners to have high levels of fixed capital unrecovered when facing high uncertainty over future demand. The significant RAB values that may need to be recovered over the next 10 – 20 years suggest that it will take multiple regulatory periods to manage this smoothly, and that waiting will only exacerbate risks.

¹⁶ An explanation of the economic principles is provided in the *Fibre IM Review Decision* at [2.272] – [2.309] and *Input Methodologies review decisions: Framework for the IM review* published by the Commission on 20 December 2016 (project No. 17.01/15081) at [114] – [153].

Figure 3: Value of our gas transmission RAB / demand compared to similar Australian GTBs



Regulatory mechanisms available to address this issue

There are a range of regulatory options available to prevent an escalation in the ratio of RAB to demand and address the risk of future price escalations and economic stranding of gas infrastructure. We strongly encourage the Commission to incorporate a summary of the underlying issue, and explore regulatory mechanisms to address this issue, in its July 2021 issues and process paper for the gas DPP reset. Many of these options are well-understood by the gas sector, and we believe it would be beneficial if the Commission’s first DPP reset paper set out the framework to evaluate which approaches may best suit the circumstances facing GPBs in New Zealand.

1) Shorter asset lives

Firstgas believes that one of the preferred regulatory mechanisms would be an amendment to provide for shorter asset lives for GPBs. The DPP currently uses a simplified asset life assumption based on a weighted average of the different types of assets that make up the network. A change to provide shorter asset lives could be as simple as reducing the average asset life assumed in the DPP financial model from 45 years to 30 years. This would align with the 2050 net zero emissions target enshrined in legislation.

Alternatively, GPBs could review all the different asset categories for both gas transmission and distribution and consider the impact of climate change policy on each group of assets, providing more granularity. Some assets (such as IT) will not have materially shorter lives due to climate change policy, while other assets (such as new pipelines, compressors and district regulating stations) will clearly have shorter risk-adjusted economic lives.

We note that the Australian Energy Regulator (AER) recently accepted shorter asset lives in its decision for the ACT / NSW gas distribution business EvoEnergy¹⁷ for its 2021 – 26 regulatory period.¹⁸ Extracts of the final decision are summarised below:

“Evoenergy, like other [Australian GPBs] faces fundamental questions about the future of the gas network, driven by jurisdictional governments moving towards net zero emissions policies in a timeframe considerably less than the asset lives of a large part of the business’s asset base. For Evoenergy, this means it will cease connecting new gas consumers in the ACT from 2023, but continue to connect NSW gas consumers over the 2021–26 period”

Evoenergy are responding to uncertainties regarding the future of natural gas by seeking to recoup investments in long-lived network assets from consumers over a shorter time horizon to mitigate against asset stranding risk.

Evoenergy considered its proposal represented an early, precautionary measure against rising bills as a result of declining gas consumer numbers, and that accelerated depreciation of the assets will reduce the risk that, in the event of network closure, consumers who find it difficult or not feasible to move away from gas will be left to pay an unfair share of costs. [AER] consider there is a case for some precautionary steps to be taken sooner rather than later.”¹⁹

We believe these points apply equally to New Zealand GPBs given the demand uncertainty facing our transmission and distribution networks.

2) Accelerated depreciation for existing assets

Another suitable option to address this risk is to use accelerated depreciation for existing gas transmission and distribution assets. The ability to apply for accelerated depreciation is already available for EDBs in New Zealand, with the mechanism introduced through the 2016 IMs review and refined through the recent EDB reset.

The Commission noted that the option was introduced for EDBs “to address the potential risk of partial recovery of investment arising from unforeseen changes in the electricity sector.”²⁰ The mechanism allows distributors to elect new asset lives based on their assets’ expected economic lives, rather than their physical asset lives, with an adjustment of up to 15% reduction in asset life.²¹ Applications for the adjustment factor to give effect to accelerated depreciation must be submitted no later than 13 months prior to the commencement of the DPP. Shortening of asset lives on application is also available for fibre services (Chorus).

We believe that a similar accelerated depreciation mechanism could be introduced for GPBs for the DPP reset. However, there are two areas where we would recommend that the mechanism be adjusted:

- a. We recommend that there is **no application process for GPBs**, rather the adjustment factor for accelerated depreciation is set as part of the DPP reset parameters. Given the tight timeframes for making decisions on the 2022 gas DPP reset and the common conditions driving the need for accelerated depreciation across GPBs, we consider that an application process is not practical or warranted. However, many of the considerations

¹⁷ Evoenergy provides natural gas distribution services to approximately 150,000 homes and businesses across Canberra, Greater Queanbeyan and Bungendore, of which around 90 per cent of consumers are located in the ACT and 10 per cent in NSW. Around 98 per cent of Evoenergy’s consumers are residential consumers.

¹⁸ *Final decision - Evoenergy access arrangement 2021-26 – Overview*, Australian Energy Regulator April 2021, <https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20Evoenergy%20access%20arrangement%202021-26%20-%20Overview%20-%20April%202021.pdf>

¹⁹ Page 9 – 10, AER Final decision.

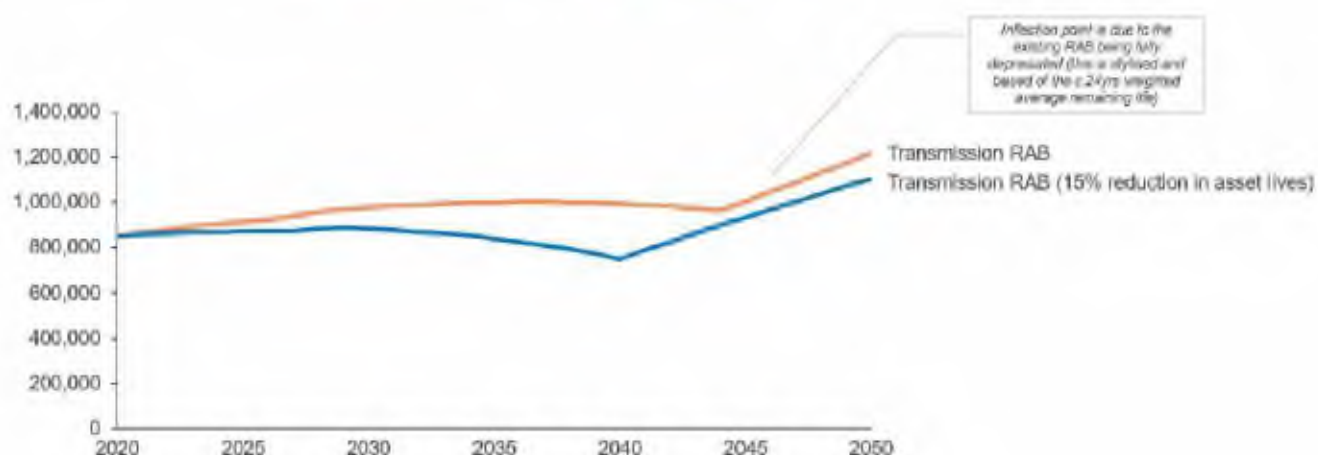
²⁰ Paragraph 4.31, *Default price-quality paths for electricity distribution businesses from 1 April 2020 – Draft decision, Reasons paper*, Commerce Commission, 29 May 2019.

²¹ As specified in clause 4.2.2(5)(a)(i) of the EDB IMs.

addressed through the application process could be consulted upon and tested through the DPP reset process since there are only five affected GPBs.

- b. We recommend an **increased rate of accelerated depreciation** for GPBs. The adjustment factor of up to 0.85 (15% reduction in asset life) is not sufficient to deal with the scale of risk that GPBs are now facing. We have undertaken some indicative modelling of the impact of reducing our GTB asset lives by 15% and the impact on total RAB. This is set out in Figure 4. This modelling demonstrated that reducing asset lives by 15% will not be enough to maintain RAB / demand ratios at reasonable levels (as shown in Figure 2 above). Rather, remaining asset lives need to be more closely aligned with the Government's climate targets.

Figure 4: Impact on GTB RAB from reducing asset lives by 15%²²



3) Removal of RAB indexation for inflation

Another way to manage RAB levels over time is to remove or adjust the indexation of RAB for GPBs. Gas pipeline RABs are currently inflation-indexed to hold their value in real terms. Under this approach, the Commission forecasts inflation at each DPP reset when projecting forward the value of RAB, the forecast revaluation is treated as income in the DPP reset model, and actual inflation is used within each regulatory period to adjust the RAB and set-off revaluation income against revenue allowances.

Several issues with this approach that have been raised both here in New Zealand (primarily by Vector)²³ and in Australia.²⁴ Many of these concerns arise from mismatches between CPI forecasts and actual CPI outcomes, which can lead to different revenue levels than expected when prices are reset. However, we believe that the main outcome of interest for gas pipelines in New Zealand is that removing RAB indexation would have the effect of reducing RAB over time (all else being equal), providing a similar outcome to shortening asset lives or accelerating depreciation.

Some regulated networks in New Zealand (such as Transpower) already have non-indexed RABs. This approach results in the targeting of the nominal WACC for “in period” revenue but results in the earlier recovery of the value of the asset i.e., no roll-forward of the asset (and no notional income deduction).

²² Graph is based off 2020 data utilising actuals from FY2020 IDs and 2020 AMP forecasts.

²³ *Changes to the Input Methodologies for electricity distributors and Transpower*, Vector Limited submission to the Commerce Commission, 5 July 2019, https://comcom.govt.nz/_data/assets/pdf_file/0021/160167/Vector-Submission-on-IM-amendments-for-DPP-and-iPP-5-July-2019.pdf

²⁴ *Future network cost recovery and depreciation: Regulatory and policy options*, Energy Networks Association, August 2015, <https://www.energynetworks.com.au/resources/fact-sheets/future-network-cost-recovery-and-depreciation-regulatory-and-policy-options/>

4) Compensation via revenue uplift

Another regulatory mechanism that would help to address this issue is to adjust allowable revenue to compensate GPBs for the risk of asset stranding. This approach was used by the Commission in October 2020 to address the stranding risk faced by Chorus for its fibre fixed line access services. In its decision,²⁵ the Commission accepted that the stranding risk faced by Chorus warranted *ex ante* compensation by way of an additional allowance. Given the similarity of issues facing GPBs and Chorus, we encourage the Commission to consider whether this mechanism could also be an effective mitigant for asset stranding risks.

Impact of recommended changes on consumers

We acknowledge that higher depreciation rates will increase prices in the near term (other factors remaining the same). However, this near-term impact is justified by the ability to provide consumers with more stable pricing over time, reducing the risk of prices shocks if demand on the system declines. We also note that the next reset may provide an ideal opportunity to both accelerate depreciation and avoid real prices increases (due to the expected decrease in the weighted average cost of capital). This outcome is aligned with the pricing principles set for our GTB, where our pricing should seek to “promotes price stability and certainty”.²⁶

Addressing the economic stranding of gas assets through the suggested regulatory changes will also provide closer alignment between capital recovery and demand, providing fairer outcomes for consumers than simply letting the last remaining users pay the full cost.

Outcome 2: Providing sufficient incentives to invest in maintaining reliable gas infrastructure

Despite the uncertainty arising from climate change policy, GPBs need continue to provide a safe and reliable service to gas users across the North Island. There will still be considerable customer demand to meet over the next DPP period (2022 – 2027), and the regulatory framework needs to continue to provide GPBs with incentives to invest to maintain reliable gas infrastructure.

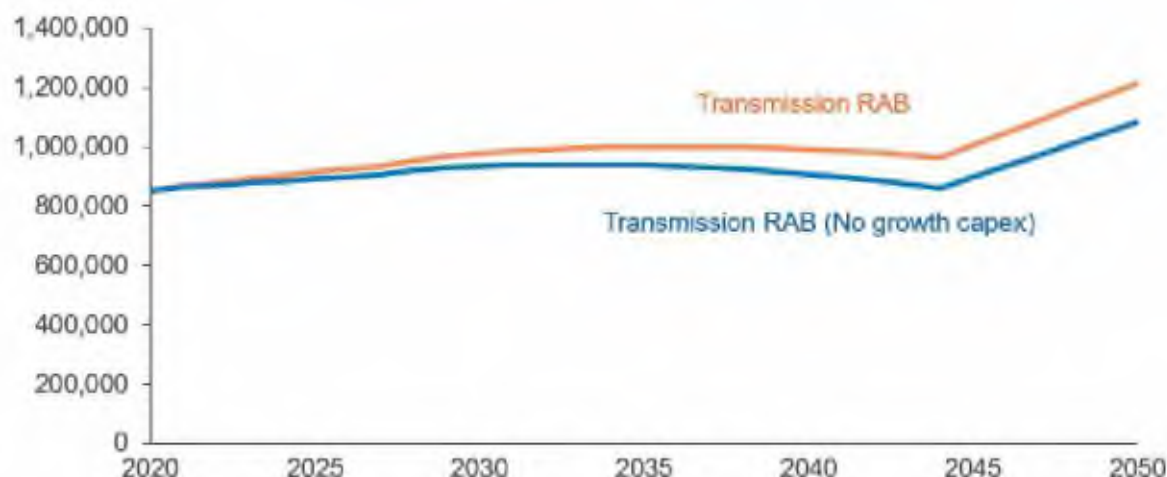
This issue is particularly relevant to our transmission network, where asset expenditure is driven by the need to not only comply with the quality path set by the Commission, but also compliance with the suite of standards specified under *AS 2885 Pipelines – Gas and Liquid Petroleum* and the Lloyds annual audit of compliance towards our five-yearly certificate of fitness, our asset management framework and risk management system.²⁷ All GPBs will also have their own Key Performance Indicators (KPIs),²⁷ employer expectations under the Health and Safety legislation, as well as public safety requirements. A large proportion of our expenditure is driven by these business-as-usual requirements to run the gas transmission and distribution systems. As illustrated in Figure 5, the vast majority of our GTB capital expenditure is directed at reliability and risk, rather than growth.

²⁵ *Fibre input methodologies: Main final decisions – reasons paper*, Commerce Commission, 13 October 2020, https://comcom.govt.nz/data/assets/pdf_file/0022/226507/Fibre-Input-Methodologies-Main-final-decisions-reasons-paper-13-October-2020.pdf

²⁶ Clause 2.5.2(4), *Gas Transmission Services Input Methodologies Determination 2012* (consolidating all amendments as of 3 April 2018), Commerce Commission, 3 April 2018.

²⁷ As disclosed in our GTB and GDB Asset Management Plans.

Figure 5: Forecast regulated asset base for our GTB²²



The Gas Industry Company (GIC) Gas Market Settings Investigation consultation paper describes the need for ongoing investment.²⁸ In this report, the GIC outline how the current policy settings are creating real uncertainty for gas infrastructure investors (both upstream and regulated pipelines). The GIC concludes that “without further investment, the worst-case scenario could see gas becoming unavailable to support electricity security of supply as early as 2026”.²⁹ It is important to acknowledge the impact that investment uncertainty within the gas sector has on the broader energy sector, and the costs that electricity consumers will potentially face. This reinforces the need to provide continued incentives to invest in gas infrastructure today.

The quality path for our GTB sets high expectations for the level of quality / service that we are required to provide, with the expectation of “no major interruptions”.³⁰ This quality standard was introduced at the 2017 DPP reset and reflects the importance that our customers place on a continuous supply of gas to meet their needs.³¹ We have met this quality standard throughout the current DPP (2017 – 2022) and can point to significant expenditure programmes that directly contributes to this outcome. This programme of work includes high-profile capital projects such as the Pairoa bypass and Gilbert Stream realignment, together costing around \$24 million.³²

Continuing under the existing quality standard of no major interruptions will require continued investment to keep supply reliability risks very low. Different / lower quality standards could allow the levels of capital expenditure to be varied across the next DPP period. However, we believe that this is a critical price-quality trade-off conversation that must be had with our transmission and distribution customers. Our engagement with major gas users to date suggests that there is little appetite for facing an increased risk of major interruptions given the significant impacts that such events have on their operations.

²⁸ Gas market settings investigation: consultation paper, Gas Industry Company, May 2021, <https://www.gasindustry.co.nz/work-programmes/gas-market-settings-investigation/developing-2/consultation-3/document/7263>

²⁹ Page 2, Gas market settings investigation: consultation paper, GIC.

³⁰ As specified in the Gas Transmission Services DPP Determination 2017 – 29 May 2017, Commerce Commission, 30 May 2017.

³¹ Paragraphs 7.16 to 7.18, Default price-quality paths for gas pipeline businesses from 1 October 2017 Final Reasons Paper, Commerce Commission, 31 May 2017, https://comcom.govt.nz/_data/assets/pdf_file/0015/62250/Gas-DPP-2017-Reasons-Paper-31-May-2017-.pdf

³² There is also \$1.8 million of operational expenditure associated with the Gilbert Stream pipe removal. For more details, review our 2020 GTB AMP, <https://firstgas.co.nz/about-us/regulatory/transmission/>

Regulatory mechanisms to address this issue

To ensure that the Commission continues to provide incentives to invest to maintain reliable gas infrastructure, we encourage the Commission to explore the following options for the upcoming DPP reset:

- **Shortening lives for new assets:** As detailed above, this would ensure GPBs were not deterred from making any further investments in their networks due to the risk that they may not be ensured a return on their capital. For example, to address identified compressor reliability issues we have developed a new compressor strategy that will be presented in our upcoming 2021 GTB Asset Management Plan (AMP). We consider that this investment is essential for maintaining ongoing network performance and reliability – but the current asset life assumptions for this equipment extend beyond the horizon for which we have demand certainty. Shortening asset lives better reflects the period that these assets will provide services to customers, aligning with the life span of gas appliances used across the network.
- **Adjusting quality path expectations:** It is important that the Commission align its expectations for expenditure with the quality standards set for the next DPP period. Any adjustments to either expenditure or quality standards should be driven by a robust discussion with customers around price-quality trade-offs to ensure expectations are met.
- **Removing indexation of new capital investments:** The use of this regulatory mechanism would also assist with this objective by removing disincentives on new investments. The removal of RAB indexation would have the effect of reducing RAB over time, including for the new investments required to maintain reliable supply.

We would welcome discussion on these matters during the DPP reset consultation phase, particularly when the Commission move to scrutinise expenditure for its draft decision.

Impact of recommended changes on consumers

By ensuring the GPBs have continued incentives to invest to maintain reliable gas infrastructure, customers will have a continued level of quality and reliability through the transition to a net zero economy by 2050. A reliable supply of gas will also ensure that customers face lower economic losses from business interruptions. We believe that it is reasonable to expect customers that will benefit from these outcomes to pay the costs of ensuring reliable gas supply.

Outcome 3: Preserving the option of using gas infrastructure to transport zero carbon gases

The regulatory settings for GPBs should encourage innovation and supports the introduction of zero carbon gases to support New Zealand’s transition to net zero emissions. We believe that our gas infrastructure can be an important enabler of this transition by allowing energy users to reduce emissions without the cost and inconvenience of switching fuels. To achieve this outcome for the upcoming DPP reset for 2022 – 2027, we encourage the Commission to:

- Provide clarity on regulatory treatment of expenditure on zero carbon gas trials and assets
- Provide GPBs with specific funding to promote “repurposing” of the gas networks.

We outline our thoughts on each of these matters below and why we consider that they should be addressed through the Commission’s upcoming DPP reset issues paper.

Treatment of zero carbon gas investments

One of the options available to decarbonise New Zealand’s energy system is to use existing gas infrastructure and networks to transport zero carbon gas. The most promising options for natural gas are to incorporate biogas and hydrogen into the networks.

Over the past few years, Firstgas Group has been advancing commercial and research and development (R&D) opportunities for these gases. This work can be found at www.gasischanging.co.nz and in our submission to the CCC on its draft advice.³³ This work builds on significant international research on repurposing gas infrastructure for zero carbon fuels and a massive international R&D effort to enable the hydrogen economy.

Figure 6 (replicated from our CCC submission) shows how biogas and hydrogen could substitute for natural gas use in the residential and commercial heating sector to achieve the CCC emission reduction targets. Our submission highlighted that by using available organic waste feedstocks to produce biogas (upgraded to biomethane) and blending hydrogen into gas networks from 2030, New Zealand could achieve the same decarbonisation outcome as banning new gas connections and forcing gas appliance replacements.

Figure 6: Opportunity for biogas and hydrogen to assist with net zero target



To date our work has focused on:

- Understanding the potential for biogas:** Firstgas is currently investigating the feasibility of injecting biogas into one of our gas distribution networks. We have partnered with Beca, Fonterra, Lion, and the Energy Efficiency and Conservation Authority (EECA) to assess the potential of biogas to provide a possible substitute for natural gas and to understand what a successful biogas industry for New Zealand would look like.³⁴ We hope to deliver a report and pathway for biogas this year. We believe there are strong near-term prospects for biogas injection into existing GPB networks.
- Developing a future for transporting green hydrogen:** In March 2021, we released a report into whether hydrogen can be used in New Zealand and transported via the existing gas pipeline network. Our report concluded that hydrogen is viable in a zero carbon energy system and that it is feasible to convert Firstgas pipelines to hydrogen — initially as a blend, and then to 100% in the future. The next phase of our work is to begin live trials of hydrogen. This work will cover three key elements – confirming network characteristics, building experiences with hydrogen, and building the hydrogen value chain.

We are treating expenditure on these network trials (hydrogen and biogas) as regulated costs and further expenditure is planned during the upcoming DPP period (2022 – 2027) and signalled in our Asset Management Plans. We see this work as integral to delivering the regulated gas transmission and distribution services and believe it provides clear and compelling benefits to system users over the long-term. However, just like experience in the EDB sector where the Commission has previously

³³ *Climate Change Commission draft advice*, Firstgas Group submission to the Climate Change Commission, 26 March 2021, https://firstgas.co.nz/wp-content/uploads/Firstgas-Group_CCC-submission-March-2020.pdf

³⁴ *Industry leaders collaborate to solve global energy challenges – First Gas*, media release, Firstgas website, <https://firstgas.co.nz/news/industry-leaders-collaborate-to-solve-global-energy-challenges/>

considered emerging technologies, we acknowledge that the boundary between regulated and non-regulated investments is not always clear-cut.

We recommend that this issue is explicitly addressed in the Commission's DPP issues paper, with the objective of providing a clear Commission view on the appropriate treatment of costs for the 2022 DPP period. This would provide greater surety for GPBs as we embark on substantive zero carbon gas trials and work programmes.

Regulatory mechanisms available to address opportunity

One of the objectives of Part 4 regulation is to ensure that that suppliers of regulated goods or services "have incentives to innovate and to invest".³⁵ Putting this objective into practice is essential to ensure that we not only have the ability to maintain our transmission and distribution networks but can also leverage off our assets to preserve the option of repurposing networks to transport zero carbon gases.

1) Innovation allowance

At present, we believe that greater regulatory incentives would help to encourage innovation within the gas sector at a level beyond small-scale trials. One mechanism that is currently available for only EDBs is the innovation allowance. This mechanism was introduced at the last EDB DPP reset to provide an innovation allowance recoverable cost, capped at the higher of 0.1% of revenue or \$150,000.³⁶

We support extending the concept of this allowance to GPBs but do not believe the scope (or size) of the EDBs allowance is likely to drive much additional innovation. We also believe that this mechanism should be tailored specifically to each sector and the unique challenges and opportunities it is facing. We have set out our initial views on approaches to funding innovation, through our submission to the Commission on the EDB DPP reset, with our commissioned report "*Analysis of approaches for funding innovation in energy networks*" from Sapere.³⁷

There are also several international examples of government funding for innovation in the gas sector. Our submissions to other government departments have highlighted the approaches countries like England are taking to facilitate innovation, such as H21 Leeds City Gate project which originally received £266,400 funding from Ofgem's Network Innovation allowance.³⁸ The Australian Renewable Energy Agency (ARENA) has recently approved up to \$32.1 million in funding for Australian Gas Networks Limited (AGIG) for a 10 MW electrolyser for gas blending at AGIG's Murray Valley Hydrogen Park in Wodonga, Victoria.³⁹

2) Use of accelerated depreciation

We consider that allowing accelerated depreciation (as discussed above) would also have the beneficial effect of supporting innovation in repurposing gas infrastructure. By recovering fixed capital sooner, GPBs will have additional cash that can be deployed in zero carbon technologies and assets. In contrast, if regulated suppliers continue to have larger amounts of unrecovered capital as RAB, then it may become increasingly difficult to attract new capital into the sector for repurposing.

³⁵ Clause 52A(1)(a) of the *Commerce Act 1986*.

³⁶ *Default price-quality paths for electricity distribution businesses from 1 April 2020 – Final decision Reasons paper*, Commerce Commission, 27 November 2019, https://comcom.govt.nz/_data/assets/pdf_file/0020/191810/Default-price-quality-paths-for-electricity-distribution-businesses-from-1-April-2020-Final-decision-Reasons-paper-27-November-2019.PDF

³⁷ *Analysis of approaches for funding innovation in energy networks*, Sapere, 17 July 2019, https://firstgas.co.nz/wp-content/uploads/Sapere_Analysis-of-approached-for-funding-innovation-in-energy-networks.pdf and *EDB default price-quality path reset: draft decision*, Firstgas submission to the Commerce Commission, 18 July 2019, <https://firstgas.co.nz/wp-content/uploads/First-Gas-Sub-EDB-DPP-draft-decision.pdf>

³⁸ Detail provided in *Draft report – Low-emissions economy*, Firstgas' submission to the New Zealand Productivity Commission, <https://firstgas.co.nz/wp-content/uploads/First-Gas-submission-to-low-emissions-economy-inquiry.pdf>

³⁹ Over \$100 million to build Australia's first large-scale hydrogen plants, 5 May 2021, ARENA website, [https://arena.gov.au/news/over-100-million-to-build-australias-first-large-scale-hydrogen-plants/#:~:text=Australian%20Gas%20Networks%20limited%20\(AGIG,Hydrogen%20Park%20in%20Wodonga%2C%20Victoria](https://arena.gov.au/news/over-100-million-to-build-australias-first-large-scale-hydrogen-plants/#:~:text=Australian%20Gas%20Networks%20limited%20(AGIG,Hydrogen%20Park%20in%20Wodonga%2C%20Victoria)

3) *Use of renewable gas for compression*

Firstgas is itself a significant gas user for compression. In FY2020, we used a total of 399 TJ of natural gas across the Maui and non-Maui systems.⁴⁰ This provides an opportunity to underpin some early production of renewable gas through the terms that we offer (for example on contract length and price). We believe that there is a real case for showing leadership on the decarbonisation of gas networks and would like to explore the implications of such arrangements on the DPP reset.

We refer the Commission to the recent AER regulatory decision for Adelaide's gas network in Australia, where the regulator allowed the costs of renewable gas (biogas) as part of the network revenue allowance.⁴¹

Impact of recommended changes on consumers

Amending the regulatory settings to preserve the option of using gas infrastructure to transport zero carbon gases protects the future value of customers' gas equipment and appliances (i.e., boilers and plumbing system). Customers will be able to continue to benefit from the use of gas in their homes and businesses and will not be required to transition to alternative energy sources and appliances before they are economic. Preserving the option for zero carbon gases will also improve the "licence to operate" in the gas industry and will provide useful learning for future gas network decarbonisation.

We also consider that preserving the option of gas-based fuels in a zero carbon economy helps to promote consumer choice. We know that consumers value gas appliances and so having options to use those appliances with zero carbon fuels also has value.

Other IMs changes and matters to address as part of gas DPP reset

There are a number of other targeted IMs amendments and DPP process issues that we recommend the Commission introduce as part of the DPP reset for GPBs. These reflect technical issues specific to the operation of our gas transmission and distribution businesses. We outline each of these amendments and issues in Table 2 below.

⁴⁰ Schedule 9d(iii), FY2020 Information Disclosures for Firstgas' GTB, <https://firstgas.co.nz/wp-content/uploads/GTB-Information-Disclosure-FY2020.pdf>

⁴¹ AER allows revenue to support renewable gas and SA consumers | Australian Energy Regulator, media release by Australian Energy Regulator, <https://www.aer.gov.au/news-release/aer-allows-revenue-to-support-renewable-gas-and-sa-consumers>.

Table 2: Proposed amendments to address through next DPP reset

Proposed amendment	Business	Type of change	Reason for change	Impact on customers
Consistent treatment of compressor fuel costs across the Maui and non-Maui pipelines	GTB	IMs amendment	<p>At present, compressor fuel used at Mokau (Maui pipeline) is treated as a recoverable cost for the GTB, while all compressor fuel used on the ex-Vector (non-Maui) pipeline is treated as Opex. Mokau compressor fuel was introduced as a recoverable cost in December 2016, as it was concluded at that time that Mokau compressors were used almost exclusively for balancing, and therefore should face same treatment as balancing gas (a recoverable cost).⁴²</p> <p>Since the establishment of Firstgas in 2016, and the operation of the two transmission systems as one network, we have changed the way we manage compression across the network. We believe that this warrants a review of how all compression costs are treated across the transmission system.</p>	Consistent treatment of compressor fuel will remove any incentives to use compression differently based on where a compression plant is located.
Adding interconnection fees paid by GDBs as a recoverable cost	GDB	IMs amendment	<p>Firstgas' GTB has introduced an interconnection policy for parties connected to the transmission network, including GDBs. GDBs have historically not had interconnection agreements, therefore interconnection fees for GDBs are a new category of costs and were not included in the current DPP Determination (2017 – 2022).</p> <p>Interconnection fees charged to the GDB are a result of growth on the distribution network and are difficult to forecast accurately for the DPP regulatory period. By incorporating them as a recoverable cost, they can be passed to customers when they occur (reflecting the principle of cost-reflective pricing) and do not erode a GDBs Opex allowance (as these fees aren't included in forecast costs).</p>	<p>The impact to customers overall should be neutral, though different customers will pay.</p> <p>The interconnection fee from the GTB to the GDB means that the costs of the upgraded or new assets are not absorbed by the customers of the GTB.</p> <p>The customers of the GDB may bear the costs which will be recovered in prices. The GDB can include the interconnection fee in the pricing of the customer(s) driving the cost.</p>

⁴² *Input methodologies review decisions – Consolidated reasons papers*, Commerce Commission, 19 December 2016, https://comcom.govt.nz/_data/assets/pdf_file/0022/60529/Input-methodologies-review-decisions-Consolidated-reasons-papers-20-December-2016.pdf.

Proposed amendment	Business	Type of change	Reason for change	Impact on customers
Smoothing mechanism for GTB revenue cap wash-up	GTB	IMs amendment	<p>We recognise that the existence of the revenue wash-up mechanism for our GTB can cause relatively large changes in price for customers between years— as it has between FY2021 and FY2022.⁴³</p> <p>We believe that the Commission should investigate other regulatory tools that smooth out any under- or over-recovery of the revenue allowance over time. A possible model is Transpower’s Individual Price Quality Path Determination, that provides for annual wash-up amounts to be aggregated over the regulatory period and used as an input in setting starting prices for the following regulatory period (the EV account).</p>	This would remove any substantial price swings for customers within a regulatory period.
Adapt approach to growth forecasting for 2022 DPP	GDB	Matter for DPP process paper	<p>At the last DPP reset, the Commission’s constant price revenue growth (CPRG) for GTBs was informed by both historical ID information and a forecast from Concept Consulting. The Commission also further tailor CPRG forecasts to better reflect the operating environments (regions) of the individual GDBs.⁴⁴</p> <p>Given the uncertainty facing the sector from climate change policy, it is not prudent for the Commission to continue with the growth forecasting approach used in the 2017 DPP reset. Simply put, the past is unlikely to be a good guide of future growth. We recommend that the Commission adjust its approach, looking to draw on the CCC’s work and demand forecasts.</p>	The revenue set for GDBs and recovered from customers will be based on more up to date assumptions around customer demand over the coming DPP period.
Use of FY2021 as base year for next DPP reset	GTB and GDB	Matter for DPP process paper	<p>It is important that the Commission utilises the most current performance data and information from GPBs for the reset. As discussed with Commission staff last year, we believe that it would be beneficial to use FY2021 Information Disclosure (ID) schedules as the base year. This would provide the Commission with the most recent data set that would provide more indicative trends, given the changing environment.</p> <p>We would be able to bring the disclosure of this FY2021 data forward to assist with the Commission’s reset timeframes. We understand a similar approach was used at the last DPP reset, where Powerco requested the Commission use the FY2016 IDs to set their base year. To achieve this, Powerco provided their audited FY2016 disclosures to the Commission in mid-February (approximately six weeks earlier than required under the ID Determination).</p>	Prices set for customers reflect the most current performance of the GPBs.

⁴³ Firstgas’ financial year is aligned with our regulatory year and runs from 1 October to 30 September, i.e., FY2021 ends on 30 September 2021.

⁴⁴ As outlined in *Default price-quality paths for gas pipeline businesses from 1 October 2017 to 30 September 2022: Draft Reasons Paper*, Commerce Commission, 10 February 2017, https://comcom.govt.nz/_data/assets/pdf_file/0008/104102/Gas-DPP-2017-Draft-reasons-paper-10-February-2017.PDF

Proactively engaging with the sector during the gas DPP reset

As outlined in our response above, Firstgas considers that there are substantive issues for the Commission to consider as it prepares its DPP reset process and issues paper for release in July 2021.

We are concerned that the timeframe for undertaking and consulting on this DPP reset is very tight, with the Commission signalling a draft decision will be made by Q4 2021. This compares with the timing of the last DPP reset, where the draft decision was not released until February 2017 (approximately 3 months prior to the regulatory deadline for the final decision). It is important that the issues raised by the sector and customers in response to this open letter (and throughout the DPP reset process) are given due consideration, subject to robust analysis and debate, and decisions are based on the most up to date information available.

To help the Commission meet its deadline for the 2022 DPP reset for GPBs, we recommend that the Commission:

- **Incorporates preliminary analysis of the emerging themes raised in response to this open letter in its DPP issues paper signalled for July 2021.** We believe this would enable early engagement with all interested parties and enable the Commission to scope a detailed timeframe for how these proposed amendments could be implemented for the start of the next DPP period (1 October 2022).
- **Uses workshop with GPBs, customers and other stakeholders.** In conjunction with formal submissions and cross-submissions, we believe the use of workshops would enable the Commission to flesh out the issues in much greater detail and ensure robust debate on the benefits and downsides of all options, from a range of perspectives. Workshops could also be supplemented with one-on-one meetings as required as the DPP reset process begins.

Contact details

Firstgas welcomes the opportunity to provide input ahead of the formal DPP reset for GPBs and welcomes engagement with the Commission as formal consultation begins from July 2021. If you have any questions regarding our submission, please contact me on 027 472 7798 or via email at karen.collins@firstgas.co.nz.

Yours sincerely



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