

Commerce Commission
P O Box 2351
Wellington 6140

For the Attention of: Dr Simon Todd

06 April 2017

Dear Simon

Report on First Gas Distribution evidence assessment of asset replacement and renewal capital expenditure forecast in the 2016 AMP

1. This letter sets out Strata Energy Consulting Limited's (Strata) AMP evidence assessment of First Gas Limited's (First Gas) forecast asset replacement and renewal capex expenditure (R&R). The purpose of our review was to assess whether First Gas' 2016 gas distribution Asset Management Plan (AMP) provided reasonable support and justification for the R&R expenditure forecast.

Background and approach

2. The Commerce Commission (the Commission) requested that Strata carry out a further assessment of First Gas' forecast R&R capex based on updated actual capex figures for 2016 and a revised back-casting applied to First Gas's forecast expenditures for the next DPP period to 2022.

Asset replacement and renewal capex

3. At an aggregate capex level, R&R capex for the forecast period between 2018 and 2022 exceeds capex BAU variance margins (+/-5%), following back casting applied for period 2013 to 2016, by 8.7%.
4. In 2017, R&R capex is forecast to increase from the 2016 actuals by 30%.
5. Strata has reviewed:
 - 1) the asset age and condition model on the dashboard (Schedule 12a of the First Gas AMP, appendix B.2);
 - 2) chapter 6 of First Gas's distribution AMP; and
 - 3) the accompanying forecast capital expenditure schedule 11a(iv), set out at Appendix B.1, pages 122 and 123 of the AMP.

6. Schedule 11a(iv) indicates that much of the capex forecast is allocated to medium pressure (MP) main pipe replacement and renewal (\$13.3m) and intermediate pressure (IP) district regulating stations (DRS) replacement and renewal (\$3.3m).
7. 2016 AMP Chapter 6 provides a good discussion of First Gas's lifecycle management approach and a subsequent summation of R&R and its asset fleets. It highlights the main pipeline replacement programmes as the:
 - pre-1985 PE pipeline replacement programme, commenced in 2015;
 - mechanical coupling and 11km small pipeline replacement programme for Hamilton City – a safety upgrade programme; and
 - Hamilton City corrosion protection replacement programme commenced in 2015 and due to run for 5 years.
8. Pipeline replacement programmes (including the two Hamilton City programmes) have been underway since 2015 but are forecast to increase. No explanation for the forecast increases in pipeline R&R are provided in the AMP. The AMP does not provide the necessary assurance that the forecast \$13.3m MP main pipe R&R capex forecast is prudent and efficient.
9. We found the AMP discussion on district regulating stations (DRS) to be confusing.
10. DRS are not flagged as a main R&R programme. In the AMP asset fleet discussion, First Gas highlight that its DRS fleet is in good condition and within the expected standard life (22 years on average compared to a standard life of 35) yet it has assessed 3% as a high priority for R&R, following condition assessment. However, First Gas indicate that all of the 3% are targeted for removal (p.80). If this is the case, these DRS should not be included the R&R forecast.
11. First Gas state that one DRS needs to be upgraded to meet ventilation standards and 9 of an existing 34 DRS require up-grades to add an additional over-pressure safety valve. In addition, First Gas indicate the need to retrofit equipotential bonding and earthing and surge diverters to mitigate electrical hazards, planned over the FY17 to FY19 period (p.82). First Gas finally concludes (p.83) that up to 6 DRS could be replaced based on condition assessment over 2017 and 2018.
12. The need for 6 DRS to be included in the R&R forecast is not supported in the AMP. The need for 6 DRS replacements appears to be contradictory with First Gas' assessment and condition of the DRS fleet (Appendix B.3, Schedule 12a, p.126), which show that there are 80% of the 4.81% condition grade 2 of IP DRS to be replaced. This indicates 4 DRS should be replaced. All remaining DRS are assessed in grade 3 or grade 4 condition.
13. Strata found few direct linkages between the discussion in the AMP and capex forecasts to justify the need for an overall 30% increase in capital expenditure between 2016/17 or the level of R&R capex forecast for 2017 and onwards. The AMP does not provide the necessary assurance that the forecast R&R capital expenditure is prudent and efficient.

Strata recommendation to the Commission for AR&R forecast capital expenditure

14. Strata recommends that the Commission requests that First Gas provide further information to support its R&R capex forecasts for:
 - 1) The main pipe programmes;
 - i. pre-1985 PE pipeline replacement programme;
 - ii. Hamilton City small pipeline replacement programme (including the mechanical coupling upgrade);
 - iii. Hamilton City cathodic protection upgrade project.
 - 2) DRS replacement and renewal programmes.
15. Thank you for the opportunity to undertake this additional assessment of First Gas's R&R forecast expenditure. Please contact me if you require any additional information.

Regards



Bill Heaps
Managing Director
Strata Energy Consulting Limited