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Submission on Advanced Gas Metering Infrastructure - Consultation Paper 7 August 2023

1. This is Vector Limited's (Vector) submission on the Gas Industry Company's (GIC) Consultation Paper, Advanced Gas Metering Infrastructure – Consultation Paper, dated 7 August 2023. We acknowledge the GIC's related papers on these matters and agree that feedback to this Consultation Paper should help inform the Statement of Proposal ("SOP").
2. Vector is committed to working with GIC, the AGMI working group and other industry participants and our customers to help ensure the benefits of advanced gas metering are realised and unlocked for the long-term benefit of consumers, as well as to support New Zealand's energy transition and decarbonisation goals.
3. We strongly recommend the GIC add 'access to data' (particularly distributor access) to their list of priority A issues. Access to data is critical to unlocking value across the energy industry and for gas distributors to have a better line of sight across their network to inform their operational plans so that investments are optimised, response to emergencies and failures is swifter, interruptions are reduced, and modelling and forecasting can be verified. All of this is critical to the new gas future that we envisage.
4. Gas distributors presently only have access to metering data from legacy gas meters that are read monthly (at the most frequent). Important decisions such as network planning, maintenance and investment have been taken to date using this high-level data, with numerous assumptions being made in converting monthly data to hourly data. In the steady-state gas sector of the past that has been manageable; but we are now facing an unprecedented change across the energy industry from swiftly evolving technology, sweeping changes to government policy and fundamental shifts in consumer demands.
5. Smart gas meter data can provide a much-needed line of sight for gas distributors to better understand this unprecedented change, through valuable data insights and visibility of usage patterns and levels across household, street and network levels, at a much more granular level than has ever been the case.

6. The remainder of our submissions focuses on the issue of distributor access to data. We reflect on some of our experiences as an electricity distributor attempting to access electricity smart meter data, which continues to be a frustrating process.

Why is data needed?

7. As Vector noted in its submissions to the Input Methodologies¹, the scale of investment required to meet future electricity demand is unprecedented and is needed now. Some of this future electricity demand will come from gas customers transitioning to electricity. For gas distribution businesses the future is highly uncertain, with demand declining² in some parts of New Zealand (outside of Auckland) and potential renewable options also being explored. We need to understand the forecasted rate of this transition, which smart gas meters can give us at the ICP level at least. Any transition from gas to electricity needs to be orderly, free from asset stranding risk and fair to customers.
8. Smart gas meter data would give gas distribution businesses granular visibility of usage on their network, so that assets and the network itself can be planned and managed through their long-lived cycle. By analysing historical consumption trends and understanding peak usage periods, distributors can optimise their distribution systems to meet customer needs efficiently. This aids the industry in avoiding supply shortages or excess capacity, leading to more effective resource allocation and cost savings. Smart meter data can also deliver the following, more specific material benefits, as it has for the electricity industry:
 - a. optimised infrastructure spending and planning
 - b. improved network operations practices
 - c. increased reliability and resilience, including the ability to act more swiftly in network failures and emergencies; and
 - d. verified modelling and forecasting for network operations, including for connection applications³

1 Available online at https://blob-static.vector.co.nz/blob/vector/media/vector-regulatory-disclosures/vector-submission-im-review-draft-decision-19-07-23_2.pdf

² The Climate Change Commission has recommended phasing out natural gas use in residential, commercial and public buildings. The initial report recommended a 'hard sunset' of 2050. See: Climate Change Commission, *Ināia tonu nei: a low emissions future for Aotearoa Advice to the New Zealand Government on its first three emissions budgets and direction for its emissions reduction plan 2022 – 2025*, 31 May 2021 (available: <https://www.climatecommission.govt.nz/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf>).

³ Currently our modelling and approvals process is for any load >100SCMh and is based on the monthly consumption information we receive from retailers, which is imprecise given legacy meters are read monthly (if that). Where we have constrained networks, any application to connect additional load to these networks is often rejected, at a cost to the consumer.

9. As an example, half hourly consumption data, could help a distributor better understand what appliances are being used, and when e.g., how much is space heating, water heating etc. This will help distributors understand where issues might need to be addressed now, what to plan for in the future based on consumption patterns and trends and what assets to maintain, reinforce or invest in. This adds significant benefit to coordinated energy system planning (i.e., the interplay between gas and electricity systems).
10. It can also help the industry, better understand what energy hardship looks like in the gas sector, so that we can provide the support needed for gas customers facing energy hardship. These customers will likely find it more difficult to transition away from gas given the not insignificant cost of replacing gas appliances and will need to be further supported.
11. From a customer perspective, the additional benefits of smart meter data include:
 - a. reduced billing costs and increased privacy – no onsite visits for meter readings and more precise billing based on actual consumption rather than estimates
 - b. better informed and engaged customers – increased customer control and decisions around pricing etc
 - c. less infrastructure and environmental impacts – optimised infrastructure spend and planning
 - d. increased reliability – faster outage detection, better network insight
 - e. innovation – operational efficiency, smart grid, market evolution.

Access and minimum standards

12. We support the GIC developing or facilitating the development of industry-specific guidelines on some of the issues noted in the paper. We consider the guidelines could help cut through some of the difficulties electricity distributors are still facing regarding accessing smart meter data.
13. At a minimum, we suggest the guidelines should include the following terms:
 - a. **Half-hourly data** – distributors need individual, connection-level half-hourly gas meter data (non-anonymised or aggregated). Rather than have some meters providing half-hourly data and others providing daily data, it would be much easier to standardise for half-hourly metering data across the board. This would also align with electricity smart metering data and achieve the consistency needed for the gas and electricity sectors to jointly manage the energy transition.
 - b. a **common set of data standards** for all smart meter data e.g., similar to the electricity industry's EIEP3 file format. Without this, interoperability and data exchange will fail, as has been our experience with electricity data, because retailers tend to have their own systems and data structures. This has necessitated significant effort and investment in data ingestion on the part of electricity distributors.

- c. Inclusion of **permitted purposes** for distributor access to data – e.g. “*pricing and network planning and management purposes*” (as noted at page 13) as permitted purposes. This would be consistent with the permitted purposes in the mandated electricity Data Agreement, and we support this alignment. Unfortunately, however access to electricity data has become unnecessarily complicated due to retailers needing to be the gatekeepers of data (providing data either directly or indirectly via MEPs), necessitating additional non-value add contractual arrangements and processes and the need for ‘compliance’ audits etc. This has slowed the flow of data down immensely and more than a year later; we are still not receiving all the data we have requested.
 - d. **Direct distributor access to data from MEPs** – this is necessary to overcome some of the challenges faced by electricity distributors in accessing electricity smart meter data. Direct access, via the guidelines, should be permitted for the following reasons:
 - i. Permitted purposes for data access would provide the necessary restrictions to give retailers comfort, and as these would be similar for electricity and gas, no new concerns should arise
 - ii. some gas distributors are already receiving electricity smart meter data and have the experience, systems and technical capability to securely access, store and protect data – privacy concerns should be a non-issue
 - iii. any retailer concerns around misuse or using data for a competing purpose e.g., for load control and/or energy import/export usage, simply do not exist for gas
 - iv. the present mechanism for access to electricity smart meter data via retailers is simply not working – it is inefficient, costly and unnecessarily complicated. Direct access to data from MEPs would be much easier. It is important to realise that retailers are not the only parties needing or seeking data. Distributors equally require smart meter data and often for different purposes e.g., to plan and manage their network, which is even more critical at a time like this. Distributors may seek new or ‘novel’ types of metering data, which we must be able to have direct commercial discussions with MEPs about. It is untenable that retailers should have to consent to such arrangements for the provision of data and data services. All that retailers should care about is that the data is protected and kept secure.
14. Any privacy concerns around whether the customer has consented to provision of data from MEPs to distributors can be addressed in the following way. We support Gas Metering Service Agreements (GMSAs) between retailers and MEPs being standardised. These should be amended to require MEPs to provide metering data directly to distributors for (a) permitted purposes (b) at a reasonable cost and (c) all disclosed data to be treated and handled as if it were all ‘personal information’.
15. Retailer customer terms already likely seek customer consent to disclosure of metering data to various parties (including distributors). Customer terms could be reviewed

alongside development of the guidelines. New data agreements then only need to be negotiated and agreed between MEPs and gas distributors, and these should back-to-back the GMSA terms. We think this should be a relatively straightforward way forward and give all parties some reassurance. Cutting out the 'middleman' ultimately benefits the customer.

Why GIC should consider distributor and third party access to consumer data

16. The GIC notes in the consultation paper that it need not consider distributor access to smart meter consumption data. Vector disagrees with the following reasons noted in the paper for the following reasons:

- a. *'Gas distributors can access data via their Gas Use of Systems Agreement' (GUoSA)* – as the GIC is likely aware, legacy agreements that pre-date gas smart meters are very much the norm for the industry. Few, if any, GUoSAs have been signed. There has, in general, not been much appetite for agreeing these and retailers have even less appetite now, given the current and future context. Accordingly, accessing data through legacy agreements or GUoSAs is not a viable option.
- b. *'Gas distributors and gas retailers are small in comparison to the electricity sector and therefore there are inefficiencies associated with a standardised approach'* – we disagree. The minimum terms we recommend in any industry-specific guidance (as noted above) would achieve standardisation relatively quickly and painlessly and achieve the desired access outcomes. The GIC has the opportunity now to fix or bypass the issues the electricity sector is still navigating through. Given the deployment of smart gas meters has only just begun, the GIC could help get the right settings in place now to unlock value across the sector.
- c. *'The Consumer and Product Data bill (under the Consumer Data Rights regime) will impact the regulatory environment'* – finally we consider the CDR regime to be a big unknown for the New Zealand context. How well it will work for the banking sector and whether it would even be rolled out to the energy sector is anyone's guess. Given gas distribution businesses are making decisions now about their networks, we need access to data much sooner than any CRD regime might be implemented in the energy sector.
- d. Our energy sector is at the precipice of unprecedented change now. We need to start putting the building blocks in place now to achieve our desired outcomes. A crucial building block is universal smart meter data, and distributors having access to this, to plan and manage their network for the ultimate benefit of customers. If we are

to optimise and maximise the benefits of the energy transition into the new energy future, then data has a critical role to play.

Yours Sincerely
For and On Behalf of Vector Limited,



Monica Choy
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