

Jemena Gas Networks (NSW) Ltd

AEMC rule change consultation

Estimated meter reads (ERC0241)

Submission

Public

14 June 2018



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1. INTRODUCTION

Jemena Gas Networks (NSW) Limited (**JGN**) is responsible for meter reading services across NSW. There are currently approximately 1.4 million gas meters and 230,000 water meters which are either read quarterly or monthly within our network. JGN is only one of two gas distributors in Australia (the other being Evo Energy) to meter hot water.

Each year, we deliver approximately 7 million meter reads to the market.

We understand the impact that bill shock can have on our customers. In some cases it can result in customers sacrificing essential items in order to pay their bill. We want to ensure that estimated meter reads only occur when absolutely necessary, and in those cases avenues for customer self-reads and redress are low-effort and low-cost.

Through various process improvement initiatives, we are pleased to have reduced the rate of meter estimation from 12.6% in May 2016 to 9.1% over the 12 months to March 2018, and based on data currently available approximately 6.8% in May 2018. Table 1–1 sets out the breakdown of total meter reads for the 12 month period to 31 March 2018.

Table 1–1: JGN meter reads – 1 April 2017 to 31 March 2018

Read type	Gas meters		Water meters	
	Volume	%	Volume	%
Actual reads	4,952,568	92.7%	689,999	79.6%
Estimated reads	388,096	7.3%	176,594	20.4%
<i>System-generated</i>	149,053	2.8%	127,561	14.7%
<i>Field generated</i>	239,043	4.5%	49,033	5.7%
Controllable	29,836	0.6%	7,032	0.8%
Uncontrollable	209,207	3.9%	42,001	4.8%
Total reads	5,340,664	100%	866,293	100%

(1) System-generated reads arises from actual or estimated reads failing validation.

(2) Controllable estimates are generated by issues such as the meter reader being unable to locate the address, or a damaged meter.

(3) Uncontrollable estimates are typically no access, obstructed meter, or a dog on premise.

As can be seen from the data, the estimation rates and causes are different for gas and water meters.

Access issues are a key driver of estimated reads for both gas and water meters per Table 1–1. The overall rate of estimation would be materially reduced if bodies corporate and commercial building owners were required to provide access to the common areas of their buildings or to install industry-standard Abloy locks, which would ensure that all Network Operators (gas, water and electricity) would have access to meters located in common areas of the building. This would enable an actual read of the meter to be performed.

Additionally, for meters where access is not possible, the impact of estimation could be improved through better customer self-read processes. Jemena received and validated approximately 15,000 customer self-reads between April 2017 and March 2018.

We recommend:

- validated customer self-reads be given priority over estimates for the purposes of customer billing, creating a three-tier hierarchy in the energy legislation and associated procedures: actual, customer self-read, estimate;
- retailers being required to use a customer self-read, regardless of whether that self-read was provided by the Network Operator, or the customer directly (unless the retailer has a incontrovertible basis for considering the read to be inaccurate);
 - the AEMC consider the merits of civil penalties to ensure retailers use customer self-reads for billing;
- bills distinguishing self-reads from estimates, to mitigate potential customer frustration from seeing their self-read labelled an estimate which in turn promotes confidence in the market;
- the retailer be required to clearly and proactively advise customers of their options (including customer self-reads) in the instance where the customer receives an estimated bill;
 - the AEMC should consider engaging with customers who have received estimated bills to provide feedback as to whether the information retailers provide (both that the bill was estimated, and avenues for redress) are fit-for-purpose and opportunities for improvement; and
- obligations on body corporates to provide access to multi-unit dwelling sites (this is particularly important in large metropolitan areas) where individual unit meters and the master gas and water meters (used to convert hot water flow into gas energy consumption) can be located in secured common areas, plant rooms and rooftops, and similar obligations on building managers of commercial premises. This will increase the ability of the Network Operator to perform an actual read;
 - an alternative would be to mandate the use of standard utility industry Abloy locks. This would also have the benefit of ensuring the Network Operator could access meters for the purposes of maintenance and scheduled replacement.

As can be seen in Table 1–1, there is a higher rate of system-generated reads for water meters than gas meters. This is in part caused by challenges with water meter and meter data logger technology. We are presently exploring options for alternative communication platforms within the residential (particularly high-rise) markets to address this issue.

We recognise that some of the above recommendations:

- could impose costs on different parties, either directly or indirectly, and therefore they could also result in higher costs for customers;
 - we note that many of the consultation paper questions relate to the costs “on industry” – this is the right question but demonstrates the need to have a collaborative discussion including all stakeholders (for example via a series of AEMC-hosted workshops) about the appropriate solutions that take into account the potential for unintended consequences (the decisions made by one party in how they comply with a requirement can impact on other parties, and ultimately the customer).
- may require changes to legislation, or the Retail Market Procedures; and
- ultimately boil down to considering a trade-off, whether that be between customer bill impacts and the customer experience, or different elements of customer experience (predictable bill timing vs bill accuracy), and so consideration should be given to direct customer research / engagement to establish customer preferences.

Ultimately, we believe a principled approach should be considered to assessing the various proposals and suggestions that will be presented by stakeholders. We suggest a strawman set of principles for consideration, recognising per above there will be trade-offs between each that need to be balanced in the long-term interest of customers:

- **accuracy**—bills reflect actual usage, not an estimate;
- **simplicity**—customers should be able to understand how their bills are calculated, particularly where an estimated consumption has been used;
- **transparency**—customers should be advised of the reasons and a clear process for providing a self-read where necessary;
- **efficiency**—meter-readings solutions should reflect the lowest sustainable cost;
- **low effort**—customer experience should be low effort, including for self-reading and avenues for redress;
- **technology**—meter reading solutions should take into account current and future technology options; and
- **safety**—customers should not be incentivised to make unsafe decisions around network assets.

2. RESPONSE TO CONSULTATION QUESTION

2.1 STRENGTHENING THE REQUIREMENTS TO CARRY OUT ACTUAL METER READS

1. Do stakeholders agree with the characterisation of the issues with estimated meter reads to be addressed?

We broadly agree with the AEMC's characterisation of the issue to be addressed.

However, a complete representation of the situation would note that reasons for inaccurate estimates also include:

- ***inherent limitations of an estimation methodology***—while the approved estimation methodology seeks to minimise inaccuracy, by its nature it cannot eliminate inaccuracy and there is still potential for material differences to occur between actual consumption and an estimation. Therefore to address the prevalence of inaccurate estimates, it is important to try and maximise—to the extent efficient—the number of actual reads.
 - it is also relevant to consider the trade-offs between bill simplicity and bill accuracy in the context of the calculation of estimates. If a customer disputes an estimate and seeks to understand how that estimate was calculated, the more complex the estimation methodology (despite that complexity potentially being caused by efforts to improve accuracy), the more likely a customer will not understand the basis for the estimate and therefore ultimately not understand the basis for their bill. Of course, the better the estimate the less likely the customer will dispute the estimate in the first instance.
- ***changing usage patterns caused by a new resident***—some estimations are based on the consumption history of the meter, however, a new resident at the premises may have different usage characteristics to the previous resident (e.g. different appliances and/or household size) and the Network Operator will not be aware of this change.

2. Are there any differences in the nature of the issue for gas customers compared with electricity customers?

There may be differences in the nature of the issue for gas customers compared with electricity customers arising from:

- the varying obligations on Network Operators / meter data agents and retailers from varying gas and electricity retail market procedures and customer contracts;
- the different metering technology:
 - in Victoria, smart meters are standard for small electricity customers, and under power of choice reforms could be implemented in other jurisdictions, however current gas meters are manually read;
 - electricity meters have an optical port which potentially can facilitate customer self-read options that requires additional hardware to be installed.
- the installation of hot water meters, which is also a key difference between JGN and most other gas distributors, noting that these contribute a high percentage of estimations (due to technology constraints) and access issues where meters are located under a kitchen sink, in foyers accessible by locked security door and/or basements;
- the different bill calculation methodology;

- unlike an electricity customer, a gas customer can't readily compare the consumption value on their bill with the difference between their last and current quarter meter reads. For gas, a volumetric meter read in cubic metres is converted to an energy value in gigajoules using consumption factors (e.g. heating values and a seasonal / geographic location factor for the meter). For water meters, a Common Factor which converts the litres of water heated to gas energy consumption is applied to the individual unit litres.). Tariffs are applied to this energy value in gigajoules (not cubic metres) on the bill – retailers add their charges on top of the gas transportation charge when they bill customers.

The issues may also differ between gas Network Operators, and between electricity meter data agents (and potentially across retailers, depending on their estimation methods). This is one of the reasons why we recommend a collaborative cross-industry approach to addressing potential issues raised by the rule change proponents. This should reflect a balanced approach to stakeholder inclusion that is not driven by the significant number of retailers relative to customer groups (and Network Operators).

3. Are there any shortfalls in the way the existing provisions in the NERR protect customers from the impacts of inaccurate estimates?

- a) Do the rules sufficiently protect customers from over and under charging?**
- b) Does rule 29 provide adequate recourse for a customer to dispute a bill based on an inaccurate estimate?**

We believe consideration should be given to:

- validated customer self-reads being prioritised over estimates for the purposes of customer billing, creating a three-tier hierarchy in the energy legislation and associated procedures: actual, customer self-read, estimate;
- retailers should be required to use a customer self-read, regardless of whether that self-read was provided by the Network Operator, or the customer directly (unless the retailer has an in irrefutable basis for considering the read to be inaccurate);
 - JGN received and validated approximately 15,000 customer self-reads between April 2017 and March 2018;
 - we would support the AEMC considering the merits of civil penalties to ensure customer self-reads are used for retail customer billing;
- bills should distinguish self-reads from estimates, to mitigate potential customer frustration from seeing their self-read labelled an estimate which in turn promotes confidence in the market;
- the retailer should be required to clearly and proactively advise customers of their options (including customer self-reads) in the instance where the customer receive an estimated bill;
- obligations on body corporates to provide access to multi-unit dwelling sites (this is particularly important in large metropolitan areas) where meters can be located in secured common areas, and similarly on building managers of commercial premises;
 - an alternative would be to mandate the use of standard utility industry Abloy locks for common areas / basements etc.

To complement retailer options, JGN is in the initial phases of exploring potential customer self-read technology solutions and we understand other Network Operators may also be considering this. Smart devices could facilitate use of:

- a QR code sticker, provided by the Network Operator for the customer to attach to the meter, that provides a link to a webpage for the customer to enter their meter self-read (limitation includes awareness of QR codes);

2 — RESPONSE TO CONSULTATION QUESTION

- an app that can photograph the meter dial with in-built number recognition technology (higher upfront technology cost, lower back-end processing costs); and
- a simple photograph of the meter dial, that could be sent to the Network Operator (lower upfront costs, but higher processing costs for manual data input).

We recognise that the primary relationship with the customer for billing purposes is with their retailer, and so any technology we develop would be mindful to complement existing and new retailer processes, and not create duplicative or conflicting processes to minimise costs and customer confusion.

In terms of managing disputes, we are not particularly well placed to comment on the customer-retailer process. However, we do recognise the important role the Network Operator can and does play in resolution of such cases.

2.2 PROHIBITING ESTIMATED READS

1. What are the costs and benefits of requiring that all customer bills must be based on actual meter reads? Should this option be considered further?

We acknowledge the customer frustration that leads to requests for all bills to be based on actual meter reads.

Through various process improvement initiatives we have been able to reduce the rate of estimation from 12.6% in May 2016 (the time of B2B harmonisation in NSW) to approximately 6.8% in May 2018. We continue to look at options to further reduce the rate of meter reading estimations.

As expressed in the AEMC issues paper, requiring all reads to be actual reads would be extremely difficult (potentially impossible) to implement. We note that in Victoria that, despite a Government mandated roll-out of smart meters for electricity distributors, there are still many customers without a smart meter (generally because these customers have refused one). Approximately 5,400 of the 345,000 customers on the Jemena Electricity Network (or 1.6%) still have manually read type 6 meters.

We note that, based on our customer research, and not escaping the fact that customers want us to maximise the amount of actual reads:

- non-high rise customers believe that 1 estimate per year is reasonable; and
- high-rise customers believe 2 estimates per year are reasonable.

2.3 PROHIBITING BILLS BASED ON GROSSLY INACCURATE METER READS

1. To what extent does the option address the issues with estimated meter reads? What are the benefits?

2. How would the option be implemented by industry and what are the costs involved?

Estimates generated by the Network Operator must be in accordance with the approved estimation methodology as per Retail Market Procedures. We recommend that retailers also adopt the same approved estimation methodology when they are required to estimate a meter read (e.g. because they have not received a read from the Network Operator).

While we understand the intent of this rule change, it appears impractical to implement. For example:

- what does “grossly inaccurate” mean and how is it determined?
- what does “ensure” actually involve and is this possible given this would require retailers to know the customer’s appliance mix, changes in appliance mix, occupancy levels and holiday plans, amongst other things.

For these reasons we also consider it unreasonable to apply civil penalties on retailers for non-compliance, should such a rule be made.

To address this further, we recommend the AEMC consider options—in collaboration with customers and industry—that inform and empower customers regarding the ability to provide customer self-reads (either to their Network Operator or retailer – whichever is most efficient) and also place obligations on body corporates / strata-managers to provide access to secured common areas on multi-unit premises, and similarly building managers of commercial buildings.

2.4 REQUIRING THE RETAILER TO ACCEPT A CUSTOMER SELF-READ

1. **To what extent does the option address the issues with estimated meter reads? What are the benefits?**
2. **How would the option be implemented by industry and what are the costs involved?**

We support the proposal from Minister Frydenberg.

3. **Are there any types of metering or tariff arrangements that would make it difficult for a customer to provide a self-read?**

We are not aware of any gas meter types that would make it difficult for a customer to provide a self-read. For hot water meters, increased how-to-read-the-meter customer education and awareness may be required to maximise the accuracy of self reads obtained. Appendix A sets out the common types of gas and water meters on the Jemena Gas Network.

For all meter types, a photograph of the meter reading and device serial number would serve to ameliorate or eliminate the potential for inaccurate customer self-reads and provide additional surety to verification and validation processes, so that customer self-reads (particularly in high-rise and multiple occupancy installations) are for the correct MIRN (Meter Identifier Registration Number), device and premises address. Importantly, meters may be in locations that could present safety risks if a customer was to attempt a self-read. Promoting self-reads would need to carefully manage safety considerations.

We are not aware of any tariff arrangements that would make it difficult for a customer to provide a self-read.

4. **What are the appropriate timeframes in which a customer should provide a self-read to a retailer to inform a bill?**

There appears to be a potential trade-off between:

- retailers’ ability to achieve economies of scale (and cost efficiencies) from managing a standardised billing process
- the improved accuracy of the bill received by the customer (which in turn minimises bill shock).

The AEMC considered a similar trade-off in the Meter Read and Billing Frequency Rule change – the trade-off of bill accuracy versus bill stability – and this led to an extended 100 day retail billing timeframe (previously 3 months).

While we recommend the AEMC consider the proposal in light of that rule change outcome, we also encourage the AEMC to consider how customers could be engaged on what appears to be a cost/service trade-off decision.

5. What arrangements should apply if the retailer rejects a customer self-read? For example, should the retailer be required to provide reasons to the customer and allow the customer to rectify the self-read?

Our approach to considering this question is similar to question 4. There appears to be a potential trade-off between:

- retailers' ability to achieve economies of scale (and cost efficiencies) from managing a standardised billing process (not having to provide an explanation)
- the improved accuracy of the bill received by the customer (which in turn minimises bill shock) should they be afforded an opportunity to rectify.

We again recommend the AEMC consider the proposal in light of the Meter Read and Billing Frequency Rule change outcome, and we also encourage the AEMC to consider how customers could be engaged on what appears to be a cost/service trade-off decision.

2.5 CONSULTATION QUESTIONS ON ADJUSTMENTS TO ESTIMATED BILLS

1. To what extent does the option address the issues with estimated meter reads? What are the benefits?

2. How would the option be implemented by industry and what are the costs involved?

Our understanding is that a retailer will use an estimate (which is not a customer self-read) that reflects:

- the estimate published by the Network Operator
- the retailer's own estimate, where it considers this to be more accurate than the estimate published by the Network Operator.

Our understanding is that the vast majority of estimates that are used for customer billing would have likely been that estimate published by the Network Operator. We believe it is appropriate for the retailer to be required to clearly and proactively advise their customers of whether their bill is estimated and avenues for redress. We would recommend that the AEMC consider engaging with customers who have received estimated bills to provide feedback as to whether the information retailers provide (both that the bill was estimated, and avenues for redress) is fit-for-purpose.

3. What are the implications of an adjusted estimated meter read and how should these be addressed? For example, are there implications on the billing cycle?

Our approach to considering this question is similar to question 4 in section 2.4 above. There appears to be a potential trade-off between:

- retailers' ability to achieve economies of scale (and cost efficiencies) from managing a standardised billing process;
- the improved accuracy of the bill received by the customer (which in turn minimises bill shock).

We again recommend the AEMC consider the proposal in light of the Meter Read and Billing Frequency Rule change outcome, and we also encourage the AEMC to consider how customers could be engaged on what appears to be a cost/service trade-off decision.

2.6 STRENGTHENING THE REQUIREMENTS TO CARRY OUT ACTUAL METER READS

1. **To what extent do these options address the issues with estimated meter reads? What are the benefits?**
2. **How would the options be implemented by industry and what are the costs involved?**

Currently retailers must use their best endeavours to ensure that an actual read of the customer's meter occurs at least once every 12 months. Proposals from Minister Frydenberg and a private citizen is to shorten this to 6 months and 3 months respectively.

All parties have a clear incentive to maximise the incidence of actual meter reads. Inaccurate estimated meter reads expose both retailers and Network Operators to reputational damage and greater costs managing customer complaints. We believe that shortening the timeframe for the best endeavours obligation wouldn't materially (if at all) create a sharper incentive on retailers (or Network Operators). We therefore question the value of such a change.

3. **What would be the most effective way to strengthen the requirements to carry out actual meter reads (if any)?**

It is important to ensure that requirements around undertaking actual meters isn't at "any cost". Even if customers were prepared to bear the costs of such a requirement, it would still be impossible to achieve as there will always be some customers who do not comply with the obligation to provide safe and unhindered access to meters installed at their premises. We have also seen this play out with the Victorian smart meter rollout referred to above.

As mentioned above, the reputational damage from a high rate of estimated meter reads is significant. It can draw media and political attention, as it has with the rule change proposal from Minister Frydenberg.

Many of our gas network meter estimations occur in multi-unit dwellings in metropolitan areas such as Sydney. We can look at options for enhancing technology solutions to remotely read (via walk-by wireless technology or meter data-loggers) meters. These technology solutions come at a cost. As discussed above, we believe it would also be beneficial if there were firmer obligations on body corporates and managers of commercial buildings to provide access to secured common areas at these sites and/or mandating use of industry Abloy locks. We recommend further exploration of these opportunities.

2.7 MORE ACCURATE CALCULATION OF ESTIMATED USAGE

1. **To what extent does Dr Dodt's proposal address the issues with estimated meter reads? What are the costs and benefits of the proposal?**

We do not wish to comment on Dr Dodt's proposal regarding estimating electricity usage by taking into account whether a customer has solar panels.

2. **What other solutions would improve the accuracy of estimates where a premises has significantly changed its usage? Would the Minister's proposals in section 5.2.3 (customer self-reads) or 5.2.4**

(adjustments to estimated bills) effectively address situations where energy usage has changed significantly?

Please refer to our comments above regarding the Minister's proposals.

2.8 CONSULTATION QUESTIONS ON CIVIL PENALTIES

1. Is compliance with rule 21 of the NERR an issue, and would civil penalties help to improve compliance?

Civil penalties should be considered if a reasonable customer-own read is provided to the retailer within the agreed timeframe and not utilised for the customer billing.

Appendix A

Residential meters on the JGN network

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A1. TYPICAL RESIDENTIAL METERS ON THE JGN NETWORK

The below photos depict typical residential gas and water meters on the JGN network. Note there are additional types of residential gas meters installed including Email 610, Davies Shepherd DS-5, Toyo MT5 and BK1.6. The dials on these meters are very similar to those shown below.

2.9 GAS METERS

2.9.1 EMAIL 602



2.9.2 LANDIS & GYR E750



2.10 HOT WATER METERS

2.10.1 HYDRUS



2.10.2 MARLY II



2.10.3 ITRON AQUADIS



2.10.4 ITRON TD8



2.10.5 ITRON ULTRAMAXX

