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| APPENDIX 2-5 - NETWORK DEVELOPMENT PLAN |  |
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| 09 November 2012 |
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# Multinet’s Submission

As part of its GAAR submission, Multinet sought $10m ($ 2012) for the purposes of[[1]](#footnote-2):

1. Conducting feasibility studies on the use of existing electricity AMI infrastructure to enable the integrated reading of gas and electric meters. This would facilitate the introduction of time-of use tariffs to increase network utilisation by encouraging the take-up of new gas appliances and more efficient usage of existing appliances. The studies would involve: research and development of technology capability and integration outcomes; development of business cases and identification of possible applications and solutions; and conducting technology trials to determine the feasibility of reading gas and electric meters using AMI infrastructure. The total estimated cost of the studies over the forthcoming access arrangement period is $5 million.
2. Conduct feasibility and cost/benefit studies relating to the design of new time-of-use tariffs, and the scope for these to encourage the uptake of new appliance technologies. The studies would involve: conducting industry and stakeholder consultation to consider tariff design criteria; and research into the potential for time-of-use tariffs to encourage the increased penetration of new demand-side technologies such as tri-generation, fuel cells, and gas air-conditioning. The total estimated cost of the studies is $3 million over the forthcoming access arrangement period.
3. Develop a detailed customer data warehouse, and use this to assist retailers and appliance manufacturers to target their marketing of gas appliances to residential consumers who do not presently use gas for space and water heating. The total estimated cost of this initiative over the forthcoming access arrangement period is $2 million.

Multinet’s submission explicitly stated that the above expenditure related to “research and development’.

# AER’s Response

In its Draft Decision, the AER stated that[[2]](#footnote-3):

* The AER considers that Multinet's forecast network development expenditure would not be incurred by a prudent and efficient service provider, contrary to the requirements of r. 91 of the NGR. Multinet has not yet undertaken preliminary steps to implement the projects under its network development plan nor has it received Board approval for this expenditure. Multinet has indicated it will only undertake these network development activities where there is a net economic benefit to customers. However, Multinet has not yet examined whether these activities are expected to have a net economic benefit.
* The AER accepts that some network development expenditure may be prudent and efficient, this would occur where the projects are expected to be net present value positive and the expected long term benefit outweighs the shorter term costs. However, Multinet has not provided evidence that the activities it proposes to undertake will provide a long term benefit to Multinet or its customers. Further, Multinet stated that the benefits of this expenditure are not easily quantifiable. The AER does not consider that a prudent service provider acting efficiently, in accordance with accepted good industry practice would undertake this network development expenditure unless it can demonstrate that it is net present value positive and will deliver a long term benefit to its customers.
* The AER notes that Multinet's proposed step change in network development expenditure is discretionary in nature. The AER also notes that the efficiency sharing mechanism provides a continuous incentive to reduce opex to a prudent and efficient level. The AER considers that due to the discretionary nature of this expenditure and the operation of the ECM, that Multinet's expenditure on network development in the 2008–12 access arrangement period is prudent and efficient. As such, without being provided detailed information on which to reach an alternative view, the AER is not satisfied that Multinet's proposed increase for network development expenditure is prudent and efficient.

Each of the specific points raised by the AER is addressed in order below, as well as a broader assessment of the proposed expenditure against the Rules and the National Gas Law.

# Evaluation criteria

Broadly, Multinet agrees with the AER’s evaluation criteria, namely, that Multinet’s proposed expenditure on its Network Development Plan should be assessed against both Rule 91 as well as Rule 74. It also adds that the AER should also explicitly have regard for the need to make decisions that are consistent with the National Gas Objective, as outlined in section 23 of the National Gas Law.

Rule 91 (Criteria governing operating expenditure) states that:

*(1) Operating expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.*

*(2) The AER's discretion under this rule is limited.*

In the context of Multinet’s proposed expenditure on its Network Development Plan, Multinet considers the key issues that the AER will need to have regard for are:

* Is there enough evidence for the AER to consider it reasonable that a prudent service provider could feasibly consider that there may be net benefits to consumers in the long term from spending money on research and development in this area?
	+ If feasible, would it be prudent for that service provider to first undertake a feasibility study, or alternatively, should they go straight to a detailed cost benefit analysis and / or project approval / delivery? OR
	+ Would it have been prudent for a service provider to have spent money in the current regulatory control period investigating these issues, given the underlying drivers for that expenditure and the extent to which they may or may not have been provided an allowance for undertaking such expenditure in the current regulatory control period?
* Is the amount of proposed expenditure reasonable, given the program of work proposed?

Rule 74 (Forecasts and estimates) states that:

*(1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.*

*(2) A forecast or estimate:*

*(a) must be arrived at on a reasonable basis; and*

*(b) must represent the best forecast or estimate possible in the circumstances.*

In the context of Multinet’s proposed expenditure on its Network Development Plan, Multinet considers that the key issues that the AER will need to have regard for are:

* Has Multinet provided detailed information in support of its proposed expenditure forecasts?
* Having regard to this information, can the AER deem that the forecast estimate has been arrived at on a reasonable basis, and that it represents the best forecast/estimate in the circumstances.

Finally, the National Gas Objective (section 23 of the National Gas Law) states that:

*‘The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.’*

In the context of Multinet’s proposed expenditure on it Network Development Plan, Multinet considers that the key issue that the AER will need to have regard for is:

* Would it be in the long term interests of Multinet’s consumers for it to undertake research and development into these issues, via the undertaking of the proposed feasibility studies, given the qualitative assessment of the benefits that could conceptually flow from that investment?

# Multinet’s Revised Proposal

* 1. Assessment of the AER’s underlying rationale for its decision

Before addressing the AER’s specific concerns in detail, it should be first noted that for the first two (of the three) proposed expenditure items, Multinet’s proposed expenditure is associated with conducting feasibility studies and cost benefits studies (‘conducting feasibility studies on the use of existing electricity AMI infrastructure to enable the integrated reading of gas and electric meters’; ‘conduct feasibility and cost/benefit studies relating to the design of new time-of-use tariffs, and the scope for these to encourage the uptake of new appliance technologies’) - it does not represent the costs associated with commissioning a specific project, or program of works.

Feasibility studies are founded on testing a high level concept. This testing involves broadly assessing the potential market (or benefits) of a project, as against the potential costs. It also involves a risk analysis and technological assessment. If the feasibility study indicates that under a range of scenarios, the net present value is positive and the expected long term benefit may outweigh the costs, then a more thorough, project evaluation analysis may then be undertaken to further analyse which feasible option will maximise returns to the community (the benefit cost ratio), given the overarching objective of the project.

In light of the above, Multinet makes the point that a prerequisite to a prudent service provider committing to spending material, additional resources to commission or implement a program of works such as that outlined by Multinet is the undertaking of a feasibility studies. This is particularly important where the program/project expenditures are likely to be material, and/or the benefits case is variable. In short, the concept of undertaking a feasibility study prior to undertaking more detailed cost benefit studies and project implementation represents “accepted good industry practice”, as required by the Rules.

Notwithstanding this, the AER states that it does not consider such expenditure to be incurred by a prudent and efficient service provider, contrary to the requirements of r. 91 of the NGR, because “Multinet has not yet undertaken preliminary steps to implement the projects under its network development plan nor has it received Board approval for this expenditure”. It further states that “Multinet has indicated it will only undertake these network development activities where there is a net economic benefit to customers”…however, “Multinet has not yet examined whether these activities are expected to have a net economic benefit”. As outlined previously, the “preliminary steps to implement the projects under its network development plan” referred to by the AER are in fact the feasibility studies that are proposed by Multinet. The absence of a feasibility study and a move straight to Board approval - which is the process that appears to be implied by the AER via the disallowance of expenditure to undertake such studies - would be entirely consistent with a service provider who is not prudent and efficient, operating in accordance with accepted good industry practice, and therefore, it is entirely inconsistent with the requirements of Rule 91 of the NGR.

The AER also states that “some network development expenditure may be prudent and efficient, this would occur where the projects are expected to be net present value positive and the expected long term benefit outweighs the shorter term costs”. Multinet fundamentally agrees with this position, as this is consistent with the overall requirements of the National Gas Objective, but again, it reverts back to the previous discussion, namely, that undertaking feasibility studies is in fact a necessary precursor to undertaking more detailed, cost benefit analysis to assess whether any such project will in fact provide a long term benefit to Multinet’s customers. Therefore, the threshold question is: would it be in the long term interests of Multinet customers for it to undertake research and development into these issues, via the undertaking of the proposed feasibility studies, given the qualitative assessment of the potential benefits that could conceptually flow from that investment?

The AER also states that “Multinet stated that the benefits of this expenditure are not easily quantifiable. The AER does not consider that a prudent service provider acting efficiently, in accordance with accepted good industry practice would undertake this network development expenditure unless it can demonstrate that it is net present value positive and will deliver a long term benefit to its customers”. Again, we reiterate that for two out of the three items, the proposed expenditures are for feasibility studies – it is impossible for Multinet to definitively “demonstrate that it is net present value positive and will deliver a long term benefit to its customers”, without first undertaking those feasibility studies. Further, Multinet’s comment that “the benefits of this expenditure not being easily quantifiable” is not only true, it actually reinforces the need to undertake a feasibility study as a pre-cursor to a more detailed program/project evaluation. In particular, the fact that the benefits of the various feasible options are difficult to quantify, does not mean they do not exist, or that they should not be investigated, rather, it implies that material resources will be required to adequately identify these benefits, and then undertake high level quantifications as to those benefits. The corollary is that if the benefits were easy to quantify, and were not subject to significant uncertainty, detailed project evaluations could be undertaken straight away, without the need to undertake feasibility studies.

Notwithstanding the above, the position put forward by Multinet should not be construed as Multinet believing that the AER should accept any or all expenditure that is nominated by a regulated business as being a ‘feasibility study’ – rather, Multinet considers that the threshold test of prudency and efficiency by the AER should be underpinned by a broader assessment as to whether conceptually, the underlying basis for the regulated business concluding that it is worthwhile spending some research and development funds on the proposed issue is reasonable, and is likely to be in the long term interests of Multinet’s customers, as required by the National Gas Objective. Perhaps this is the “demonstrate that it is net present value positive and will deliver a long term benefit to its customers” that the AER is referring to. If so, Multinet notes that it addressed this issue in response to one of the AER’s questions (‘What benefits does Multinet expect to derive from these feasibility studies, will any of these benefits be realised in the 2013-17 regulatory period?’), when it stated that[[3]](#footnote-4):

* *Electricity Generators and the Transmission and Distribution networks in Victoria are constrained on hot days due primarily to air-conditioning load. Due to these constraints, spot prices become extremely volatile and end use customers bear the burden of these additional costs. Likewise, capital expenditure to support this air-conditioning peak is increasing.*
* *There would be cost benefits to Victoria if an alternative energy source (Gas) could be used to reduce air-conditioning load, one way of encouraging gas air-conditioning or insitu gas fuelled electricity generation is by introducing favourable tariffs to support their introduction.*
* *MGH’s network is underutilized in summer and can be constrained in winter so encouraging usage in the summer months would increase network utilization.*
* *If feasible, there are other qualitative benefits such as decreased Greenhouse emissions (Gas emits less carbon than brown coal). In the past these emerging technologies have been cost prohibitive but with the cost of energy increasing especially for Electricity in peak periods combined with Carbon tax benefits and cost reflective gas tariffs and reductions in capital costs there may be opportunities to encourage these technologies in Multinet’s area.*

The above provides the basis for Multinet’s view that there may be long term benefits to its customers from such a program of works, which in turn provides the basis for it, as a prudent service provider, seeking to undertake feasibility studies into these Network Development Programs. Given that the AER did not comment on the veracity of these high level drivers, particularly as the basis for the making of their Draft Decision, Multinet can only assume that the AER accepts that these benefits could potentially stem from the programs that are being investigated.

Finally, on a separate yet related issue, the AER states that “Multinet's proposed step change in network development expenditure is discretionary in nature”, and that the “AER also notes that the efficiency sharing mechanism provides a continuous incentive to reduce opex to a prudent and efficient level. The AER considers that due to the discretionary nature of this expenditure and the operation of the ECM, that Multinet's expenditure on network development in the 2008–12 access arrangement period is prudent and efficient. As such, without being provided detailed information on which to reach an alternative view, the AER is not satisfied that Multinet's proposed increase for network development expenditure is prudent and efficient”. Whilst Multinet agrees with the AER’s position – to a certain point – the assumption around prudency and efficiency in this context applies to the delivery of existing levels of service (i.e., the status quo). This underpins the price / service tradeoff which in turn underpins the whole regulatory regime. However, as is explicitly stated in its submission, Multinet’s expenditure on its proposed Network Development Plan represents a step change, or a change from the provision of the status quo. Further, the AER’s presumption also needs to be considered in the context of the fundamental driver of the proposed expenditure, namely, the roll out of smart meters in electricity. This is the precursor to the proposed expenditure on the first two expenditure items. Such metering has only been materially rolled out in the last 18 months, thus, there has not in fact been any real opportunity to contemplate such work previously.

In relation to the third expenditure item (‘Development of a detailed customer data warehouse, and use this to assist retailers and appliance manufacturers to target their marketing of gas appliances to residential consumers who do not presently use gas for space and water heating’), Multinet considers this to be an area where there is significant market failure at present. In particular, there is substantive evidence to suggest that there is information asymmetry between consumers’ knowledge of the benefits associated with installing some gas appliances, and the underlying economics associated with the installation of such appliances. Further, this is not necessarily able to be overcome by the competitive market for gas services, because neither Retailers nor manufacturers of gas appliances have the necessary access to this detailed customer data. Multinet notes that it is not uncommon for investments to be made in programs that are effectively overcoming information asymmetries such as this – for example, much of the information provision associated with the outputs from AMI meters in electricity is around making customers, and providers of services to those customers, more aware of their electricity usage, so that they are more informed when it comes to making choices as to how they consume electricity, and the appliances that they choose to purchase. These more informed choices lead to more efficient outcomes. Multinet considers, in the context of its gas network, that making such data available via a customer data warehouse would reduce information asymmetries, and increase the penetration of gas appliances and connections where it is economic to do so, which in turn is consistent with promoting efficient investment in, and use of, gas services, consistent with the National Gas Objective. Multinet further notes that a prudent service provider operating in a competitive market would adopt a similar outcome, given the situation. For example, most businesses who undertake marketing campaigns do so to not only gain brand exposure, but to explain the benefits of their product relative to their substitutes, and to break down any barriers that there might be to the procurement of their product[[4]](#footnote-5). The development of a customer data warehouse seeks to break down these barriers in a similar way.

Finally, it is noted that as part of its response to specific questions put to it by the AER on this expenditure proposal, Multinet provided a very detailed breakdown of the assumptions that have been used to derive its proposed expenditure forecasts[[5]](#footnote-6). As the AER has not commented on the efficiency of Multinet’s expenditure in its Draft Decision, we can only assume that the AER considers that Multinet’s forecast is consistent with the requirements of Rule 74, that is, that they have deemed that those forecasts have been arrived at on a reasonable basis, and that they represent the best forecast/estimate in the circumstances.

# Other issues for consideration

* 1. Research and Development Funds in Electricity

Multinet notes that its proposed expenditure on its Network Development Plan (particularly the first two components) is analogous to the Demand Management Incentive Scheme, which the AER provides regulated electricity network businesses.

The AER has previously stated that the[[6]](#footnote-7):

“Demand Management Incentive Scheme (DMIS) aims to provide incentives for Distribution Network Service Providers (DNSPs) to conduct research and investigation into innovative techniques for managing demand so that in the future, demand management projects may be increasingly identified as viable alternatives to network augmentation.”

It has also stated that[[7]](#footnote-8):

“The objective of this scheme is to provide incentives for DNSPs to implement efficient non-network alternatives or to manage the expected demand for standard control services in some other way”.

Having regard to the above, it is clear that both are ‘Research and Development” in nature, and the objectives of both are to conduct research and investigation into techniques for better utilising existing network assets. In the context of the DMIS, it focuses on projects that may provide for more efficient utilisation of the network at times of peak demand, whereas, Multinet’s proposed expenditure on its Network Development Plan is a more holistic approach to better utilising energy (electricity and gas) networks.

Multinet considers that the DMIS may provide a model for the AER to adopt in the gas industry when considering expenditure such as Multinet’s proposed Network Development Plan. It also provides a counter-point to its assessment as to what constitutes prudent and efficient expenditure for gas distribution businesses.

* 1. Underlying Regulatory Incentives to undertake such expenditure

Multinet wishes to reiterate a point that it made in response to the AER’s questions on this expenditure proposal, namely, that the current incentives to undertake such expenditure are limited under the existing regulatory model. In particular, in response to the following questions – “*will any of these benefits be realised in the 2013-17 regulatory period?*” – Multinet stated that[[8]](#footnote-9):

“It is unlikely that benefits accrue directly to Multinet in the 13 to 17 period. However the current regulatory regime largely removes incentives to invest in development of the network by setting price controls at the time of the GAAR based on historic and forecast volumes. If a Distributor were to invest in the network after a GAAR to increase volume, at most 5 years of increased volume (and associated incremental revenue) would be obtained before this revenue stream is effectively reset to zero in the next GAAR. This process therefore provides a significant market investment distortion as on average only activities with a less than 2 year payback would be undertaken, which is significantly shorter than the timeframe over which other investments in the network are assessed (often being in the order of the 30 year lifetime of distribution assets). To overcome this regulatory structure issue, funding from customers is sought via the haulage reference tariff for investment in operating a demand improvement programme. Ultimately customers funding this investment will get a return through operating costs being distributed over a larger customer base with a higher total demand, resulting in lower Distribution tariffs. It is proposed that Network Development activities will only be progressed where they have net economic returns for customers, have a coincident benefit for the Distributor, and have net greenhouse gas reduction benefits.”

Multinet reiterates the impact that the current regulatory approach has on its financial incentive to spend money to increase gas usage within period. It also notes that this disincentive is compounded further by the fact that it is likely to bear the costs of any additional operating expenditure that is not otherwise provided for in operating cost allowances, for a 5 year period, as a result of operation of the Efficiency Carryover Mechanism. Furthermore, the capital efficiency benefits that accrue to Multinet from improving its network utilisation during its peak demand periods reduces substantially, the further into the regulatory period the improved network utilisation occurs. This is due to the lack of a carryover mechanism for capital expenditure, in conjunction with the way actual capital expenditure is rolled into the regulatory asset base.

# Conclusion

Multinet does not accept the AER’s Draft Decision that expenditure on its proposed Network Development Plan is inconsistent with that which a prudent and efficient service provider would incur. In particular:

Two (of the three) proposed expenditure items are to conduct feasibility studies and cost benefits studies;

The absence of a feasibility study and a move straight to a detailed cost benefit analysis and/or Board approval, which is the process that appears to be implied by the AER, would be entirely consistent with a service provider who is not prudent and efficient;

It is impossible for Multinet to definitively “*demonstrate that it is net present value positive and will deliver a long term benefit to its customers*”, without first undertaking a feasibility study. Furthermore, Multinet’s comment that “*the benefits of this expenditure not being easily quantifiable*” is not only true, it actually reinforces the need to undertake a feasibility study as a pre-cursor to a more detailed program/project evaluation;

The reference by the AER to the ECM is inappropriate, given:

* + The proposed expenditure is a move away from the status quo (in terms the service that will be provided); and
	+ The fundamental driver of the proposed expenditure is the roll out of smart meters in electricity, which has only materially occurred in the last 18 months, thus, there has not been any opportunity to contemplate such work previously.
* Any additional expenditure required to undertake feasibility studies into these potential program of works that is not otherwise provided for in the approved regulatory allowances, is likely to be penalised under the Efficiency Carryover Mechanism for a 5 year period, whereas any financial benefit is limited to the time between implementation and the next price review period (as this is when new, higher, gas usage forecasts will be incorporated into prices);
* The AER could consider an allowance similar to the DMIA that operates in the electricity industry, in order to provide a means by which businesses can undertake research and development activities that are likely to be in the long term interests of Multinet’s customers, whilst ensuring businesses do undertake the programs outlined in their regulatory submissions; and
* Developing a detailed customer data warehouse and making such data available to Retailers and appliance manufacturers will reduce the current information asymmetries, and increase the penetration of gas appliances and connections where it is economic to do so, which in turn is consistent with promoting efficient investment in, and use of, gas services, consistent with the National Gas Objective.

1. Multinet – Gas Access Arrangement Review 2013 – 2017 – page 91 [↑](#footnote-ref-2)
2. AER Draft Decision – Multinet 2013-2017 – Attachments – page 160 [↑](#footnote-ref-3)
3. AER Information Request 24 [↑](#footnote-ref-4)
4. The advertising of solar panel providers is an example of how individual businesses seek to differentiate themselves not only from other service providers, but also, from their substitutes, namely, network service providers. [↑](#footnote-ref-5)
5. Ibid [↑](#footnote-ref-6)
6. Decision; 2010–11 DMIA Assessment; July 2012 – page 1 [↑](#footnote-ref-7)
7. Demand Management Incentive Scheme; Energex, Ergon Energy and ETSA Utilities; 2010–15 October 2008 – page 1 [↑](#footnote-ref-8)
8. AER Information Request 24 [↑](#footnote-ref-9)