

31 May 2012

Mr John Pierce
Chairman
Australian Energy Market Commission
Level 5, 201 Elizabeth Street
Sydney NSW 2000

via website: submissions@aemc.gov.au

Dear Mr Pierce

Response to Consultation Paper - AEMC Rule change – Distribution Losses in Expenditure Forecasts – Project Reference Code ERC0142

Please find attached the ENA submission to the AEMC Consultation Paper (dated 12 April 2012) on Distribution Losses in Expenditure Forecasts.

The ENA recognises the work put into the Rule change by the AEMC and appreciates the opportunity to contribute to its development.

If you have any questions please contact Jim Bain on 02 6272 1516.

Yours sincerely



Malcolm Roberts
Chief Executive



AEMC Rule change – Distribution Losses in Expenditure Forecasts

AEMC Reference: ERC0142

ENA Submission

(note this submission excludes the views of CitiPower and Powercor Australia who have provided an alternate submission direct to the AEMC)

31 May 2012

Key Messages

The key messages presented in this submission are:

- The ENA is supportive of the principle that DNSPs should consider broader market benefits when making investment decisions; it does not support the proposed Rule request in its current form.
- If the AEMC deems that some form of Rule change is appropriate to address the issue of losses, we would argue that it is more appropriately placed in Chapter 5 of the Rules to focus on investment decisions rather than Chapter 6.
- However, given the substantial overlap between the Rule request and other market reforms currently being considered (eg Power of Choice – Stage 3 DSP review), we would suggest that the AEMC delay making a determination until these other reforms have been finalised.



About ENA

The Energy Networks Association (ENA) is pleased to have this opportunity to respond to the Australian Energy Market Commission's (AEMC) Consultation Paper on the Rule change for Distribution Losses in Expenditure Forecasts.

The ENA is the peak national body for Australia's energy networks, which provide the vital link between gas and electricity producers and consumers. The ENA represents gas distribution and electricity network businesses on economic, technical and safety regulation and national energy policy issues.

Energy network businesses are valued at more than \$70 billion and deliver electricity and gas to over 13.5 million customers, employ more than 40,000 people and contribute approximately 1.25 per cent to Australia's gross domestic product. Each year they undertake investment of more than \$6 billion. Energy is delivered across Australia through approximately 48,000 km of transmission lines, 800,000 kilometres of electricity distribution lines and 81,000 kilometres of gas distribution pipelines.

Discussion

It is common practice for DNSP's to optimise (not always minimise) distribution losses in consideration with other network requirements consistent with planning, designing and operating a distribution network efficiently and prudently. This ultimately minimises the price to customers.

It is recognised there are many factors outside the control of DNSP's that affect distribution network losses. These include energy volume, the "peakiness" of network demand and therefore load factors, customer load profiles and customer requested network supply infrastructure.

It remains challenging to forecast with accuracy the projects required for network augmentation going out 7 years as part of a regulatory submission, and is based upon the best information available at a point in time. It is recognised project options will likely change when performing the detailed planning analysis, and losses are considered at that time. To explicitly consider losses at the time of proposing capex and opex forecasts is unrealistic and impractical, ultimately overstating the influence either of these forecasts has on reduction of network losses. Further, as losses are already accommodated in DNSP investment decisions through planning, design and operating considerations they are already optimised and reflected in operating and capital expenditure. Therefore, there is no need for a separate requirement for considering losses.

It is important that potential loss reductions are evaluated in the context of meeting other network objectives, as reducing network losses often involves trade-offs with other factors. Generally, network investments purely for the purposes of loss reduction are not economically justifiable as the value of the loss reduction is immaterial in light of the cost of the infrastructure. Consequently, investing for such purposes would likely be contrary to the principles of building and operating the network in an efficient and prudent manner. Loss reductions are generally only cost effective where they leverage off other works. Therefore, whilst network losses are not an appropriate investment driver they may influence the choice of possible investment options that are being implemented to meet other network requirements.

As noted above, it is common practice for DNSPs to consider network losses in making their investment decisions. When making a capital investment decision to address the projected limitations of the distribution system, the National Electricity Rules (NER) requires the DNSP to carry out an economic cost effectiveness analysis of possible options to identify options that satisfy the regulatory test—that is, the preferred option has to either maximise the net economic benefit or minimise the cost of meeting a compliance requirement. This is the place for reduction of network losses to be considered and the RIT-D framework would be best positioned to reflect this.



Summary

Whilst ENA is supportive of the principle that DNSPs should consider broader market benefits when making investment decisions, it does not support the proposed Rule¹ request in its current form. We believe that the Rule request is not appropriate as it is too narrow in focus. Further, it would appear that the intent of the proposed Rule will likely be addressed by other market reforms currently being considered. We believe that these reforms are better positioned to address the proponent's concerns as they have a much broader focus, allowing for a more balanced consideration of competing market benefits and planning considerations.

DNSPs do not purchase energy to make up networks losses. DNSPs operation decisions on matters like determining and restoring the network configuration has negligible effect on the total distribution losses. On this basis, the rule change proposal by CDC in s6.5.6 requiring DNSPs to include electrical losses in the distribution systems in their operating expenditure forecast is pointless—all it provides is symmetry to the proposed rule change in s6.5.7 of the NER.

In addition, from a regulatory perspective the proposed amendment to 6.5.6(b) and 6.5.7(b) is not the appropriate place to address investment incentives. These clauses specify the requirements of a compliant forecast rather than investment decisions and efficiency. Whilst there is an obvious connection, we question whether this would provide an incentive that does not already exist when forecasting the most efficient and prudent costs.

If the AEMC deems that some form of Rule change is appropriate to address the issue of losses, we would argue that it is more appropriately placed in Chapter 5 of the Rules to focus on investment decisions rather than Chapter 6. However, given the substantial overlap between the Rule request and other market reforms currently being considered (eg Power of Choice – Stage 3 DSP review), we would suggest that the AEMC delay making a determination until these other reforms have been finalised.

¹ NER s6.5.6 (b) (1A) – pay regard to the cost of *electrical energy losses* in the *distribution system*; and NER s6.5.7 (b) (1A) – pay regard to the cost of *electrical energy losses* in the *distribution system*; and



Attachment 1

The answers to the questions in the Consultation Paper are set out below:

Question 1

(a) Is there evidence that DNSPs do not consider the cost of electrical energy losses when making capital and operating expenditure forecasts?

Response:

Accurately forecasting the projects required for the regulatory submission is challenging and is based upon the best information available at the time. Consequently, project options are likely to change from the time of making the forecasts due to the availability of new information and more detailed planning analysis. Therefore, explicitly considering losses at the time of preparing forecasts is likely to be unrealistic and impractical.

Losses are accommodated in DNSP investment decisions through planning, design and operating considerations and as a result are already optimised and reflected in operating and capital expenditure. Existing and proposed² mechanisms provide for consideration of network losses and importantly allows for potential loss reductions to be evaluated in the context of meeting other network objectives. This is important, as reducing network losses often involves trade-offs with other factors.

Question 1

(b) Do the rules provide effective incentives for DNSPs to make efficient capital and operating expenditure decisions? If so, what are these incentives?

Response: Yes.

The current framework already provides an incentive to take into account distribution losses as in order for the AER to accept a DNSP's forecast it must be satisfied that the forecasted expenditure reflects efficient and prudent costs. The AER is required to assess the efficiency of the forecasts of proposed expenditure which could include an assessment of whether likely loss impact on the efficiency of the proposed investment is reflected in those forecasts.

Further, we note that the Power of Choice – DSP 3 review contemplates a new incentive mechanism which would allow DNSPs to deem value from market benefits. Once finalised, this could potentially provide an appropriate and effective incentive mechanism for DNSP's to consider broader market benefits when making investment decisions.

Question 1

(c) To what extent does the EBSS impact on a DNSP's consideration of the cost of losses?

Response: EBSS in the current form does not require consideration of losses and nor does it provide an incentive for doing so. It is not appropriate to have an incentive scheme aimed at reducing distribution losses as DNSPs are constrained by the level of loss reduction which is achievable on the network. Further, as loss reduction occurs over a period of decades as

² Existing mechanisms include the direct influence of equipment losses via minimum energy performance standards (MEPS); indirect limits on equipment losses through noise limits; and indirect limits placed on network losses through meeting licensed reliability standards. In addition, expected changes to the Regulatory Test for Distribution will require consideration of market benefits such as losses in DNSP investment decisions.



opposed to years any incentive scheme is likely to be ineffective as the opportunity for loss reduction are miniscule and are likely outweighed by measurement error.

Question 1

(d) Do distribution losses significantly contribute to the price of electricity to consumers? If so, how much do they contribute and does this materiality vary between networks?

Response: There is significant variation in network losses between DNSP's due to a number of factors including customer needs, energy consumption, peak demand, load factor, load profile, customer location, the environment, weather and customer requested network supply infrastructure. One of the major factors however is differences in topography between networks. Predominantly urban networks will experience lower network losses than predominantly rural networks due to shorter distances for supply reticulation and the network elements required for supply (e.g. three phase HV vs. Single Wire Earth Return systems).

Distribution Loss factors are determined annually by each DNSP on a financial year basis, are approved by the AER and published by AEMO each April.

Question 2

(a) How might the extension of the EEO program to distribution networks address the concerns raised in the rule change request by CDC?

Response:

The proponent is concerned that as there is no Rule requirement for Distribution Network Service Providers (DNSPs) to explicitly consider the cost of network losses, DNSPs will select the least cost solution when making investment decisions, which may lead to higher losses.

We note that the proposed extension of the EEO program is yet to be finalised making it difficult to assess whether it will address the concerns raised by the Rule request. It is important to note that DNSPs have strong concerns where the proposed extension to networks does not demonstrate the anticipated physical or economic benefits.

However, our preliminary view is that if the program was extended to include a requirement for DNSP's to investigate opportunities to reduce losses and to publicly report these outcomes (Type 2 obligations) this would address some of the proponent's concerns and would provide CDC with reassurance that losses are being considered in DNSP investment decisions.

Question 2

(b) To what extent do the requirements on distribution transformers under the MEPS program encourage DNSPs to minimise distribution losses?

Response: DNSPs currently include MEPS in their tender specifications when procuring distribution transformers. This practice allows DNSPs to optimise (not minimise) distribution losses. DNSPs procurement is based on lowest life cycle cost, and therefore the lowest cost to the customer through electricity prices.

Question 2

(c) Do the requirements on distribution transformers under the MEPS program influence the broader network equipment decisions of DNSPs?



Response: No. Typically DNSP's build their network using a standard building block approach which has benefits and savings associated with volume procurement. This results in a suite of commonly utilised conductors, cables, transformers and other network equipment. Often other considerations will determine requirements prior to consideration of losses.

Question 3

(a) Will the proposed rule result in DNSPs considering the cost of network losses in preparing their capital and operating expenditure forecasts?

Response: ENA members are of the view that the proposed Rule request will not result in changes to the way capital or operating expenditure forecasts are made. At a project specific level, a decrease in network losses due to network augmentation are typically such a small improvement that applying a cost for losses would make negligible impact on options analysis.

As mentioned in response to question 1(a), at a network level it remains challenging to forecast with accuracy the projects required for network augmentation going out 7 years as part of a regulatory submission, and is based upon the best information available at a point in time. It is recognised project options will likely change when performing the detailed planning analysis, and losses are considered at that time. Therefore to say losses are considered at the time of proposing capex and opex forecasts is unrealistic and impractical, ultimately overstating the influence either of these forecasts has on reduction of network losses.

Question 3

(b) Are there any alternatives to the proposed rule that may better address the issues raised in the rule change request?

Response: DNSPs would be more supportive of network losses being considered under the proposed RIT-D requirements to cover treatment of network losses at a network project level. Alternatively, if the AEMC deems that some form of Rule change is appropriate to address the issue of losses, we suggest that it is more appropriately placed in Chapter 5 of the Rules to focus on investment decisions.

Question 3

(c) Should a similar requirement to the proposed rule be considered for transmission networks?

Response: We understand that this question will be answered by Grid Australia.

Question 4

(a) What are the likely implementation and ongoing costs associated with the proposed rule for DNSPs and the AER?

(b) Is the proposed rule likely to result in more efficient expenditure which could lead to lower electricity prices for consumers over the long term?

Response: There will be implementation and on-going cost to monitor report and audit etc for the proposed rule. Increasing regulatory burden on DNSPs without the confidence in corresponding reductions to network losses is seen as counter to the national electricity objectives with costs outweighing the benefits.

Question 5



(a) How material is the cost of losses to the expenditure by DNSPs that would not be captured under the requirements of the proposed RIT-D?

Response: All material costs attributed to distribution losses will be captured under the requirements of the proposed RIT-D.

Question 5

(b) To what extent would the guidance and worked examples proposed to be provided by the AER in the RIT-D application guidelines help determine the value ascribed by DNSPs under this proposed rule if implemented?

Response: DNSPs consider guidance by way of worked examples using the long run marginal cost of energy in the AER's RIT-D application guidelines would be useful to value distribution losses.