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1 August 2012

Mr Warwick Anderson  
General Manager, Network Regulation  
Australian Energy Regulator  
GPO Box 3131  
Canberra ACT 2601

Dear Mr Anderson,

### **Proposed Demand Management and Embedded Generation Connection Incentive Scheme (DMEGCIS)**

Ausgrid welcomes the opportunity to provide a submission on the proposed DMEGCIS to apply to NSW Distribution Network Service Providers (DNSPs) in the 2014-19 regulatory period. We submit that incentive schemes for DNSPs to seek out and undertake alternatives to traditional network augmentation in response to increases in peak demand is an important element in delivering the National Electricity Objective (NEO) in the long term interests of consumers.

It is with the NEO in mind that we do not support the proposal to unnecessarily restrict the level of funding under the Demand Management Innovation Allowance (DMIA) component of the DMEGCIS and to discontinue the operation of the D-factor scheme from the commencement of the next regulatory period in NSW. We would contend that these two changes result in no positive incentive to DNSPs to encourage greater demand side participation (DSP).

In terms of DMIA, it is important to note that it is not an incentive scheme but rather a research, development and demonstration (RD&D) fund, and while small, has proven useful in informing our forecast demand management (DM) expenditure in the regulatory determination process. While we note that the AER has expressed a view that DNSPs have utilised only a small proportion of the DMIA allowance available to them in 2010-11, the AER has also recognised the inherent flexibility of the scheme as to the profile of the expenditure over the regulatory period. This is important as early RD&D DM activities (and expenditure) were naturally evolving. For example, Ausgrid's DMIA expenditure in 2011-12 is \$661,334 compared to \$52,963 in 2010-11. Moreover, we expect to spend our allowance by the end of the regulatory period.

Ausgrid urges the AER to re-consider the proposed innovation allowance amount to a level reflecting both the size of DNSP revenues and investments and the size of future DM opportunities.

We note that the existence of a DMIA component of the DMEGCIS is a stated reason for the proposed discontinuation of the D-Factor scheme. Further, it should be noted the two schemes have different objectives, with the DMIA being an 'innovation' fund and the D-Factor an 'incentive' fund providing an additional positive incentive to the value of capital deferral from DM as an improvement in capital efficiency. Although the proposed DMEGCIS may retain a foregone revenue component to offset some of the perceived disincentives to conduct DM within the weighted average price cap, this is not an incentive. To discontinue the D-Factor, and therefore the incentive component of the DMEGCIS, undermines the purpose of the scheme.

While the D-Factor scheme originally developed by IPART (the 'IPART D-Factor') has some limitations, including its administrative complexity and its tendency to towards a narrow focus, it has also proved successful in delivering a larger amount of non-network initiatives than would have otherwise been the case. Further, amounts recovered including forgone revenue amounts claimed under the IPART D-factor have been modest compared to the delivered benefits.

Rather than discontinue the IPART D-Factor and remove incentives from DMEGCIS altogether, Ausgrid proposes a simplified 'AER D-Factor' that addresses the issues and complexities identified by the AER. As effective DM reduces the need for network expenditure, a simplified D-Factor will improve consumer price outcomes over the longer term. It also acknowledges the strong support from stakeholder submissions to the AEMC Power of Choice Review for the continuation of an incentive mechanism. The fact that there is no D-Factor incentive scheme available in Victoria may explain the negligible DNSP DM activity in that state.

The added advantage of keeping a D-Factor scheme is that it allows the AER to give effect to the expected findings of the AEMC Power of Choice Review which will be concluded in September 2012. Based on the 23 March 2012 Power of Choice Directions Paper, the AEMC recommendations are likely to recognise that there are opportunities to improve incentives and remove restrictions for DNSPs to deliver DSP (especially where there are market benefits). This is particularly important as the recently released draft distribution network planning and expansion framework rule includes a new Regulatory Investment Test for Distribution (RIT-D) which requires DNSPs to consider potential market benefits in analysis of business cases for DM.

In light of the above, Ausgrid's attached submission is focused on demonstrating that the inclusion of a higher amount of funding for the DMIA component and the continuation of a simplified D-factor scheme better reflect the factors set out in clause 6.6.3(b) of the Rules which the AER must have regard to in developing and implementing a DMEGCIS.

If you have any queries or wish to discuss this matter in further detail please contact Mr Keith Yates, A/Executive Manager Regulation & Pricing on (02) 9269 4171.

Yours sincerely



**Peter Birk**  
**Executive General Manager**  
**System Planning & Regulation**

# **Proposed Demand Management and Embedded Generation Connection Incentive Scheme, ACT and NSW distribution determinations – 2014-19**

## **Ausgrid Submission**

August 2012



## 1 Introduction

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Ausgrid submits that incentive schemes for DNSPs to seek out and undertake alternatives to traditional network augmentation in response to increases in peak demand is an important element in delivering the National Electricity Objective (NEO) in the long term interests of consumers.

It is with the NEO in mind that we do not support the AER's proposal to restrict the level of funding under the Demand Management Innovation Allowance (DMIA) component of the DMEGCIS and to discontinue the operation of the D-factor scheme from the commencement of the next regulatory period in NSW. We would contend that these two changes result in no positive incentive to DNSPs to encourage greater demand side participation (DSP).

We believe there is scope for increased amounts of cost effective DM in the NEM and that there are no inherent barriers in the National Electricity Rules (NER) to prevent this occurring. These views are widely shared by stakeholders contributing to the AEMC Power of Choice review. The capacity exists but lies dormant within the existing regulatory framework - what is missing are the incentives to activate DM

In light of the above, this submission is focused on demonstrating that the inclusion of a higher amount of funding for the DMIA component and the continuation of a simplified D-factor scheme better reflect the factors set out in clause 6.6.3(b) of the Rules which the AER must have regard to in developing and implementing a DMEGCIS.

## 2 An Improved Incentive Framework for DSP

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The three elements required to support efficient levels of DM are:

1. **Support for innovation and development** – a continuation of the DMIA scheme at a viable level sufficient to enable the consideration of wider market benefits under the proposed Regulatory Investment Test – Distribution (RIT-D) as well as to cover initiatives not included in the revenue proposal at the time of the distribution determination.
2. **DSP opportunities identified within the regulatory period (D-factor Incentive Scheme)** – as projects are reviewed (including those under the RIT-D) opportunities should emerge for DM as the most efficient solution from a whole market value chain viewpoint in the long term interests of customers. To ensure efficient DSP is delivered in-line with the NEL objectives, a DMEGCIS should allow evaluations to consider and receive a share of the unpriced transmission and generation benefits not available through market mechanisms that a network DSP option delivers. To achieve this, Ausgrid submits that a simplified D-factor incentive scheme should be applied in the 2014-19 regulatory period.
3. **DM within revenue building blocks at regulatory resets** – foreseeable short-term DM as part of efficient capital and operating expenditure would be included within the regulatory period as well as longer-term DM strategy expenditure primarily directed at efficient outcomes in future regulatory periods. Pricing initiatives directed at shifting demand are also part of the reset process. Both the DNSP business case for supporting short and long term DM and the regulated revenues should reflect the benefits to the whole value chain from a DM activity.

## 2.1 DMIA support for Innovation and Development

The overall level of DMIA funding should reflect the size of the opportunity available for DSP across the NEM. The AER states<sup>1</sup>:

*The total amount recoverable under the DMIA within a regulatory control period will be capped, based on the AER's understanding of typical demand management and or embedded generation connection project costs. It is scaled to the relative size of each DNSP's average annual revenue allowance in the previous regulatory control period.*

*For the next regulatory control period, the AER's proposed amounts for allocation to the ACT and NSW DNSPs are as follows:*

- ActewAGL—\$100 000 per annum
- Ausgrid—\$1 million per annum
- Endeavour Energy—\$600 000 per annum
- Essential Energy—\$600 000 per annum.

We note that the allocation of \$1 million per annum for Ausgrid is the same amount approved for 2009-14. It is also noteworthy that the AER approved a \$2 million DMIA allocation for Aurora Energy in its 2012-17 Aurora Energy Determination. Scaled proportionally by revenue or capital spend, a DMIA for Ausgrid should be at least \$10-15 million.

Ausgrid urges the AER to re-consider the proposed innovation allowance amount to a level reflecting both the size of DNSP revenues and investments and the size of future DM opportunities.

## 2.2 Proposal for a simplified “AER D-factor” for the DMEGCIS

The DMIA was originally referred to as a “learning-by-doing fund” and has an important role to play in addressing innovation programs that would be unlikely to be supported based on a commercial business case due to the uncertainty and risks alone. However, a learning-by-doing fund alone will not translate into appropriate levels of DM in the NEM where there are unpriced positive externalities that are not recognised and included in incentive mechanisms. This is why a D-Factor incentive scheme remains critical to the future implementation of DM.

The AER proposes to discontinue the operation of the D-factor from the commencement of the next regulatory control period in NSW. However, this is subject to the exception that expenditure on projects or programs implemented in the last two years of the current regulatory control period will be recoverable in the first two years of the next regulatory control period<sup>2</sup>.

We note that the existence of a DMIA component of the DMEGCIS is a stated reason for the proposed discontinuation of the D-Factor scheme. Further it should be noted that the two schemes have different objectives, with the DMIA being an ‘innovation’ fund and the D-Factor an ‘incentive’ fund providing an additional positive incentive to the value of capital deferral from DM as an improvement in capital efficiency.

Although the proposed DMEGCIS may retain a foregone revenue component to offset some of the perceived disincentives to conduct DM within the weighted average price cap, this is not an incentive; it only removes a disincentive. Irrespective of whether the form of control is a revenue cap or weighted average price cap, to discontinue the D-Factor, and therefore the incentive component of the DMEGCIS, undermines the purpose of the scheme.

While the D-Factor scheme originally developed by IPART (the ‘IPART D-Factor’) has some limitations, including its administrative complexity and its tendency to towards a narrow focus, it has also proved successful in delivering a larger amount of non-network initiatives than would have otherwise been the case. Further, amounts recovered in annual D-Factor submissions to the AER, including forgone revenue amounts claimed under the IPART D-factor have been modest compared to the delivered benefits.

<sup>1</sup> Proposed DMEGCIS ACT and NSW distribution determinations 2014-19, pp 10-11.

<sup>2</sup> Explanatory Statement - Proposed DMEGCIS ACT and NSW distribution determinations 2014-19, p 8 .

Rather than discontinue the IPART D-Factor and remove incentives from the DMEGCIS altogether, Ausgrid proposes a simplified, within period 'AER D-Factor' that addresses the issues and complexities identified by the AER. As effective DM reduces the need for network expenditure, a simplified D-Factor will improve consumer price outcomes over the longer term. It also acknowledges the strong support from stakeholder submissions to the AEMC Power of Choice Review for the continuation of an incentive mechanism. Moreover, it provides a real incentive rather than merely adjusting for disincentive or providing Research, Development & Demonstration (RD&D) funding.

The components for the simplified AER D-factor scheme are provided at attachment A.

### 3. Consideration of factors in the NER

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#### 3.1 How Ausgrid's DMEGCIS better reflects the factors in the NER

Ausgrid's submission is focused on demonstrating that the inclusion of a higher amount of funding for the DMIA component and the continuation of a simplified D-factor scheme ("AER D-Factor") better reflect the factors set out in clause 6.6.3(b) of the NER which the AER must have regard to in developing and implementing a DMEGCIS. Specifically, in regard to the components of clause 6.6.3(b) we submit the following:

- *the need to ensure that benefits to consumers likely to result from the scheme are sufficient to warrant any reward or penalty under the scheme for DNSPs* – this is assured through the calculation of unpriced externalities and the sharing of these benefits with customers and is not addressed under the AER's current proposal as incentives to adopt or implement efficient non-network alternatives do not exist in relation to external benefits. The recovery of amounts are on a "use it or lose it" and "opt in" basis so the risk of overfunding is removed. Positive benefit cost ratios of DM projects indicate sufficient benefits are available to share with consumers.
- *the effect of a particular control mechanism (i.e. price – as distinct from revenue– regulation) on a DNSP's incentives to adopt or implement efficient non-network alternatives* – Irrespective of whether the form of control is a revenue cap or weighted average price cap, to discontinue the D-Factor, and therefore the incentive component of the DMEGCIS, undermines the purpose of the scheme. However, the recovery of foregone revenues removes a disincentive under the weighted average price cap form of regulation.
- *the extent the DNSP is able to offer efficient pricing structures* – the simplified AER D-factor can operate independently of efficient pricing structures or be used in coordination with specific projects or proposals to enhance outcomes.
- *the possible interaction between a DMEGCIS and other incentives schemes* – the proposed AER D-factor can operate under the same principles as the DMIA in its interaction with other incentive schemes. It will not negatively interact with the incentives created by either the EBSS or STPIS as currently specified, nor should these schemes hinder the effectiveness of the DMEGCIS.
- *the willingness of the customer or end user to pay for increases in costs resulting from the implementation of the scheme* – this is inherent in the link between the estimation of the network incentives and external benefits and, while not measured directly, the sharing of benefits proposed for the AER D-factor would operate in a similar manner to the EBSS. Stakeholder support for increased DM demonstrated in the DSP3 review process suggests a strong customer willingness to support effective DM initiatives.
- *the effect of classification of distribution services, as determined in accordance with cl.6.2.1, on a DNSP's incentive to adopt or implement efficient embedded generator connections* – the proposed incentive would be available for supporting embedded generator connections.

## 3.2 A response to the AER's reasons for amendments to the current scheme

AER Reasons:	Ausgrid response
Unnecessary administrative burden which detracts from the implementation of efficient and effective DM projects or programs.	The modified AER D-Factor scheme is simplified and removes the administrative burden that has been associated with implementing the scheme. As a result, the potential benefits far outweigh the burden.
The lagged operation of the scheme.	The modified AER D-factor scheme removes the implementation costs component which has been a contributor to the lagged operation of the scheme. The modified scheme exhibits no more lag than other incentive schemes.
The D-factor scheme has a high degree of complexity	This issue is resolved through simplifying and replacing the IPART D-Factor with an AER D-factor. A proposed AER D-factor which includes a simplified calculation formula is at attachment A.
Proposed DMEGCIS is better targeted toward the development of longer term capabilities and efficiencies which may lead to a change in the decision making processes of DNSPs	The proposed DMEGIS only supports small RD&D expenditure and is not consistent with the NEO and investment evaluation requirements (made explicit in the RIT-D) to consider full market benefits. As outlined in this submission, a higher amount of funding for the DMIA component and the introduction of the AER D-factor scheme will be better targeted towards the achievement of this objective.
The proposed DMEGCIS is sufficient to promote DM and efficient connection of embedded generators in the next regulatory control period.	The proposed scale of the DMIS is less than is required for RD&D purposes and the lack of an operational AER D-factor will result in less efficient DM than would otherwise be the case.
The DMIA access criteria in the proposed DMEGCIS are sufficiently broad to allow the approval of the same scope of projects or programs as permitted by the D-factor scheme	<p>The breath of the criteria is not the issue, it is the size of the funding available. The AER should reconsider the amount to a level reflecting both the size of DNSP revenues and investments and the size of future DM opportunities.</p> <p>Scaled proportionally by revenue or capital spend, a DMIA for Ausgrid should be at least \$10-15 million.</p>
Other jurisdictions operate on the basis of a single scheme similar in nature to the DMIA and the proposed DMEGCIS. In the interests of regulatory consistency, incentives for DM in NSW should be brought into line with other jurisdictions.	The DMIA and D-factor have different objectives so adopting only one scheme is not an appropriate solution. We would submit that the development of appropriate incentives and meeting the NEL objectives is a more important goal than consistency in regulation across jurisdictions. In any event, the simplified AER D-Factor is an "opt-in" scheme and may be adopted by other DNSPs if considered appropriate.

## **Attachment A: “AER D-factor” as a component of the DMEGCIS**

The proposed DMEGCIS is based on three components:

- First is the demand management innovation allowance (DMIA) an ex-ante allowance in addition to the annual revenue requirement for learn-by-doing projects, capped and based on a use-it-or-lose-it cost recovery.
- Second is recognition and sharing of the positive external benefits of network DM in generation and transmission as an ex-post incentive in addition to the annual revenue requirement.
- Third is a foregone revenue component as an ex-post calculation of the impact of DMIA and AER D-factor initiatives on the annual revenue requirement, to be applied ex-post if the form of regulation requires it.

A simplified and more appropriately targeted “AER D-factor” is proposed to replace the current “IPART D-factor” as a component of the DMEGCIS for the 2014-19 regulatory control period. The AER will note that the proposed calculation formula removes the implementation and avoided distribution costs and greatly simplifies the calculation.

### **Access to the AER D-factor**

The AER D-factor will be an annual ex-post revenue allowance to be added to the revenue requirements in the year following an investment decision.

The estimated value of unpriced externalities in generation and transmission are to be proposed by the DNSP for acceptance by the AER as part of the determination. The deemed values of unpriced externalities should be based on the long run marginal cost of augmentation – the Market Benefit Allowance (MBA).

### **The AER D-Factor Criteria**

The AER D-factor criteria is similar to the DMIA criteria but differs in that it does not include projects or programs for capability building or research and development. It is a commercial incentive which recognises the need to incorporate unpriced externalities to ensure DNSPs' decisions are aligned with the long term interest of customers.

To be eligible for a D-factor incentive as an addition to the revenue allowance under the AER D-factor, projects and programs eligible for approval must meet the following criteria:

1. DM projects or programs are measures undertaken by a DNSP to meet customer demand by shifting or reducing demand for standard control services through non-network alternatives, or the management of demand in some other way, rather than increasing supply through network augmentation
2. DM projects or programs may be:
  - a. broad-based DM projects or programs—which aim to reduce demand for standard control services across a DNSP's network, rather than at a specific point on the network. These may be projects targeted at particular network users, such as residential or commercial customers, and may include energy efficiency programs
  - b. peak DM projects or programs—which aim to address specific network constraints by reducing demand on the network at the location and time of the constraint.
3. DM projects and programs may be tariff or non-tariff based.
4. DM projects or programs may include the connection of embedded generators.
5. Projects or programs would not be fully funded through:
  - a. market mechanisms .



- b. any other source, including another jurisdictional incentive scheme or any State, Territory, Commonwealth or other government scheme and the DMIA.
- c. forecast capital or operating expenditure approved in the distribution determination for the regulatory control period under which the scheme applies, or under any other incentive scheme in that determination.

### **Approval of claims under the AER D-factor**

At the end of each regulatory year of the next regulatory control period, the AER will review the AER D-factor Market Benefit Claim (MBC) which is the unpriced externality benefits claimed for the preceding regulatory year<sup>3</sup>. It is to be based on a estimate of the impact of DM projects or programs on shifting or reducing demand through non-network alternatives so as to reduce short or long term costs outside DNSP boundaries.

### **Annual reporting requirements**

Consistent with the current approach, a DNSP to which the scheme applies must submit to the AER a report on its MBCs under the AER D-factor for each regulatory year of the next regulatory control period. A DNSP will be required to submit its annual report under this scheme as part of the AER's annual regulatory reporting requirements for DNSPs.

The AER will review the information provided in a DNSP's annual report to assess whether the MBC is compliant with the AER D-factor criteria.

The AER will publish the annual reports to provide information to stakeholders on the results of DM projects and programs investigated or implemented under the scheme. Reports must therefore be submitted in a form suitable for publication.

A DNSP's annual report must include:

1. the total amount of the AER D-factor benefit created in the previous regulatory year, and how this amount has been calculated.
2. an explanation of each DM project or program for which approval is sought, demonstrating compliance with the AER D-factor criteria with reference to:
  - the nature and scope of each DM project or program.
  - the aims and expectations of each DM project or how each DM project or program was or is to be implemented.
  - the identifiable benefits that have arisen from the DM project or program, including any off peak or peak demand reductions.
3. a statement signed by a director of the DNSP certifying that the full costs of the DM project or program are not:
  - recoverable under any other jurisdictional incentive scheme.
  - recoverable under any other State, Territory or Commonwealth Government scheme.
  - included in the forecast capital or operating expenditure approved in the AER's distribution determination for the regulatory control period under which the scheme applies, or under any other incentive scheme in that determination.
  - recoverable through an available market mechanism.

Where a project or program extends across more than one regulatory year, a report on the MBC on that project or program in each regulatory year of the regulatory control period will be required.

<sup>3</sup> Internal costs and benefits to the DNSP of non-network alternatives are subject to the same efficiency incentives as network alternatives. They will be funded through approved capital and operating expenditures and do not form part of the AER D-factor claim.

### Compliance assessment and publication of annual report

The AER will assess a DNSP's compliance with the DMIA criteria on the basis of the information provided in its annual report. At the completion of the annual assessment, the AER will publish:

1. all annual reports submitted by DNSPs to which this scheme applies
2. a report stating the MBC approved by the AER, and its reasons for that decision.

### Final year adjustment

The AER will calculate a total carryover amount on the basis of the annual assessments in the DMEGCIS to account for any adjustments to revenue requirements.

### Calculation

The method of adjustment to allowed revenues by applying the D-factor to the control mechanism would be on the same basis as the existing D-factor and S-factor incentive schemes. This would be set out in the DNSP's distribution determination and is not addressed below. If the control mechanism required, it could include a foregone revenue component.

The amount claimed under the AER D-factor would be the sum of the MBCs for individual projects or programs. The MBC for an individual program or project would be based on the product of the Distribution Demand Reduction (DDR) in forecast peak demand at the distribution level as a result of the project or program and the Market Benefit Allowance.

Elements required in setting a MBA to calculate the amount of the MBC in an AER D-Factor could include:

- Avoided transmission and generation costs<sup>4</sup>
  - \$0.90million/MW for long run marginal cost of transmission
  - \$0.94million/MW for long run marginal cost of generation
- A benefit sharing proportion

Elements no longer required in AER D-factor calculations include:

- Implementation costs
- Avoided distribution costs

A reduction in demand affects future investment from the time at which it influences forecasts and hence planning decisions. This may come about through explicit forecasts which incorporate the demand reduction or implicitly from the demand reduction reducing actual outcomes and thus the underlying base for forecasts. Therefore, and because implementation costs are no longer required in calculations, the existing lag in the application of the D-factor incentive can be reduced under an AER D-factor.

### Worked Example

A demand management program which in year t creates a one year Distribution Demand Reduction (DDR) in forecast peak demand of 1000kVA at the distribution level (through for example increased energy efficiency) would result in the calculation of a Market Benefit Claim (MBC) based on a MBA of \$85 per kVA of:

$$MBC^t = MBA^t * DDR^t$$

$$MBC^t = (\$85) * 1000$$

$$MBC^t = \$85,000$$

<sup>4</sup> Values based on LRMC is provide in the AECOM Final advice to the AEMC on Electric and Natural gas vehicles <http://www.aemc.gov.au/market-reviews/open/energy-market-barriers-for-electric-and-natural-gas-vehicles.html>