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Dr John Tamblyn
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

**EMAIL: submissions@aemc.gov.au**

Dear John

**AEMC's Draft Report: Review of Demand-Side Participation in the National Electricity Market (Reference EPR0002)**

## 1. Introduction

United Energy welcomes this opportunity to comment on the AEMC's Draft Report on demand-side participation in the National Electricity Market.

United Energy notes the view expressed in the Draft Report that:

- the desired outcome is for demand side participation (DSP) to be used when the associated savings in supply-side costs is greater than the loss of value to consumers from using less electricity; and
- regulatory frameworks should support opportunities for efficiency-improving use of DSP to be identified and taken up.

United Energy sees a need for some of the Commission's draft findings and proposals to be re-examined from a broader perspective, to ensure that distributors are provided with stronger incentives for innovation. This is particularly important given the increase in activity expected to be associated with connecting new lower-carbon technologies to the network, and also an increased focus on the ways that energy use could be managed through the platform provided by advanced interval metering technology.

In a similar vein, United Energy also considers that the Commission's examination has overlooked the sound public policy rationale for "seeding" new and increased demand side participation, in the transition to a low-carbon economy. We think that it would be appropriate for the AEMC to adopt a broader perspective than that applied in its Draft Report, when considering the public policy case for strengthening the incentives for distributors (through mechanisms such as "D factor" schemes) to promote the uptake of DSP solutions.

This letter sets out United Energy's comments in response to the Draft Report. Our comments are confined to those that are directly relevant to the provision of distribution network services. For convenience, our comments are set out under the same main headings as those appearing in the Draft Report.

## 2. Economic regulation of networks

### 2.1 Efficacy of network price signals

United Energy concurs with the Draft Report's finding that a pre-condition of efficient DSP is that network charges accurately reflect costs, and that these cost signals are in turn communicated to individual users.

In this context, we welcome the Draft Report's finding that the regulatory framework supports the setting of appropriate, cost-reflective network charges. This finding provides an important foundation for the AEMC's review, given the key role that network charges play in encouraging efficient DSP by providing signals to consumers about the network cost implications of their consumption decisions.

### 2.2 Rationale for additional arrangements to facilitate the uptake of DSP

United Energy also agrees with the Draft Report's findings that network charges are, unavoidably, too imprecise to signal costs at different locations and times with sufficient accuracy to capture *all* opportunities for efficient DSP. We therefore concur that there is a case for complementary DSP contracting by network businesses to improve efficiency. That said, it is also important to recognise (as the Draft Report does) that significant work is underway - through the rollout of advanced interval meters in some jurisdictions including Victoria - to address the barrier of metering technology for small customers.

Advanced interval metering technology will provide a very material step-change in the information flow to all consumers, and could create an environment in which consumers are much more responsive to electricity prices. As discussed in further detail in section 2.5 below, subject to further research and development, it is also expected that advanced interval metering technology will provide a platform for the development of innovative DSP.

We note the Commission's draft finding that the basic model of price cap regulation provides regulated network businesses with financial incentives that are consistent with efficient use of DSP. In this regard, the Draft Report states that:

> "This finding implies that additional regulatory measures to amend the operation of price caps in respect of the use of DSP (such as the 'D-factor' adopted by IPART in its 2004 review of distribution business in NSW) are not required to promote the efficient contracting for DSP, but rather should be viewed as a subsidy to DSP." [1]
>
> "Accordingly, there is no economic basis for providing additional incentives for network businesses to achieve efficient levels of DSP under a price cap form of regulation or to

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[1] AEMC, *Draft Report: Demand-Side Participation in the National Electricity Market*, 29 April 2009, page 17.

> compensate them for the revenue foregone when they do adopt DSP incentives. Indeed to do so is likely to encourage them to pursue DSP beyond the point where it is socially efficient."[2]

The reasoning set out in the Draft Report is founded on an assumption that a "socially efficient" level of DSP will be delivered through market interactions where:

- environmental externalities are not valued (at a time when community concerns regarding the environmental impact of energy production and consumption are higher than they have ever been, and are continuing to increase); and

- the technology for facilitating efficient further demand side participation is in its infancy.

Prima facie, there appears to be a sound public policy rationale for "seeding" new and increased demand side participation. This is reflected in:

- the establishment of IPART's D-factor incentive scheme, which is intended to encourage the establishment and development of an "infant industry"; and

- the application by the UK energy regulator (Ofgem) of a £1.50/kW/yr incentive rate to distributors to reward them for the connection of embedded generation to their networks. This incentive scheme has been justified with reference to the UK Government's Energy White Paper that sets out its long-term ambition for 60% reduction of UK's carbon dioxide emissions by 2050; and an industry view that distribution network companies do not have strong incentives to connect distributed generation.[3]

In this context, it is noteworthy that the AER's April 2009 final decision on the demand management incentive scheme (DMIS) to apply to Victorian distributors over the 2010-15 regulatory period acknowledged that the scheme is "modest"[4]. Notwithstanding this, the AER's final decision also stated:

> "The AER acknowledges that demand management is at an early stage of development in Australia, and that further research is required before establishing high powered incentive arrangements that will deliver economically efficient demand management."[5]

In light of the foregoing discussion, it would be appropriate for the AEMC to adopt a broader perspective than that applied in its Draft Report, when considering the public policy case for strengthening the incentives for distributors to promote the uptake of DSP solutions. We encourage the AEMC to carefully consider this matter.

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2 Ibid, page 19.

3 Mott MacDonald/British Power International, DG-BPQ Analysis Summary of Findings, Final Report for Ofgem, March 2004.

4 AER, *Final Decision: Demand Management Incentive Scheme - Jemena, CitiPower, Powercor, SP AusNet and United Energy - 2011–15*, April 2009, pages 7, 8, 13, 18, 24 and 26.

5 Ibid, page 8.

### 2.3 Economic regulation and financial risk for networks using DSP

Page 24 of the Draft Report states:

> "There is an imbalance in the risk of recovering revenue between capital and operating expenditure that creates a bias against expenditure on DSP. This occurs because, unlike for capital expenditure, a network owner needs to seek approval for ongoing operating expenditure on DSP from the AER at each regulatory determination."

United Energy concurs with this finding. We welcome the Commission's proposal that the NER relating to distribution revenue regulation be changed to align the risks and payoffs between capital and operating expenditure, to provide certainty that ongoing expenditure on DSP initiatives is recovered over successive regulatory control periods, and is not subject to review by the AER.

### 2.4 Shifting expenditure from capital expenditure to operating expenditure

Page 25 of the Draft Report explains that differences in the use of an efficiency carry-over mechanism (ECM) between capital and operating expenditure can distort the incentives between building infrastructure and contracting for DSP.

United Energy concurs with the draft findings on page 25, which state:

> "If only applied to operating expenditure, an ECM appears to penalise efficient substitution of network infrastructure (capital expenditure) with DSP (operating expenditure). This can create a barrier to efficient DSP."

It is noted that in relation to this matter, the AER's final decision on the DMIS for the Victorian distributors stated[6]:

> "Where expenditure on demand management that has been undertaken within a regulatory control period has not been contemplated in approved opex or capex forecasts, but rather, undertaken as part of the DMIS, it may result in an increase in opex above forecast levels. Under ordinary circumstances, this could lead to a corresponding penalty under the EBSS [efficiency benefit sharing scheme]. To address this issue, the AER will exclude identifiable opex on non-network alternatives from the actual and forecast opex amounts used to calculate carryover gains or losses under the EBSS."

The approach adopted by the AER is canvassed in the Draft Report as one possible response to the issue of bias against DSP where an efficiency carry over mechanism exists for operating expenditure but not capital expenditure. As noted in the Draft Report, another solution would be to reinstate an efficiency carry over mechanism for capital expenditure. In regard to this solution, the Draft Report asserts (on page 25) that the rewards for deferring capital expenditure are "higher than intended". United Energy questions this assertion. Our analysis suggests that where a distributor is rewarded under an EBSS for efficient deferral of capital expenditure, the total present value cost of distribution services to customers is lower than the cost that would otherwise be incurred by customers had the expenditure not been deferred. We invite the Commission to give this matter further careful consideration.

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[6] Ibid, page 10.

## 2.5 Incentives for innovation

Page 27 of the Draft Report explains that there is an issue as to whether regulated network businesses have adequate incentives to innovate, including by exploring the potential benefits and costs of greater use of DSP. The Draft Report proceeds to state that:

> "Due to the alignment of forecast revenues to forecast costs at every revenue reset, the building blocks framework provides relatively weak incentives for innovation. A possible option to address this weak incentive includes providing an allowance for network owners to recover expenditure for approved innovation projects outside of the standard expenditure requirement.
>
> In other contexts, this issue has been addressed by changing the regulatory framework to make explicit allowances for expenditure on innovation on a 'use-it-or lose-it' basis, and in tandem with a compliance and reporting framework to guard against the money being used on inappropriate projects.
>
> We think this is an appropriate framework to develop for implementation in the NEM. This has the advantages of limiting total expenditure risk to customers by placing a cap on the funds available, and by limiting the use of any funding to 'accredited' projects."

United Energy notes that under the AER's DMIS for the 2010-15 regulatory period, the company will receive a demand management innovation allowance (DMIA), which the AER itself describes as "modest" (at $400 000 per annum). The allowance is to be provided on a "use-it-or-lose-it" basis.

Whilst United Energy naturally welcomes the provision of such an allowance, we note that at best, it only partially addresses the need to provide incentives for innovation, particularly in light of the Commission's recognition (on page 27 of the Draft Report) that:

> "Innovation in electricity networks is likely to become increasingly important. This is principally because there is likely to be significant new activity in connecting new lower-carbon technologies to the network and also an increased focus on the ways that energy use can be managed."

Moreover, it is surprising that the Commission has proposed what is essentially a cost-recovery mechanism with very weak incentive properties, notwithstanding its observation (on page 28) that:

> "A network owner will have an incentive to innovate if it expects to earn more profit by doing so."

As also noted by the Commission (on page 28 of the Draft Report):

> "The process of resetting allowed revenues periodically may impact on the perceived benefits of innovation. If innovation delivers cost savings, then there is a likelihood that the AER will adjust future revenues downwards at the next re-set to reflect the cost savings. This limits the flow of profits for the business to a maximum of five years while the costs may require a longer pay-back period. Consequently, network owners may decide not to incur costs on developing innovation, or focus their efforts on projects with relatively short (or certain) pay-back periods.
>
> Such a conservative approach to innovation may lead to under-investment. In a period of significant change in the energy sector, consumers may be better off in the longer term if network owners were to take on greater levels of expenditure and risk in respect of innovation."

United Energy agrees with Commission's observations regarding these particular matters. It is disappointing therefore that the Commission proposes to provide only a modest allowance for expenditure on innovation on a 'use-it-or lose-it' basis. United Energy considers that the Commission's proposal falls well short of providing distributors with sufficient incentives to innovate because, as noted in the Draft Report:

- any business (including an electricity distributor) will only have an incentive to innovate if it expects to earn more profit by doing so; and
- the present building block approach (which essentially equilibrates costs and allowed revenues every five years) effectively imposes a very short payback period of 5 years or less on all DSP investment opportunities.

We urge the Commission to consider these issues in further detail in the course of preparing its final report.

## 3. Service Incentives and Reliability Standards

### 3.1 Mandatory service standards – planning and reliability standards

Page 32 of the Draft Report noted:

> "DSP options and network options are not perfect substitutes as they can each provide different levels of reliability. If the planning standards do not allow a consideration of the relative cost of an option and its relative impact on reliability (i.e. an economic methodology), then there is a bias against DSP. To address this concern in transmission, the Commission's Final Report to the MCE for the Transmission Reliability Standards Review recommends that transmission reliability standards be economically derived using a customer value of reliability or similar measure and be capable of being expressed in a deterministic manner."

In its submission of 17 April 2009 on the Commission's review of a national framework for electricity distribution network planning and expansion, United Energy noted that the Commission's recent Policy Recommendation[7] regarding the amalgamation of reliability and market benefits in the regulatory investment test for transmission (RIT-T) was as follows:

> "Project assessment shall be carried out under a cost-benefit framework. The purpose is to identify options which maximise the present value of net economic benefits (or minimise the present value of net economic costs) subject to meeting deterministic reliability standards (where they apply) (RIT-T Rules, clause 5.6.5B (b) and (c)).
>
> Under the RIT-T, mandatory reliability obligations would be met by the option that had the highest positive net present value (NPV) or lowest negative NPV. Where there is no underlying mandatory reliability obligation (an issue solely motivated by the delivery of market benefits) then the test would be met by the option which had the highest positive NPV (RIT-T Rules, clause 5.6.5B (c)(11).
>
> Where deterministic standards exist, only the incremental reliability benefits delivered in addition to the level of reliability required by the standard will have to be quantified for the purpose of the RIT-T (RIT-T Rules, clause 5.6.5B (c) 7)."

In its 17 April 2009 submission, United Energy stated that:

- The regulatory test for distribution (RIT-D) should provide for project assessment to be carried out under a cost-benefit framework that recognises and accommodates the investment requirements driven by any applicable deterministic standard.
- In this regard, the approach to amalgamating reliability and market benefits in the RIT-T could probably also be applied in the development of the RIT-D.

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[7] AEMC, *National Transmission Planning Arrangements: Final Report to MCE*, 30 June 2008, page 44.

- United Energy supported the Commission's view that distribution planning and investment decision analysis should be transparent and inclusive of all interested participants and, importantly, be efficient and proportionate.

Following on from the third point noted immediately above, United Energy strongly concurs with the Commission's statement (on page 33 of the Draft Report) that:

> "There are, however, reasons that a probabilistic planning standard may not always be preferred. The Reliability Panel found that deterministic planning standards can provide improved transparency as the required standard is easier to interpret. In addition, due to the number of augmentations required for distribution networks it may not always be practical to undertake detailed economic assessments in each instance."

United Energy also concurs in principle with the Commission's conclusion (page 33) that:

> "Requiring deterministic planning standards to be economically derived, such that they consider customer values of reliability, will improve the prospects for the efficient inclusion of DSP."

Indeed, it is noted that United Energy's 2008 Distribution System Planning Report[8] explains that:

> "The planning approach adopted by UED is probabilistic, taking into account the combination of load profiles, plant ratings and plant failure rates to quantify the exposure of customers to loss of supply. The approach allows an economic balance to be made between the cost of network reinforcement and the probability-weighted cost of loss of supply to customers, plus other benefits such as energy loss reduction."

On this basis, United Energy notes that the network planning and reliability standards it applies under the existing regulatory framework readily accommodate full consideration of DSP.

### 3.2 Discretionary service standards – service incentive schemes

United Energy concurs with the Commission's draft findings (on page 34) that:

- the existing service incentive schemes for distribution do not provide a barrier to DSP; and
- the service incentive schemes allow network owners to appropriately compare levels of reliability and continuity of supply with likely penalties or benefits.

### 3.3 Distribution network planning

Page 37 of the Draft Report states:

> "As noted in the previous chapter, network owners have financial incentives to minimise the costs of delivering their services to the required standards. Where DSP is the more cost-effective option, network owners should have the incentive, irrespective of any other obligations, to procure the service. However, it is also recognised that there is no competition for the

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8 This report is published in accordance with the requirements of the Victorian Electricity Distribution Code. A copy can be obtained from United Energy's web site at: http://www.ue.com.au/industry/download/2008_UED_DSPR.PDF

> provision of network services. Therefore, in order to provide market participants with more assurance that only appropriate augmentations are undertaken, network owners are subject to a number of regulatory obligations in terms of how they plan network investment."

United Energy questions the suggestion that in spite of the existence of incentives to minimise costs, price-capped distributors must, in the absence of competition, be subject to further administrative and prescriptive forms of regulation to ensure that they act in accordance with those incentives. Nonetheless, United Energy accepts that a prescriptive planning framework exists and that framework is unlikely to be made materially less onerous anytime soon.

In its draft findings (on page 38), the Commission states:

> "There is a lack of national arrangements for distribution planning. This leads to a barrier to DSP due to the inconsistency across jurisdictions."

In response to the Commission's draft finding, United Energy certainly does not see the need for the present Victorian planning framework to be made any more prescriptive or onerous in the transition to a national distribution planning framework.

In its submission of 17 April 2009 to the Commission's review of a national framework for electricity distribution network planning and expansion, United Energy described the present arrangements in place in Victoria, noting that:

- The existing planning arrangements in Victoria have been in place for nearly a decade.
- Experience over that period demonstrates that these arrangements have been effective in fostering efficient development of the distribution networks and distributors' transmission connection facilities.
- On the basis of this experience, United Energy supports the retention of these current arrangements under a national framework.

### 3.4 Triggers for case-by-case consultation and assessment of network development proposals

The Draft Report notes that the MCE-directed review of national distribution planning arrangements requires the Commission to consider the triggers for case-by-case consultation and assessment of network augmentation proposals.

United Energy's 17 April 2009 submission to the Commission's review of the national framework for electricity distribution network planning and expansion details our views on these matters.

## 4. Network access and connection arrangements

### 4.1 The process for connection

United Energy welcomes the Commission's draft findings (on page 46) that:

> "There is a detailed connection process in the Rules which is available to all connecting parties irrespective of their size. Considering the detailed nature of these arrangements the Commission has not been persuaded that there is a significant barrier regarding the connection process. Indeed, the arrangements provide certain safeguards and protection to connection applicants."

### 4.2 Minimum technical standards

It is noted that the matter of minimum technical standards for embedded generators is to be considered by the AEMC Reliability Panel in its "Comprehensive Review of Technical Standards". That review will examine the individual technical standards based on the principles set out in the Reliability Panel's final report on the Technical Standards Review, published on 30 April 2009.

### 4.3 Connection charges

United Energy welcomes the Commission's draft finding (set out on page 51) that the connection charging framework does not represent a material barrier to efficient DSP.

### 4.4 Network support agreements

Page 54 of the Draft Report states:

> "If an embedded generator is not able to fairly negotiate with a network owner they may not receive payments that accurately reflect the benefits they are providing.
>
> Larger embedded generators are the most likely to have network support agreements and, due to their size, have sufficient capability to negotiate with the DNSP. Given network support agreements will predominately apply to these generators, and the lack of conclusive evidence in submissions, we do not consider the negotiation of network support agreements to be a barrier to DSP."

United Energy welcomes the Commission's draft findings.

It is also noted that in relation to small embedded generators, such as solar micro-generation, the Victorian Parliament is presently considering a bill under which a distribution business will be required to provide a residential customer (with 3.2 kW of solar capacity or less) with a 60c/kWh credit for all net energy fed back into the distribution network. The proposed feed-in tariff will be applied to the first 100 MW of installed capacity over the next 15 years.

## 5. Concluding comments

As noted at the outset, United Energy notes the Commission's view that regulatory frameworks should support opportunities for efficiency-improving use of DSP to be identified and taken up. However, United Energy also sees a need for a broader perspective to be adopted by the Commission, to ensure that distributors are provided with stronger incentives for innovation in a period of significant change in the energy sector. United Energy also considers that the Commission's examination has overlooked the sound public policy rationale for "seeding" new and increased demand side participation, in the transition to a low-carbon economy.

United Energy looks forward to continuing to participate in the Commission's review. In the meantime, should you or your staff have any queries regarding this submission, please contact me on (03) 8540 7819.

Yours sincerely

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