

VALUE OF CUSTOMER RELIABILITY IN THE NEM

A REVIEW BY THE AUSTRALIAN ENERGY MARKET OPERATOR

A submission to the June 2011 Issues Paper from a small consumer perspective.

Att: Richard Hickling, Principal Economist, AEMO

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BACKGROUND

VCR

The Value of Customer Reliability (VCR) is a numerical parameter of significant potential use in the operation, planning and regulation of electricity systems. VCR represents the dollar value that customers place on the reliable supply of electricity – an indicator of customers' *willingness to pay* for not having supply interrupted. It is not a parameter that can be measured directly and it is not a parameter that has a single value applicable to all customers across Australia's National Electricity Market.

It is a parameter that must be approximated or estimated and the methods by which this is done will impact on the uncertainty with which it can be determined. In turn, the uncertainty with which it can be determined should influence the way in which it is used.

Late in 2010, the Australian Energy Market Operator (AEMO)¹ released a background paper and sought input from interested parties as part of its review of the most suitable approach to establishing and maintaining up-to-date Australian estimates of VCR.

A submission was prepared by Andrew Nance as end-use customer representative on the Australian Energy Market Commission's Reliability Panel in consultation with members of the *National Consumer Roundtable on Energy* (particularly Mr Tony Westmore at the Australian Council of Social Service, **ACOSS**² and Mr Craig Memery at the Alternative Technology Association, **ATA**³).

AEMO subsequently released an Issues Paper in June 2011. It was pleasing to see that AEMO fully considered the previous submission.

This brief submission is in response to the June 2011 Issues Paper.

Introduction

Like any aspect of the regulatory framework, the consideration of VCR should be done on the basis of the National Electricity Objective (NEO), as stated in the National Electricity Law:

... to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to –

- *price, quality, safety, reliability, and security of supply of electricity; and*
- *the reliability, safety and security of the national electricity system.*

To the extent that 'efficient investment' is for the long term interests of consumers and efficiency needs to be assessed against a 'willingness to pay' it is apparent that VCR, a measure of 'willingness to pay', will be used either explicitly or implicitly in the market. Such a direct relationship to the NEO suggests that the reliable determination and appropriate use of VCR measures is a high order need of the market.

¹ <http://www.aemo.com.au/planning/vcr.html>

² www.acoss.org.au/about_us/what_we_do/

³ www.ata.org.au/projects-and-advocacy/

DISCUSSION

1. The Issues Paper outlines two options, the second of which is to develop a comprehensive determination of new, NEM wide VCR values. The paper appears to acknowledge the merit of a comprehensive approach but, constrained by the cost of doing so, states a preference for Option 1 – adopting figures derived from previous Victorian surveys.
2. The cost of developing a comprehensive suite of VCR values is acknowledged. It is felt that, as indicated in the AER submission to the background paper, VCR has a wide range of applications in the NEM. AS such it is recommended that if AEMO does proceed with Option 1 that it write to either the MCE or AEMC or both advising of the need for a broader study and its willingness to contribute to it (as opposed to having to fund it all).
3. The recommendation (and discussion within the paper) essentially confirms that the current VCR suite is satisfactory for transmission planning but not appropriate for distribution level use. The AER must therefore be notified formally that they should exercise great caution in using the AEMO figures for their STPIS schemes.
4. In relation to Option 1, the use of regional VCRs derived from the Victorian figure, a number of issues remain unresolved:
5. The nomination of a tolerance band for testing sensitivity is supported. However, the use of +/- 20% is not evidenced in the Issues Papers. As discussed in the previous submissions, the customer segments exhibit quite varied VCR figures. Table 1, below is taken from the Oakley Greenwood (OGW) spreadsheet posted on the AEMO webpage for this inquiry:

Sector-by-sector results (\$/MWh)

	Vic	Qld	NSW	SA	Tas
Residential	20,395	15,318	17,190	16,469	18,532
Agricultural	111,062	62,887	68,396	133,493	76,716
Commercial	90,763			18,649	
Industrial	36,074	31,427	32,055	32,905	34,157
State-wide	50,258	37,198	35,085	38,037	42,022
Residential / State-wide	41%	41%	49%	43%	44%
State-wide - 20%	\$ 40,000	\$ 30,000	\$ 28,000	\$ 30,000	\$ 34,000

Table 1: OGW derivations of region specific VCRs (for 2007)

6. Table 1 adds two rows to the OGW table (shaded). The first calculates the relation between the residential segment VCR and the state-wide (weighted average). The final row calculates the ‘-20%’ lower bound.
7. As can be seen, the ‘-20%’ does not reach the estimated VCR of residential consumers in any NEM region. It does not even reach the estimated VCR of industrial customers in all regions. It is apparent that the sensitivity would need to extend to at least ‘-60%’ to include the estimated residential figure.
8. It is recommended that the prescribed tolerance range be extend to ensure that, at least, the assessment includes the VCR assigned to all customer segments.
9. The Issues paper does not seem to acknowledge the uncertainty in the derived VCR estimates. Further, the use of up to 6-significant figure precision for figures that likely have an uncertainty of over 20% is not good practice.

SUMMARY

It is apparent that various regulatory processes have extrapolated and inferred from the Victorian VCR figures and it is a concern that this has perpetuated without a significant testing of the validity of such an approach.

It is also apparent that estimating '*willingness to pay*' is a complex undertaking but relevant to a very wide range of stakeholders. From an electricity consumer perspective, the application of VCR estimates is clearly pervasive and, for that reason, greater effort in providing a more sophisticated approach to its determination and application is well overdue.

It is disappointing that this current process will only be making limited progress towards this broader aim. It is acknowledged that AEMO is but one of a number of stakeholders with a vested interest in robust VCR estimates and AEMO is encouraged to ensure this is understood by the MCE, AEMC and the AER.

I trust that this brief submission is of use to AEMO and I am available to discuss these issues further.

Sincerely,



Andrew Nance