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Total Environment Centre

Submission to the Australian Energy Regulator

Objectives and Priorities of Electricity Network Service Provider Performance Reports

Discussion Paper

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Introduction

Total Environment Centre (TEC) welcomes the opportunity to provide input to the Australian Energy Regulator's (AER) *Objectives and Priorities of Electricity Network Provider Performance Reports.* TEC wishes to congratulate the AER on highlighting this important issue.

Like the AER and Minister Conlon, TEC considers performance reporting to be "a key aspect of transparency for service providers" and "an important element of the regulatory framework". TEC asserts that without transparent performance reporting it is not possible to achieve the National Electricity Objective (NEO) as transparent performance reporting helps achieve efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to price, reliability and security of supply. A similar transparency situation should apply to demand management and if the objective was more broadly defined to include environmental matters.

Proposed priorities of performance reporting

TEC agrees with the proposed priorities of performance reporting, and is particularly in support of the proposals to:

- Report forecast and actual capex and opex, and identify reasons for differences between forecast and actual expenditures;

- Report information that can be utilized for future distribution determinations, including information on cost drivers, expenditure trends, service levels and variation in network performance; and

- Report and compare the NSPs' network operations, including service standard levels and demand management information;

Forecast and actual capex and opex

Comparisons between forecast and actual capex and opex are pertinent in light of recent distribution determinations. As TEC has previously pointed out,[1] NSPs can attempt to game the regulatory system by under-estimating overall electricity sales (GWh) to secure a higher per-unit price for electricity sold through their networks and over-estimating peak demand growth (GW) to enable greater capital investments upon which future revenue could be earned.

Forecast and actual demand growth for future distribution determinations

As well as comparisons between forecast and actual capex and opex, a priority for reporting should be comparisons between forecast and actual *demand growth*, as high projections of demand is one of the prime justifications for increased network capex. Demand growth should identify both growth in total demand and growth in peak demand, as increases in peak demand are a signal for possible demand-side

[1] TEC (2010) *Submission to Australian Energy Regulator on Draft decision Victorian electricity distribution network service providers 2011—2015* 24 August 2010 p.2

investment. This should include load duration curves for each transmission and distribution network, and the raw data used to compile those load duration curves. This will allow stakeholders to accurately analyze how long each percentage of network capacity is used over the course of the year.

Demand management reporting

TEC particularly commends the proposal for reporting and comparison of NSP network operations, including demand management information. For sake of clarification, TEC interprets 'demand management' to include all demand-side network operations, energy efficiency, demand response, distributed generation, interruptible loads, direct load control, load shifting, pricing initiatives, and smart metering. Reporting on *all* demand-side projects is necessary if reporting is to achieve the desired effects of greater transparency, accountability, and performance improvements for network service providers.

Reporting demand management

TEC advocates for efficient investment in demand management (DM) projects in the NEM. DM helps to increase the economic efficiency of the NEM, while working in the long-term interests of consumers. DM increases reliability and security of supply, decreases congestion, and costs less than half that of network expansion (capex) when used to meet peak demand. [2]

Given these advantages, it is likely that an economically efficient electricity market would implement a proportion of DM to meet peak demand. However, there is little reporting on DM in the National Energy Market. For example, in the last round of Victorian distribution determinations, DM investment reporting was completely absent from some NSP proposals.[3] When it did feature, information was difficult to access and quantify both in NSP proposals[4] and AER determinations[5]. This asymmetry of information discourages active and informed stakeholder participation and prevents evaluation of NSP investment, let alone comparisons between NSPs.

When DM reporting is absent from determinations it extremely difficult to assess the level of investment in DM by NSPs or indeed whether any demand-side projects have been undertaken at all. Stakeholders are denied insight into business practices and decision making, and are unable to assess the efficiency of network investment (except to conclude that the absence of information suggests no investment in DM, which in light of the evidence presented by TEC above is likely to be extremely sub-optimal).

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[2] Total Environment Centre (2010) *Submission to the Australian Energy Market Commission Transmission Framework Review Issues Paper* p.10-21, Total Environment Centre (2010) *Demand Management and Energy Policy Development: A Case Study* of NSW Available at: http://www.tec.org.au/component/docman/doc_download/373-dm-cost-effectiveness-report-nsw

[3] Powercor Australia Limited (2010) *Revised Regulatory Proposal 2011 to 2015*, Jemena Electricity Networks (Vic) Ltd (2010) *Revised regulatory Proposal 2011 to 2015*

[4] United Energy Distribution (2010) *Revised Regulatory Proposal for Distribution Prices and Services January 2011-December 2015*, SPI Electricity Pty Ltd (2010) *Electricity Distribution Price Review 2011-2015 Revised Regulatory Proposal*

[5] AER (2010) *Victorian electricity distribution network service providers Distribution determination 2011-2015 Final Decision*, AER (2010) *Victorian electricity distribution network service providers Distribution determination 2011-2015 Final Decision — appendices*, AER (2010) *CitiPower Distribution determination 2011-2015 Final*, AER (2010) *Powercor Distribution determination 2011-2015 Final,* AER (2010) *SP Ausnet Distribution determination 2011-2015 Final,* AER (2010) *Jemena Distribution determination 2011-2015 Final,* AER (2010) *United EnergyPty Distribution determination 2011-2015 Final*

Performance reporting is an ideal medium to present information on demand management. It is a centralized, accessible medium which allows for comparison between demand-side and supply-side investment, comparisons between NSPs, and extrapolation to evaluate the efficiency of the NEM as a whole system. Following on from the benefits of performance reporting mentioned in the Discussion Paper, performance reporting of DM will:

- allow stakeholders to rate the performance of incentives such as the DMIA and regulatory mechanisms like the RIT-T in stimulating efficient investment DM;
- allow for the comparison of demand-side investment between network service providers over time;
- encourage active and informed stakeholder participation in regulatory processes'
- assist with future distribution determinations; and
- educate both consumers and network service companies on the benefits of demand-side participation.

Importantly, demand-side performance reporting will also provide insight into business practices and decision making on DM projects. As previously mentioned, lack of DM in the NEM seems inconsistent with the economic and network benefits it offers both customers and NSPs. DM reporting would allow stakeholders to better comprehend business practices and decision making, and identify barriers to the implementation of demand-side options. Identifying barriers to DM and highlighting where demand-side investment is efficient would assist with the improved performance of NSPs.

Demand Management for Electricity Distributors NSW Code of Practice

The benefits and pertinence of DM reporting can be seen in the adoption of the *Demand Management for Electricity Distributors NSW Code of Practice* by NSW DNSPs. The Code of Practice was created in 2004 "by a working group comprising NSW electricity distribution network operators, the NSW electricity transmission network operator, the NSW economic regulator, electricity user representatives, environmental and consumer groups (including the TEC) and a university representative, chaired by Integral Energy and facilitated by the Department of Energy, Utilities and Sustainability."[6] The code provides guidance for DNSPs on meeting requirements to carry out demand-side activities in their operation.

[6] NSW Government (2004) *Demand Management for Electricity Distributors NSW Code of Practice* Department of energy, Utilities and Sustainability p. 2 Available at: http://www.industry.nsw.gov.au/energy/files/electricity_connect_nsw_code_of_practice-_demand_management_for_electricity_distributors.pdf Last accessed: 20 January 2011

Section 10 of the Code outlines the importance of DM reporting:

> *"The need for reporting is twofold: it informs the market about opportunities for future development and it provides information to the economic regulator that ultimately determines whether the investment mix will be deemed prudent and therefore recoverable."*[7]

The Code lists the following items to be reported:

1. Electricity System Development Review (ESDR) issue date. If the ESDR was not issued, the distributor is to submit a plan for issuing the ESDR.

2. A summary report of zone substations that are likely to reach a capacity constraint within the next five years (compiled from the ESDR disclosure pro forma).

3. Detail the criteria used to determine the Reasonableness Test (refer to Section 7 —Specification Protocol).

4. Document the results of the Reasonableness Test for all items listed in (2).

5. Reference any details of Request for Proposals.

6. If no RFP is to be issued, the alternative action taken and its rationale.

7. Define the basis for evaluating the proposal and option/s.

8. List the results of the evaluations conducted, including assessment of cost/benefit.

9. Provide a summary report of areas investigated and programs implemented.

10. Report on other ongoing programs such as off-peak control of hot water and other end-use appliances.

The data to be reported as part of the summary report (item 9) may include:

- total number of demand management programs investigated including a summary description of each investigation;
- total number of demand management programs implemented;
- total cost of demand management strategies;
- PV of distributor operating expenditure saved; and
- PV of distributor capital expenditure deferred.

The Code shows that DM reporting can take place in the NEM, and offers benefits to NSPs, regulators and other stakeholders.

[7] Ibid p. 25

3. Reporting requirements

In addition to the reporting priorities outlined by the AER, TEC recommends the following items for incorporation into NSP performance reporting:

- A full list of requests for DM issued by the NSP
- A full list of the offers made by DM proponents to the NSP (unless the proponent has explicitly requested confidentiality)
    - Reporting on the number of DM inquiries made to the NSP (for example calls, letters, emails, submissions, proposals)
- Full reporting on the levels of DM implemented (in MWh)
- Full reporting on expenditure on DM projects (in dollars)
- Reporting on the savings achieved through the implementation of DM projects, including:
    - Avoided and deferred capital costs
    - Avoided and deferred operating costs
    - Avoided and deferred peak demand in (in MW)
    - Avoided total energy consumption (in MWh per annum)
    - Avoided or deferred network congestion
    - Avoided and deferred cost of capital (interest on loans for capex)
    - Avoided and deferred costs of capital depreciation
    - Avoided and deferred carbon costs from avoided/deferred network expansion
    - Value of increased reliability and security of supply
    - Value of decreased congestion
    - Comparison between avoided/deferred capex and opex and the cost of DM
    - Savings generated for the NSP through the implementation of DM
    - Savings passed on to customers through the implementation of DM
- Reporting on the value of electricity sales foregone
- Reporting on the planned level of DM expenditure for each of the next 5 years

- Amount of DM used to *avoid* network expansion versus amount of DM used to *defer* capex
- The avoided supply interruptions created through DM (in hours/days)
- Projected and actual peak demand
- Projected and actual overall demand
- Load duration curves for each transmission and distribution network, including the raw data used to compile these curves (to allow for accurate reporting of network use)

Even if a NSP has not undertaken any demand side projects, the above reporting requirements should still be featured in their report, even if values are zero.

Greenhouse reporting

While the environment is not explicitly mentioned as an objective in the current version of the NEO, the environment has been an objective throughout the history of the NEM.[8] The National Grid Management Council (NGMC) — one of the organizations that evolved into the NEM of today — featured a specific environmental objective as part of its First National Grid Protocol.[9] Since then, both COAG and the MCE have identified the environment as a specific objective for the NEM on multiple occasions. [10] Even today, in 2011, the first sentence on the Ministerial Council on Energy's website currently reads:

"The Ministerial Council on Energy is the national policy and governance body for the Australian Energy Market, responsible for delivering the economic and *environmental* benefits for Australia resulting from implementation of the Council of Australian Governments national energy policy framework"[11] (italics our emphasis)

Climate change is a key policy issue for both State and Federal parliaments. With developments such as the formation of business and NGO roundtables in the Federal Parliament, the release of the Prime Minister's Task Group on Energy Efficiency Report, the proposed introduction of an ETS or carbon tax, and the release of the second Garnaut Review Report, climate change is becoming a focus across government portfolios. Climate change and environmental policy is intrinsically linked to energy policy and in the future there will likely be increased assessment of the NEM's environmental performance. Stakeholders and government bodies will require environmental data (particularly data on greenhouse gas emissions) to assess the NEM's environmental performance.

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[8] McLennan Magasanik Associates (2009) *Role of the NEM in responding to climate change policies: Report to Total Environment Centre* p. 8-13 Available at: http://www.tec.org.au/component/docman/doc_download/345-mma-nem-report Last accessed: 20 Jan 2011

[9] Ibid p.8 Cf. National Grid Management Council (1992) *National grid protocol, first issue* Objectives page Available at: http://www.efa.com.au/Library/NationalGridProtocol_1992.pdf Last accessed: 20 Jan 2011.

[10] Ibid p.8-13

[11] Ministerial Council on Energy (2011) *Ministerial Council on Energy Homepage* Available at: http://www.ret.gov.au/documents/mce/default.html

Emissions reporting is a requirement of the *Demand Management for Electricity Distributors NSW Code of Practic*e, and EnergyAustralia, Country Energy, and Integral Energy all report CO_2 Reduction (Tonnes Per Year and Expected Duration) relating to each of their demand management projects.

Reporting on greenhouse gas emission reductions will assist greatly with government process and parallel energy legislation such as an ETS or the Renewable Energy Target. Reporting emissions in national NEM performance reporting will increase stakeholder education and accessibility and allow for national comparisons between network service providers.

TEC recommends the AER to include the following criteria as part of its performance reporting:

- CO_2 reduction achieved through DM projects (tonnes per year and expected duration). This should also include the saved carbon costs that would otherwise have been created through network augmentation (capex)

- CO_2 emissions created through capex and opex (tonnes created through construction and maintenance on each project)

- Area of bushland cleared in capex and opex projects (in hectares)

- Avoided bush clearing through DM projects (in hectares)

Other reporting

Performance standards and compliance

TEC believes that historical data should be included on network performance, including the additional reporting requirements outlined above. Historical performance reporting serves as a key accountability measure — without benchmarking and review against historical data, performance and forecast accuracy cannot be effectively tracked.

If historical data is excluded from performance reporting, then the AER's Regulatory Information Order should be made publicly available, as the only annual reporting on historical data with quantitative analysis.