29 April 2013

Dear Mr Pierce,

Westpac Energy supports the rule change request (ERC0156) proposed by the National Generators Forum on the public release of zone substation data.

Westpac Energy is a significant participant in the secondary market for electricity hedging contracts. We're also a participant in the Settlement Residue Auctions. Westpac Institutional Bank is also a significant lender to the electricity sector.

One of the strengths of the National Electricity Market is its high degree of transparency. Westpac is able to provide accurately priced hedging contracts to physical market participants because of the high availability of historical and real time data.

We support the publishing of half-hourly zone substation demand data, both on a historical and real time basis if possible. The publication of demand data is a natural progression of the market given the current publication of generation point data. Providing connection point demand data will allow all market counterparties to make more informed decisions and will lead to greater market efficiency.

With regard to aggregation of connection points to maintain customer privacy, we do not believe this would significantly reduce the utility of the data and should be implemented. As the NGF correctly identified, a benefit of the proposed rule change will be the ability to separately analyse residential, commercial and industrial load patterns. This ability will not be compromised by aggregating load data for large users to satisfy confidentiality requirements.

Westpac Energy agrees with the NGF's comments on how the rule change would satisfy the National Energy Objective (NEO). The NEO is the correct framework to asses this rule change request. Westpac Energy would like to make the additional comment that the National Energy Objective explicitly mentions electricity services, which is a broader concept than electricity supply. Consumer's demand for electricity services is changing structurally as well as declining quantitatively and this structural shift is poorly understood by market participants and regulatory bodies in general.

Please find below more detailed comments on the questions posed by the AEMC;

Question 1 Data availability and accessibility

(g) Does the data need to be published in a standardised format (for example, in a spreadsheet) for ease of access? If so, what is the preferred format?

The data will need to be published in a standardized, machine-readable format.

The ideal mechanism would be for the data to be made available as CSV files either over ftp or http.

Question 3 Confidentiality issues

(a) Are there likely to be issues of confidentiality surrounding the publication of zone substation data? If so, at what disaggregated level (that is, in terms of number of customers) do such considerations come into play?

Confidentiality issues for large electricity users seem likely. The substation data will still be valuable if large customers are aggregated, even up to the level of 10 customers per aggregate. When aggregating substations for confidentiality purposes, similar customer types should be aggregated together where possible.

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(b) Will aggregation of the data up to a certain number of customers avoid issues of confidentiality?

Customer confidentiality could be maintained by aggregating large loads.

(c) If so, what criteria should be used to aggregate the data? For example, should aggregation occur where there are five, three or less customers supplied from one zone substation?

The substation load data will be interesting for both its geographic detail and for detail on how different customer classes' load profiles are changing. Aggregation of customers should be high enough that identification of an individual customer's bulk energy usage is incalculable from published data. However aggregation should still be granular enough to investigate geographic or customer-class trends in electricity usage.

Segregating individual customer data from aggregates as small as thee or five would be highly difficult without another form of additional data.

(d) Will aggregation reduce the usefulness of the data for demand forecasting and econometric studies? If so, what level of aggregation should be applied to avoid the issue of confidentiality while still retaining some degree of usefulness of the data?

As mentioned in (c), aggregation granularity should preserve geographic detail and customer-class segregation as best as possible while maintaining customer confidentiality.

Question 4 Expected benefits

(a) What is the materiality of the benefits identified by the proponent?

Materially quantifying expected benefits of this rule change is a large economics project in its own right. Qualitatively, the material benefits are expected to be large. Comments below will attempt to put some context on the scale of potential benefits.

I.   Commissioning detailed econometric studies

Westpac Energy agrees with the NGF that the electricity market has been in a state of unprecedented change since approximately 2008. The electricity market has historically been characterized by slow decision making processes, as befits an industry responsible for committing large amounts of capital of multi-decade time frames. The long decision timeframe creates a substantial risk that key policy and investment decisions are being based on assumptions and analytical models that are rapidly outpaced by changing market conditions.

II.   Enable third party scrutiny of AEMO forecasts

By way of a recent example; the NGF and Macquarie generation have lodged concerns about the proposed upgrade of the VIC-SA Heywood interconnector that will cost $80 million and is modeled to have net market benefits of $191 million. While Westpac Energy does not have a position on the Heywood upgrade, it is relevant that Macquarie generation cited outdated demand forecasts as reason for their concerns.

Transmission and distribution capital expenditure is predicated on demand forecasts and accounts for roughly half of the costs of electricity supply. The Clean Energy Act, the Renewable Energy Target and the AEMC's Power of Choice review are all multi-billion dollar policies that rely in part on demand forecasts. Even a small improvement in third party scrutiny in this area could lead to substantial net market benefits.

III.   Information asymmetry

Information asymmetry does not appear to have a material benefit in itself. Additional load data availability will have net market value irrespective of any symmetry with generation data.

(b) What are your views on the value of historical and forward looking electricity demand information?

Historical demand information is easily available at a state aggregate level and is already valuable.

Electricity demand forecasts published by AEMO are useful as a base case. The NGF has been somewhat unfair in criticizing AEMO's demand forecasts. Until recently, AEMO was forced to rely on demand forecasts for NSW and QLD provided by the transmission service providers in those regions.

Electricity market participants will always wish to form their own view on future electricity demand. Several market participants correctly identified that loads were decreasing before non-independent forecasts were released based on the demand data already available. The availability of additional demand data will aid these forecasting projects and allow demand trends to be more easily revealed to a wider range of trading entities, increasing market transparency and removing market distortions due to asymmetric information, therefore leading to a more efficient market.

(c) What other benefits of the proposed rule change can be expected that have not been identified by the proponent?

AEMO forecasts project continual distributed solar deployment in the NEM even with the withdrawal of most government subsidies. IPART, ESCOSA and QCA have all recently published estimates of the value of solar PV exports to the electricity grid. A key issue identified was the mismatch between solar PV's generation profile and the typical residential customer's demand profile. Substation level load data would allow quantification of the (mis)match between solar PV generation and the load profile of customers in any given area. Identification and prioritization of areas where the mismatch is least could deliver significant net market benefits by deferring capital investment in transmission, distribution and peaking generation infrastructure.

The AEMC itself has identified $4.3-11.8 billion of potential market benefits from demand side participation (DSP) in their Power of Choice final report. The opportunities for DSP are often location dependant and customer-type specific. The evaluation and implementation of DSP methodologies will be substantially aided by the publication of substation level demand data.

(d) Are these other benefits likely to be significant?

Yes. There is approximately 2GW of distributed solar installed in the NEM that currently supplies about 2% of NEM electricity. This has mostly been installed with no consideration of the effect on peak demand either locally or on a system level.

(e) Who are likely to be the recipients of these benefits?

Consumers will be the ultimate beneficiaries of improved pricing and capital allocation decisions that will result from a more detailed understanding of demand trends. The value of electricity in the futures market can be more accurately priced if demand is understood better. Futures electricity prices help to send appropriate investment signals to the generation industry.

Question 5 Consistency of approach

(a) Should there be a consistency of approach in publishing zone substation and connection point electricity demand data? Please provide reasons as to why there should/or should not be a consistent approach.

There should be a consistency of approach in publication to the best extent practical. The key element of consistency will be the definition of load data on a half hourly (or half hourly sub unit) basis. This will help match the data to AEMO's published state level demands.

Final comments

A characteristic of the Australian energy market is the high availability of physical data. This principle should be extended as far as practical to the demand side of the market.

The NGF makes no mention in their proposed rule change of real-time data. The market structure is changing rapidly enough that an annual release of historical data will not reveal changes quickly enough. Demand data should be released as quickly as practical, ideally daily.

Yours sincerely

Dr Kerry Burke | Associate | Commodities, Carbon and Energy
Westpac Institutional Bank | Level 2, 275 Kent Street, SYDNEY NSW 2000
T 02 8254 9056 | **F** 02 8254 6953 | **E** KerryBurke@westpac.com.au