

23 May 2013

Mr John Pierce
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235



positive energy

Dear Mr Pierce

Consultation Paper: National Electricity Amendment (Publication of Zone Substation Data) Rule 2013 (ERC0156)

Energex Limited (Energex) appreciates the opportunity to provide a submission on the National Generators Forum's (the proponent's) rule change proposal relating to the publication of historical annual electricity load data for all zone substations within distribution networks.

Energex's responses to the questions raised in the AEMC's consultation paper are provided in **Attachment 1**.

Energex considers that the proposed rule change would be appropriate if it was demonstrated to represent the optimal solution to provide the anticipated benefits and those benefits outweighed any costs imposed.

Energex does not foresee any material costs in extracting historical half-hourly zone substation load data. However, it is not clear that the data will achieve the benefits outlined in the proponent's rule change proposal. Historical zone substation load data is not sufficiently robust to enable reliable econometric studies or third party scrutiny of AEMO's electricity demand forecasting performance.

If the AEMC determines that there is benefit to be gained from extracting this data, Energex believes that, rather than publishing the data on distributor websites, a more efficient approach would be for distributors to provide the data in a suitable format to a central body to coordinate and publish on behalf of the proposed beneficiaries of the rule change. This would provide benefit for both distributors and users of the data.

Energex notes that certain data may be confidential. The rule change, if adopted, should include an exemption from publishing confidential data.

Should you have any enquiries regarding this report please contact Louise Dwyer Group Manager Regulatory Affairs, on (07) 3664 4047.

Yours sincerely

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Issue	Energex Response
Question 1: Data availability and accessibility	
In relation to DNSPs: (a) How many zone substations are there in the DNSP’s distribution system?	There are 312 zone substations (including 41 bulk supply substations) in the Energex distribution network.
(b) Is half-hourly interval load data at zone substations available?	Energex can extract half-hourly zone substation interval load data from SCADA (the system used to control and collect data from remote distribution plant) for the ten year period. However, while data for the past five year period is readily accessible, accessing older data will require more effort.
(c) If the data is available, does it extend back to the previous ten years, or if not, how many years of data are available?	Yes, it extends back 10 years.
(d) Are there issues with data quality and consistency regarding the historical data? For example: (i) Are there issues related to metering which may affect the quality and reliability of the data? (ii) Are there gaps in the data with respect to a time series and/or location? (iii) Are there issues of consistency in data within and between distribution businesses and jurisdictions?	There are significant issues concerning the quality and consistency of historical SCADA zone substation interval load data, including: <ul style="list-style-type: none"> • the data is not meter quality data as in the majority of cases existing instrument transformers (current transformers and voltage transformers) are utilised; • there will be gaps in the data due to issues such as loss of supply, metering errors and / or communication errors; • in some instances, historical data may be inaccurate due to the application of incorrect multipliers; and • some substation load transfers are not taken into account (or corrected in the data stream). In addition, the SCADA data does not take into account important normalising factors such as: <ul style="list-style-type: none"> • half-hourly temperature and weather data; • network configuration;

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	<ul style="list-style-type: none"> • substation compensation data and application; • the network model, ie substation source and supplied substations; • load transfer data; • planning standards; • customer demographic data; • customer category data for each substation; • solar PV capacity data for each substation; or • load control data for each substation. <p>SCADA zone substation load data is used primarily by Energex to operate the distribution network, with provision of basic load data being of secondary importance. There would be no benefit to Energex in enhancing the quality of this data and, given the number of substations in Energex’s distribution area, it is not considered feasible to validate half-hourly data for each substation for the past ten years. Energex is not currently resourced to manage queries or requests for assistance from generators or interested parties regarding this data.</p> <p>Due to the data quality issues detailed above, Energex considers that basic, unenhanced SCADA interval zone substation load data (raw data) would not be sufficiently robust to enable reliable econometric studies or third party scrutiny of AEMO’s electricity demand forecasting performance. It is not clear whether anyone, including the proponents, would receive any material benefits from the raw data.</p> <p>For these reasons, any data provided would be accompanied by a disclaimer that Energex gives no warranty and accepts no liability for any loss or damage incurred in reliance on this information. A responsible market approach would also require any published material relying on this data to prominently include the disclaimer and the data limitations detailed above.</p> <p>Energex currently uses the daily peak demand as a basis for forecasting forward-looking demand. A data validation and correction process is applied to this subsection of the data to ensure the data is fit for purpose.</p>

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<p>(e) Can the required data be extracted from historical records? If so, what is involved in this task? How costly and / or time consuming is this likely to be?</p>	<p>As it is relatively straightforward to extract the raw data from historical records, Energex does not consider that the costs involved in performing this task would be material. It is estimated that it would require one to two weeks' work for one full-time employee.</p> <p>It should be noted that the date specified by the Queensland Government for publishing the first Distribution Annual Planning Report (DAPR) is 30 September 2013. Consequently, the earliest possible notice should be provided if there is an expectation that the required data is to be extracted and published by DNSPs by this date.</p>
<p>(f) What issues are there in the ongoing management and updating of the databases? For example, what business systems and / or processes may need to be put in place in order to facilitate the publication of the data annually?</p>	<p>Energex has not identified any significant issues regarding extraction of raw data.</p> <p>However, Energex does have concerns with regard to the proposal for DNSPs to publish this data on their websites. The Energex website is designed to deliver quick and easy access to <i>customer</i> information, eg network outage information. As such, Energex is careful to manage website content to ensure optimal performance for customers accessing the site. Adding a file (or a number of files) of the size requested by the proponents, particularly in Excel spreadsheet format, would potentially result in diminished website performance. Business investment may be required if performance issues were to result from a requirement to publish this data.</p> <p>Energex considers that a far more efficient market approach would be for DNSPs to provide the data annually to a central body for compilation and publication by either:</p> <ul style="list-style-type: none"> • transferring the data to a central File Transfer Protocol (FTP) server; or • providing the file on CD in a Comma Separated Values (CSV) or NEM12 format. <p>This would provide a “one-stop-shop” for the data for the NEM and clearly have economies-of-scale advantages. This approach would also lead to a more equitable, user-pays approach to publishing and accessing the data.</p>

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<p>In terms of all stakeholders:</p> <p>(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?</p>	<p>While a standardised format would clearly be the preferred approach for data users, an Excel spreadsheet (or spreadsheets), is not an appropriate format in which to publish the data due to the volume involved (ie 10 years x 365 days x 48 half hourly intervals x 312 substations = over 54 million cells). This volume of data in Excel spreadsheet format would exceed the acceptable maximum file size for the Energex content management system.</p> <p>As noted in 1(f) above, Energex’s strongly preferred approach would be to provide the data (either to an FTP server or on a CD in CSV format) to one body to coordinate, publish and manage centrally on behalf of generators and other interested parties.</p> <p>To assist DNSPs, the data set that would need to be provided should be standardised, including whether the load data is to be provided in MW, MVA, MVAR or Amps.</p>
Question 2: Expected costs of collecting and publishing data	
<p>In relation to DNSPs:</p> <p>(a) What are the expected establishment activities / tasks and costs in implementing this rule change? Please provide an indication of the magnitude of these costs.</p>	<p>As noted in 1(e) above, Energex does not consider that the costs for extraction of historical raw data in the format that is currently available would be material (ie one to two weeks’ work for one full-time employee).</p> <p>However, as noted in 1(f) above, if there is a requirement to publish this volume of data on DNSP websites, investment in Energex’s website may be required to ensure performance is not compromised.</p>
<p>(b) What are the expected ongoing activities / tasks and costs in complying with this rule change? Please provide an indication of the magnitude of these costs.</p>	<p>Energex estimates that extraction and compilation of raw zone substation load data would require one full-time employee for approximately one week annually.</p> <p>As noted in 1(d) above, Energex is not currently resourced to manage any queries that may result from publication of the raw data and, as the rule change proposal only refers to the extraction and publication of data, any other ongoing activities of this type have not been taken into consideration when assessing costs.</p>



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(c) Are these ongoing costs likely to decrease over time? If so, how significantly and over what time period?	It is unlikely that these costs will decrease materially over time.
(d) Are there other expected activities / tasks and costs associated with this rule change that have not been identified? If yes, in terms of costs, how significant are they?	Energex does not envisage that there will be any other costs associated with the provision of interval zone substation load data other than those already discussed above.
Question 3: Confidentiality issues	
<p>In terms of all stakeholders:</p> <p>(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?</p>	There are currently three privately owned zone substations in the Energex distribution network and 33 single customer substations which can easily be identified from the site identifier. Energex's connection contract includes standard clauses regarding privacy and confidentiality of customer information.
(b) Will aggregation of the data up to a certain number of customers avoid issues of confidentiality?	Aggregation will not completely avoid confidentiality issues as there is insufficient complexity in the configuration of the distribution network to conceal the presence of certain customer 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?	N/A. Refer to 3(b) above.

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<p>(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?</p>	<p>N/A. Refer to 3(b) above.</p>
<p>(e) How should disputes arising from data confidentiality be resolved?</p>	<p>Confidentiality of customer information is governed by contract terms which prevent disclosure of information except in specific circumstances, such as where Energex is required to disclose the information by <i>Laws</i>. Confidentiality disputes are therefore generally resolved by contract and, where there is a breach of contract, by one party seeking damages for loss or injunctions, etc.</p> <p>Energex would suggest that any rule change should include a mechanism or an exception that allows a DNSP to not have to disclose zone substation data if it believes that by doing so it would be likely to breach customer confidentiality obligations.</p>
<p>In relation to DNSPs:</p> <p>(f) How many zone substations supply less than five customers, less than three customers and only one customer in a distribution system?</p>	<p>There are 36 zone substations in the Energex distribution network supplying one customer only. Apart from these, there are no substations supplying less than five or less than three customers.</p>
<p>(g) Are there issues of liability associated with judgements on confidentiality?</p>	<p>Yes, there are issues of liability associated with breach of confidentiality, although it might not always be possible for a customer to prove actual loss or damage has been incurred even where there is clearly a breach of confidentiality in relation to a customer's individual load or demand details.</p> <p>Despite this, DNSPs have connection contracts that include confidentiality clauses and there are a range of other obligations (such as ring fencing guidelines) that also require DNSPs to not disclose data that might be expected to materially affect the commercial interests of its customers.</p>

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<p>(h) How should issues associated with making judgements on confidentiality be addressed?</p>	<p>In Energex’s view, issues associated with judgements on confidentiality should be addressed as follows:</p> <ul style="list-style-type: none"> • At the specific level - the rule change should be drafted to include discretion for DNSPs to not report zone substation data where it reasonably determines that this might breach confidentiality obligations. • At the general level - DNSPs should be able to exercise their own discretion about whether zone substation data would be likely to be either confidential or commercially sensitive. Even if it is not clear whether the data is confidential or whether disclosure would breach an obligation, the DNSP is best placed to make a judgement about whether, in all the circumstances (including the number of customers fed from that substation and the nature of individual customer’s usage), that data should be put into the public domain. <p>If there was a requirement to publish confidential information, Energex would communicate this outcome to impacted customers prior to the publication of the final rule change.</p>
<p>Question 4: Expected benefits</p>	
<p>In terms of all stakeholders:</p> <p>(a) What is the materiality of the benefits identified by the proponent?</p>	<p>Energex understands that the proponent has submitted this rule change request to realise the following benefits:</p> <ul style="list-style-type: none"> • enable detailed econometric studies by interested parties; • enable third party scrutiny of AEMO’s forecasts; and • reduce information asymmetry. <p>The rule change proposal identifies demand-side aggregators, generation investors and capital providers as beneficiaries of the publication of zone substation load data. No specific beneficiary is identified, although there are broad references to “policy makers”, “market participants”, “third parties”, “NEM customers”, “industry” and “industry participants”. There is a noticeable lack of any specific information contained in the proponent’s rule change proposal regarding quantifiable or</p>

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	<p>material benefits. Energex is unable to identify any measurable benefits to DNSPs or our network customers from providing this service.</p> <p>Taking into consideration the data quality issues detailed in 1(d) above, it is questionable whether any benefits could be achieved by accessing the historical zone substation interval load data extracted from SCADA. Further, this data may be subject to misinterpretation or misuse.</p>
(b) What are your views on the value of historical and forward looking electricity demand information?	Historical demand information is based on actual demand recorded and therefore can provide an indication of underlying changes in demand. However other factors such as temperature and weather correction should be taken into consideration when using this information as a basis to forecast future growth.
(c) What other benefits of the proposed rule change can be expected that have not been identified by the proponent?	No other benefits have been identified by Energex.
(d) Are these other benefits likely to be significant?	N/A.
(e) Who are likely to be the recipients of these benefits?	N/A.
Question 5: Consistency of approach	
<p>In terms of all stakeholders:</p> <p>(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.</p>	As suggested in 1(f) above, Energex considers that if this rule change is to be implemented, there should be a consistent approach to publishing zone substation load data, similar to the proposal for AEMO to collect and publish connection point data.