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## **UNISON SUBMISSION – DATA AND DATA EXCHANGE FOR MARKET TRANSACTIONS**

### **Introduction**

Unison welcomes the opportunity to provide a submission to the Electricity Authority (the Authority) on the consultation paper, *Data and Data Exchange for Market Transactions*. The Authority's aim in the paper is to seek industry views on "whether any changes to data and data exchange arrangements may be required to promote innovation and more participation in the electricity industry"<sup>1</sup>. The scope of the consultation is on data collected and exchanged for the purposes of operating the market.

Unison has provided feedback in response to the Authority's consultation questions (attached as Appendix One). We have also provided our observations of the opportunities and issues that relate to current Data and Data Exchange practices between distributors and retailers. These are set out below.

### **Opportunities and Issues with Data and Data Exchanges**

#### *1. Technological impact on the current data exchange system*

Unison observes that the current data system has evolved out of a concentrated supply side in combination with a low contact demand/retail side where information has required manual collection and aggregation. There are two key technology drivers that are impacting on this traditional model:

- (a) digital communications (primarily smart meters) potentially enabling real time data collection, and
- (b) consumer energy technology enabling mass market participation (e.g. demand management, and storage of energy).

These drivers have resulted in some areas of accelerated development (automated meter reading), as well as diverse levels of improvement and innovation. It is Unison's observation that the use of richer metering information is at a very preliminary stage. Smaller innovative retailers

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<sup>1</sup> Electricity Authority (21 September 2017). *Data and Data Exchange for Market Transactions*.

have leveraged off the new infrastructure opportunities to enable customers to participate in the market, while other smaller retailers have been overwhelmed by the IT challenges.

The issues around data and data exchange that Unison experiences are generally associated with those retailers that have not evolved their systems and capabilities to respond to technology change. For example, Unison regularly receives inaccurate and late submissions from one “IT focussed” retailer who submits data a month late each cycle. Another generator-retailer provides large and extremely variable wash-ups. Unison respects the different priorities our retail customers have, and we are able to deal with the resulting diverse outcomes we experience – however this does come with some increase in administrative overhead costs.

We observe that there are several projects currently being undertaken to address issues/problems with data and information exchange. Given the potential for duplication and inconsistencies, ideally, there would be one ‘principles-based’ approach that sets out the direction the Authority is intending to take. This would also help to identify the ways in which other projects will be impacted by the direction of these papers, such as *Enabling Mass Participation in the Electricity Market* and the *Distribution Pricing Reform*, where access to data and appropriate data systems are key to delivering efficient outcomes. Unison therefore supports the development of a roadmap toward a data system that will enable a more consistent and effective response to these key drivers that will benefit all industry participants and contribute to competition, reliability and efficiency in the electricity market.

## 2. *Frequency of Data Collection and Exchange*

Unison observes that there are benefits of more frequent data collection and exchange, even “real-time” exchange of data. Increasing the frequency of data collection and exchange is likely to require developing greater interoperability, greater assurance and integrity of information. Data exchange also needs to facilitate innovation for the benefit of consumers including retail and peer to peer offerings that enable direct real-time consumer participation for consumers.

However, Unison would like to stress that this while this real-time data system offers scope for immediate or more frequent financial settlement for interested parties, it should not necessarily require real-time counterparty settlement. Unison has noted in our response to the Authority’s questions, that there may indeed be more costs that benefits with a reduction in the timeframe for monthly invoicing and settlement. Rather, these arrangements should be left to retail innovation (for settlement arrangements with consumers) and between counterparties for settlements for services between market participants outside the wholesale market. Unison would be open to exploring the potential for reducing prudential risk associated with some counterparties through more frequent financial settlement.

## 3. *Integrity, Privacy and Security of Data and Data Exchange Systems*

Unison recognises that the distributed nature of the current data system has risks to both integrity as well as privacy of private customer details and commercially sensitive information. It is vital that the data system roadmap prioritises delivering improvements to ensure that data security and integrity is a priority. We are conscious that the changing cyber security environment requires the industry to remain vigilant and ensure that systems and processes are designed appropriately to protect information assets such as personally identifiable information (PII). Regular risk-based assessments of threats and weaknesses around information assets and systems is crucial to ensure the confidentiality, integrity and accessibility of information in the industry.

Finally, Unison wishes to emphasise the importance of developing a roadmap and securing broad buy-in to this across industry sectors, stakeholders and participants. In developing and rolling this out it will be important to factor in the costs, technology and organisational impacts associated with transition, implementation and future operation of the data system.

For any questions relating to this submission, please contact Roanna Vining, Senior Regulatory Affairs Advisor, by phone (06) 873 9329 or email [Roanna.Vining@unison.co.nz](mailto:Roanna.Vining@unison.co.nz).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Nathan Strong'.

Nathan Strong

**GENERAL MANAGER, BUSINESS ASSURANCE**

**Attached: Appendix One – Unison Response to Consultation Questions**

## Appendix One: Unison Response to Consultation Questions

Question	Comment
<p>1. What inaccuracies in data and data exchanges have you experienced, for what reasons, and with what impact?</p>	<p>As an electricity distribution business, Unison has experienced the following issues with data exchanges between participants:</p> <ul style="list-style-type: none"> <li>• Incorrect meter register content codes. This leads to retailer consumption submissions incorrectly allocating consumption between uncontrolled and controlled price options.</li> <li>• Inaccurate consumption data being submitted by retailers. This is due to estimation processes being used despite having significant AMI capable meters in the area. Inaccurate consumption data results in significant wash ups being processed and a greater level of manual data scrutiny to gain assurance on revenue.</li> <li>• Non-delivery of agreed data files by retailers within agreed timeframes. This has led to late invoicing of distribution charges or estimation of charges for customers with missing information.</li> <li>• Customer details – the exchange of customer details between retailers and distributors can create inefficiencies. For example, when this data is relied on and used for network purposes such as dividend cheque distribution or planned shutdown notifications. This has been exacerbated by the number of retailers relying on email communication as opposed to traditional mail delivery.</li> </ul>
<p>2. What are the types of benefits and the costs of being able to reduce settlement periods between industry participants?</p>	<p>Unison considers that the costs to distributors may outweigh the benefits of any reduction in settlement periods between industry participants. Our observations include:</p> <ul style="list-style-type: none"> <li>• Shorter settlement periods could lead to an increased level of estimations which would be counterproductive and further reduce data clarity.</li> <li>• While there are likely to be benefits for generators, we are not convinced that shorter periods would necessarily bring about a reduction in prudential payment risk for traders. Unison is, however, open to exploring the potential reduction in prudential risk further with counterparties.</li> <li>• For Unison, and other distributors, there would likely be an increase in cost to the Finance and Billing teams due to increased workload, thus reducing efficiency (within the current system configuration).</li> <li>• There are benefits in greater frequency of data collection and exchange, even 'real-time' data; however, this should not necessarily require more frequent counterparty settlement.</li> <li>• Some customer groups may prefer more regular, smaller bills that are easier to manage for household budgeting. Retailers are likely to have the most insight into customer billing preference.</li> </ul>

Question	Comment
<p>3. What are the types of benefits and costs of more standardisation in data and data exchanges?</p>	<p>The standardisation in data and data exchanges has allowed the monthly invoicing processes to be reasonably efficient as significant data and funds are transferred between participants in a reliable fashion. The number of new entrants in the market during the last two years has shown that the existing data exchange processes are able to be implemented by a new provider and that the existing regulated file formats can accommodate changes to distribution and retail pricing.</p> <p>From a network management perspective, the standardisation of half hour energy consumption data at each ICP will enable distributors to improve the reliability of supply and efficient operation of the industry, both long-term benefits to consumers. For example, more standardised data allows distributors to forecast load at different points across the network based on past usage and trends. Forecasting load will facilitate identification of network constraints allow them to be addressed before they impact consumers. Therefore, the availability of half-hour data consumption data will enable Unison to improve network performance and minimise any increases in cost to energy consumers (e.g. this promotes the reliability of supply and efficient operation of the industry for the long-term benefit of consumers).</p>
<p>4. What are the types of costs and the benefits of using more accurate available data for settling transactions?</p>	<p>Unison supports settlement being based on the most accurate available data (e.g. HHR). The benefit of using the most accurate available data is that it reduces wash-ups being processed between participants and gives a superior view of consumption patterns across the distribution network.</p> <p>However, our experience has been that not all retailer systems can receive this information and that aggregates are used, which supports the Authority's findings in Figure 3 in the consultation paper. The existing data systems are clearly struggling with the current requirements given that a significant portion of consumption is still estimated even though there are AMI capable assets.</p> <p>For Unison, there is not likely to be much more additional cost to the business to receive more detailed information as we already have in place effective policy, processes and systems to ensure this data is managed in accordance with the Privacy Act 1993. (e.g. we receive and manage personally identifiable information (PII) about energy consumers on our network such as name, address, phone and other details). The same policy, processes and systems are applied to HHR energy consumption data. Therefore, as an electricity distribution business we are already well positioned to safely and responsibly manage the privacy aspects of HHR energy consumption data. The cost to the industry is likely to be in the system changes that some retailers may need to make to receive this information.</p>

Question	Comment						
<p>5. What changes may be required to allow more buyers and sellers of products and services can access the industry's data systems in the future?</p>	<p>Unison agrees with the Authority's observation that data systems in the future are likely to need to be able to cope with increased participants and volumes of transactions. We would expect that in the future electricity submissions are based on AMI data capture and that there is a reduced reliance on estimations. This would reduce the wash-ups between participants and would increase the integrity of the overall data system. In addition, the future ability to access to real-time data has benefits to improving network reliability and forecasting. As noted in response to question 2 above, network load forecasting would be greatly assisted by having access to real-time data. Network companies can pinpoint the source of network faults faster and can restore the network faster, leading to improved quality of supply. To ensure that all parties have access to future real-time electricity consumption data, it is important to have a system accessible to all parties that will enable everyone to have one source of truth.</p> <p>Finally, Unison emphasises the importance of developing a data exchange roadmap that has broad buy-in across industry, stakeholders and participants. In developing and rolling this out it will be important to factor in the costs, technology and organisational impacts associated with transition, implementation and future operation of the data system. We note that the ENA has established a joint working group of retailer and network businesses to address these kinds of issues.</p>						
<p>6. What are the risks to security of data exchange and consumer privacy from more participants exchanging more data?</p>	<p>Unison recognises that the distributed nature of the current data system has risks to both integrity as well as privacy of private customer details and commercially sensitive information. It is vital that the data system roadmap prioritises delivering improvements to ensure that data security and integrity is a priority.</p> <p>Unison considers that the future increase in the number of transactions has the potential to raise the likelihood of a privacy or cyber breach in the industry. The industry and its participants need to be responsible for ensuring systems and information sharing processes are robust and are designed to protect the confidentiality, integrity and accessibility of information. Regular risk-based assessments of threats and weaknesses around information assets and systems is crucial to ensure the confidentiality, integrity and accessibility information in the industry.</p>						
<p>7. What is your view of the Authority's overall impact assessments of the potential problems facing the electricity industry today and in the future (Table 3)? Use the Impact Assessment template in Table 10 (Appendix A) to note any changes.</p>	<p>For the second matter the Authority considered, <i>Data exchange timeframes</i>, Unison suggests the efficiency impact has been overrated. We suggest reducing this down to yellow:</p> <table border="1" data-bbox="619 1850 1098 1962"> <thead> <tr> <th data-bbox="619 1850 778 1906">C</th> <th data-bbox="778 1850 938 1906">R</th> <th data-bbox="938 1850 1098 1906">E</th> </tr> </thead> <tbody> <tr> <td data-bbox="619 1906 778 1962" style="background-color: red;"></td> <td data-bbox="778 1906 938 1962" style="background-color: yellow;"></td> <td data-bbox="938 1906 1098 1962" style="background-color: yellow;"></td> </tr> </tbody> </table>	C	R	E			
C	R	E					

Question	Comment
8. What other potential problems do you think impact data and data exchanges for market transactions? Use the Impact Assessment template in Table 10 (Appendix A).	No comment.