

7 November 2017

Submissions

c/- Electricity Authority

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by email: submissions@ea.govt.nz

SUBMISSION ON DATA AND DATA EXCHANGE

- 1 Orion New Zealand Limited (**Orion**) welcomes the opportunity to comment on the “Data and data exchange for market transactions” consultation paper (the **paper**) released by the Electricity Authority (Authority) in September 2017.

Introduction - key points from the paper

- 2 The Authority’s paper on data and data exchange focuses on market systems, processes and rules relating to the data system. The paper is not considering arrangements relating to accessing consumption data by consumers or consumer agents- this will be a focus of a forthcoming consultation on multiple trading relationships.
- 3 Market operations service providers (MOSPs) such as Jade, NZX, EMS and the System Operator perform specific functions necessary for the operation of the market. These specific functions include registry, reconciliation manager, clearing manager, FTR manager, pricing manager, extended reserves manager, system operator and WITS.
- 4 NZX performs the role of five out of eight of the MOSP functions.
- 5 Participants such as generators, retailers, distributors, MEPs and other energy service providers transact with the market via MOSPs.
- 6 The Authority undertook a review of the MOSPs and concluded their systems are scalable and can handle an increase in participation.
- 7 Information exchange protocols and functional specifications already exist to standardise data formats and exchanges.

Distinction between market systems and participant systems

- 8 Figure 2 of the paper provides a diagram of the data system. Presumably its purpose is to provide a visual indication of data flows between parties. What is not clear is the distinction between market systems and wider participant systems (be that retailers, distributors, MEPs or energy services companies), where the boundaries are and whether it is proposed that these boundaries move. Therefore the paper is unclear about what the relevant systems are that should be considered for data and data exchange.

- 9 The Authority should clarify if the data system incorporates only MOSPs (market operation service providers) where data exchange flows from participants into the market data system administered by MOSPs.
- 10 For example home energy management systems (HEMS) might rely on and produce significant data but this is (currently at least) outside market systems. Likewise inverters and related control systems and peer to peer trading systems.
- 11 The paper states that “The data system should also accommodate different ways of doing business and increasingly complex data flows”¹. In our view the market data system, which is levy funded, should not look to accommodate a smorgasbord of new business models or technologies but look to provide a consistent, predictable data exchange arrangement that is agnostic to business models and technologies.
- 12 We agree that evolution of the market system should ensure continued compatibility with existing or legacy participant systems so as not to introduce unnecessary cost to the industry as a whole. As suggested existing participants will incrementally evolve their systems in line with their business models and the requirements of the market system.

Efficiency of market design

- 13 The paper indicates that outsourcing the operations of parts of the data system and market platform is not usual. However, the purpose of outsourcing was to provide for competition for each core data exchange. Given that NZX performs five out of eight of these functions we question whether competition has been achieved and if in fact the design of the market has been complicated by this approach therefore reducing efficiency.
- 14 Submissions on real time pricing may also influence/contribute on the topic of data and data exchange particularly the suggestion that the pricing manager should be disestablished.

Materiality of Impacts

- 15 We suggest that given the uncertainty of future requirements a pragmatic approach is to improve the existing system before addressing new or future improvements.
- 16 It is difficult to attach any materiality to the impacts summarised in Table 3 given no definition of the assessment criteria of high, medium and low.
- 17 The matters to be considered are not clearly supported by the examples in para 3.4 (a) to (f) of the paper. All of these seem to be accommodated by existing arrangements (since they are happening). A more useful list would have been examples of arrangements that were requested/tried but couldn't be accommodated.
- 18 We note that some retailers already manage weekly 'settlement' (billing) with customers despite the monthly market cycle. Cash flows are improved for this retailer while weekly market settlement would actually make them worse off. This might be overall neutral once

¹ Electricity Authority, Data and data exchange for market transactions consultation paper, point 4.47 page 21

prudential requirements (that would likely be lower under weekly market settlement) are taken into account, but neutrality is not an improvement. And, other things equal, weekly settlement is likely to drive increased costs into retail businesses². In addition, some retailer pre-pay offerings effectively allow customers to choose their billing period by choosing how far in advance they pay. The market systems cannot reasonably be expected to accommodate the potential variety of retailer offerings.

- 19 We also point out that weeks do not align with months or years, which is probably not a low-cost system or process impact for many parties.

Exchange protocols

- 20 Some of the discussion centres on reconciliation which is not specifically about data and data exchange but about what happens to that data under the Code.
- 21 The paper states that EIEPs are an important part of the data system. Some EIEPs are regulated and others are non-regulated and voluntary. Data exchange using an EIEP format occurs via the registry's EIEP exchange hub. The registry is a good example of a centralised market data system.
- 22 The paper states in relation to EIEP data processes that "Effectively, these legacy systems become a barrier to new business models and deter the use of new technology."³ No examples of actual barriers are given, so it is unclear whether this is related to legacy systems or lack of demand for the new business models. This paragraph and final sentence undermine the standing data formats working group and industry cooperation on incremental changes and additions to the EIEP arrangements over time. There is an avenue for new businesses to contribute and the use of EIEPs does not influence business models but does standardise data exchange between participant business (whatever their business models) via the registry MOSP.
- 23 We support the exploration of "whether there are more opportunities for more standardisation in data and data exchanges."⁴ We suggest that further examination of mandating EIEPs and general standardisation opportunities would be beneficial in the data space.

Distinction between data availability and data use

- 24 The Authority draws attention to the quantum of non-half-hour data versus half-hour data submitted to the reconciliation manager.⁵ Any data system will still rely on accurate input, be that half-hour or non-half-hour data. Half-hour data is not superior to non-half-hour data if it is non-compliant or inaccurate. Also, use of non-half-hour data does not of itself mean customer bills are based on estimates. Non-half-hour data can be profiled in various ways

² And into other participants businesses as well if they were required to also move to weekly settlement.

³ Electricity Authority, Data and data exchange for market transactions consultation paper, point 4.41 page 20

⁴ Electricity Authority, Data and data exchange for market transactions consultation paper, point 4.24 page 16

⁵ Electricity Authority, Data and data exchange for market transactions consultation paper, point 4.36 & 4.37 pages 19 and 20.

and it may be this captures many of the important differences. Profiling is an area where the market systems support but do not limit innovation.

- 25 Errors in large multipliers on category 2 sites can cause data inaccuracy. Half-hour data is not necessarily any more accurate than non-half-hour data. Half-hour data can have data gaps or holes due to communications failures and overwriting of the data storage window resulting in the need for estimation.
- 26 It is conceivable that processes are always needed to estimate and fill gaps where issues arise in obtaining actual data. Mature retailers have established processes determining a credible substitute in these instances.
- 27 We support a review of the accuracy standards for half-hour data (logger compliance) as this may be part of the explanation for half-hour data use being less than smart meter penetration.
- 28 The requirements around metering for distributed generation may impact data and data exchange as participation increases. We suggest a Code change requiring existing metering to have the reverse flow flag enabled where distributed generation exists/is installed. In the absence of a meter able to accommodate this requirement then the Code should require an export meter to be installed.

Data access and privacy

- 29 We agree that privacy and security of data is an important consideration. Our understanding is that data in the market data system is always anonymous at customer level. Data exchanges between other participants may raise privacy issues, however the Privacy Commissioner has oversight of that. In any case, it makes good business sense to manage privacy and cybersecurity.
- 30 It may be useful for the Authority to consult on what specific data participants are having difficulty accessing, what benefit there would be in access to this data and what reasons were given for access being denied.

Cross reference with other submissions

- 31 We anticipate that the Authority will cross reference submissions to other consultations that are data-related. For instance the real time pricing paper asked if the Pricing Manager should be disestablished and residual functions allocated to others. Implementing this recommendation will go some way to simplifying data exchange processes. We refer you to our earlier point 15.
- 32 In particular the Authority should review submissions to the mass participation paper for relevant information relating to this consultation.

Concluding remarks

- 33 Thank you for the opportunity to make this submission. Orion does not consider that any part of this submission is confidential. If you have any questions please contact Bruce Rogers (Pricing Manager), DDI 03 363 9870, email bruce.rogers@oriongroup.co.nz.

Yours sincerely

A handwritten signature in black ink, appearing to be 'BR', written in a cursive style.

Bruce Rogers
Pricing Manager

Appendix: Responses to specific questions**Submitter: Orion New Zealand**

Number	Question	Response
Q1.	What inaccuracies in data and data exchanges have you experienced, for what reasons, and with what impact?	<p>EIEP files have already been mandated and standardised however, file inaccuracies still occur. File format and data content errors occur particularly when new retailers commence trading. This is only natural and can be put down to ‘teething problems’ as they establish their systems and processes and build relationships with the various industry parties. Every business has some level of administrative overhead whose time involves communicating with other participants regarding errors and issues. All participants share the cost of errors.</p> <p>Errors in large multipliers on category 2 sites can cause data inaccuracy. Half-hour data is not necessarily any more accurate than non-half-hour data. Half-hour data can have data gaps or holes due to communications failures and overwriting of the data storage window resulting in the need for estimation.</p> <p>We agree with the impact assessment subject to our comment in paras 15 to 19 above.</p>
Q2.	What are the types of benefits and the costs of being able to reduce settlement periods between industry participants?	<p>Moving to more frequent settlement will introduce more transactional costs and may increase the error rate. We see no benefit in doing this especially as there appears to be no compelling reason given by the Authority nor are customers advocating for this. Monthly settlement does not appear to have restricted retailers from offering more frequent billing to customers, and such retailers may indeed be worse off with weekly settlement.</p> <p>We agree that evolution of the market system should ensure continued compatibility with existing or legacy participant systems so as not to introduce unnecessary cost to the industry as a whole. As suggested, existing participants will incrementally evolve their systems in line with their business models and the requirements of their consumers and the market system.</p>
Q3.	What are the types of benefits and costs of more standardisation in data and data exchanges?	<p>The main cost is in participants individually updating their internal systems to enable alignment of data format for data exchange with the market data system. Benefits may be obtained from alignment of expectations and data definitions</p>

		<p>across participants along with clearer requirements for new entrants. These costs are likely to be incremental.</p>
Q4.	<p>What are the types of costs and the benefits of using more accurate available data for settling transactions?</p>	<p>The paper refers to some data systems which would suggest it is no longer referring to just the MOSP market data system but also to participant systems. It is worth noting that while smart meters have been deployed they may not have been deployed by the current consumer’s retailer. This retailer may not have adapted its systems to manage half-hour data (presumably because they cannot justify the cost) and therefore receive data in a non-half-hour format for submission to the market data system. If the market data system is to remain backward compatible then the form of retailer submission (being non-half-hour or half-hour) should not matter. The consumer has retailer choice. A factor in that choice may be the billing cycle offered.</p> <p>The data market system should not impose undue costs on participants by forcing wholesale upgrades to participant systems. If this happens it could have the effect of reducing competition.</p>
Q5.	<p>What changes may be required to allow more buyers and sellers of products and services to access the industry’s data systems in the future?</p>	<p>The market data system has already sustained increased participants and transactions as retail competition and other service providers have entered the market. This would indicate that there is already easy access to the MOSPs. The Authority reminds participants that it undertook a review of the MOSPs and concluded their systems are scalable and can handle an increase in participation. What will be important is the data security around data exchange.</p> <p>We suggest that given the uncertainty of future requirements a pragmatic approach is to improve the existing system before addressing new or future improvements.</p>
Q6.	<p>What are the risks to security of data exchange and consumer privacy from more participants exchanging more data?</p>	<p>We agree that it is important that consumers clearly understand what they are consenting to when their energy data is collected and that participants respect the level of consent. To facilitate this the Authority needs to be concise on what data is required by participants in order to operate the market data system for the long term benefit of consumers. The Authority may have a role in educating consumers on why certain data is required and how their data is protected. The reasons why data is required are unlikely to change based on the frequency of settlement.</p> <p>We agree that the risk to security of data exchange, between participants and the MOSPs, will increase as the number of transactions increases. The Authority</p>

		should consider cybersecurity measures to reduce the risk. We support updating of security and data arrangements.
Q7.	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.	No comment
Q8.	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).	The requirements around metering for distributed generation may impact data and data exchange. We suggest a Code change requiring existing metering to have the reverse flow flag enabled where distributed generation exists/is installed. In the absence of a meter able to accommodate this requirement then the Code should require an export meter to be installed.