

Taryn Maroney
Australian Energy Market Operator
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Melbourne VIC 3001

Via email: mdpp@aemo.com.au

5 June 2015

Dear Taryn,

Metering Data Provision Procedure

Thank you for the opportunity to comment on this important topic.

EnerNOC is a leading provider of energy intelligence software (EIS) and services to utilities and enterprise customers. EnerNOC's EIS solutions help small and large commercial and industrial enterprise customers optimise how they buy electricity, how much they use, and when they use it.

We are a data-driven energy services organisation. The interpretation of data into actionable energy-focussed strategies for our customers underpins many of our service offerings. It is our hope that the package of Power of Choice reforms – particularly metering competition and this process – will improve customer and third-party access to this data and other value added services.

We have formed our views based on our experiences in the NEM to date and from dealing with similar issues across a number of international markets. We hope that our comments will be of assistance to AEMO, and look forward to participating in the next industry workshop.

1 Leveraging best practices for data provision

We appreciate that implementing the Green Button standard within the time-frame allocated to this process would be challenging. However, it would be remiss not to learn from its principles, and, where appropriate, incorporate them into this procedure.

One of the key principles supported by EnerNOC is the requirement for the data to be provided in a standardised format.¹ This is a good outcome for consumers because it will help foster an ecosystem of tools and services that will assist consumers in making informed decisions about their consumption behaviour, their energy contracting, and potential investments in emerging technologies.

¹ We note the general support for rigorous standardisation amongst market participants at the AEMO workshop on Monday, 13 April 2015.

When describing the Green Button initiative, the United States' Energy Department notes as follows:

*"The Green Button initiative is an industry-led effort ... to provide utility customers with easy and secure access to their energy usage information in a **consumer**-friendly and **computer**-friendly format."*²

[our emphasis]

In our opinion, the Department's distinct use of the terms 'consumer' and 'computer' is telling.

'Consumer-friendly' means that the data should aid consumer choice, and ensure the consumer can make informed decisions based on the information provided.

'Computer-friendly' means that the format should be amenable to access, interpretation, and analysis of the energy data using automated tools. This is only achievable if the format of the input data is fully standardised.

To expect the same file to be both consumer-friendly and computer-friendly is a tall order. The Green Button initiative achieves this through a carefully-specified XML schema that allows web browsers to render the detailed data into a consumer-friendly form.

If we are not going to adopt this Green Button approach, then the specified summary format should be optimised for consumer-friendliness and the detailed data format should be geared towards enabling the consumer's use of applications and software.

Importantly, it is the consumer who is the beneficiary of both the 'consumer-friendly' and 'computer-friendly' formats. EnerNOC strongly believes that a flourishing ecosystem and set of tools will develop if the correct foundations of data standardisation are set in place.

This process being led by AEMO therefore presents an excellent opportunity to achieve exactly this outcome.

2 Objectives and recommendations for the summary format

In our opinion, the primary objective of the summary format is to provide understandable energy information that consumers can use to modify or optimise their energy consumption and purchasing behaviour.

It is worth noting that this procedure change proposal is a result of the Power of Choice review, the purpose of which was to promote consumer choice. If we

² <http://energy.gov/data/green-button>

apply this principle to this procedure, then it is the consumer who should drive the content of the summary format.

Accordingly, we suggest that consumer representatives should work together with data visualisation professionals to design the most appropriate format.³

EnerNOC recommends that the representatives listed above form the basis of a working group with the aim of delivering a standard reference tool that takes the 'detailed data' format as input and produces a summary report as output. We suggest that this reference tool be made available free of charge to retailers and DNSPs, and that it be maintained by either AEMO or the AER.

Importantly, this approach means that the details of the format – e.g. what graphs are drawn, or what averages are presented – should make no difference to retailers' or DNSPs' implementation costs.

This will minimise the costs associated with delivering this service. The major implementation task required of retailers and DNSPs would then relate to the development of a process to feed data in the detailed data format (e.g. NEM12) into the supplied tool, and provide the output to the consumer.

The provision of this standard summary should not be viewed as stifling innovation or competition. Retailers and DNSPs will still be able to offer value-added services that deliver value and advice beyond the basic summary format.⁴ However, this standardised approach means that all consumers can benefit from access to a clear and easy to understand summary.

3 Objectives and recommendations for the detailed format

The purpose of the detailed data format is also to support consumers in making informed decisions about their consumption patterns, procurement choices, and potential investments in new and emerging technologies (solar PV, battery storage, etc.). By providing full details, it allows consumers to learn more about their behaviour and weigh up more unusual possibilities than can be achieved through a standard summary format that has to be simple so as to be widely accessible.

Unlike the summary format, the detailed data format will not be looked at directly by the vast majority of consumers (energy geeks excepted). No format that includes full interval metering data is simple enough for that. Rather, consumers will use tools to interpret the data. The Green Button initiative shows what is possible: an ecosystem has developed including comparator websites, hosted tools, and open source software.

³ The PDF version prepared by Martin Jones from CUAC is a good starting point.

⁴ This may include tariff information, weather data, industry comparisons, cost projections, etc.

Being ‘consumer-friendly’ does not mean that the file format has to be dumbed down. It means that the consumer should be able to use it to do whatever they need. This will only happen if the detailed interval data format is completely standardised. If the files come in multiple variants, the ecosystem development will be undermined. If the file format has to be revised over time (due to omissions or ambiguities in the initial specification), each change will largely wipe out the ecosystem.

As such, it does not make sense to compromise the usefulness of the detailed format for tools in an attempt to make it superficially more ‘consumer-friendly’. Attempting to do so will run counter to the objective, and severely limit the success of this initiative.

4 Creating a new detailed data format would be inefficient

Fully specifying a new detailed format is a very big job: it probably can't be done from scratch in the time available. Even creating a variant of the existing standard NEM12 format, with the intention of being somehow more “consumer-friendly”, introduces the risk of the standard features not working correctly.⁵

Accordingly, EnerNOC suggests that the existing NEM12 format is the obvious candidate for the single standardised detailed format: it is completely standardised, including all the awkward corner cases.

It was suggested in the workshop that the Victorian Government’s My Power Planner team were not able to handle NEM12.⁶ However, further discussion with the My Power Planner team revealed that this was based on a misunderstanding: in fact, My Power Planner already supports two formats that contain no information beyond that in NEM12.⁷

If it is desired to include some additional information in the detailed format beyond that supported by NEM12, it could be included as a header or wrapper to the standard NEM12 file.⁸

If for some reason the NEM12 format is deemed unacceptable, then it is highly desirable that every piece of information that is present in a NEM12 file should be

⁵ For example, representing meter changes unambiguously is complex. The kinks have largely been worked out of this in NEM12. Doing it again from scratch in a new format would be difficult and error-prone. Getting this sort of thing right is important, because one of the likely uses of this data is to investigate billing disputes, which often stem from mistakes at such times. If the data given to the consumer does not preserve the full detail of the utility’s data – including, e.g., substitution types and timestamps – it will not be particularly helpful in resolving disputes.

⁶ The reason given was that they thought at the time that it wouldn't allow them to identify which register was used for which tariff component.

⁷ EA/CitiPower/Powercor and Alinta/Dodo/Neighbourhood/Simply/Momentum. i.e. It is trivial to convert from NEM12 format into those formats, with no additional information required.

⁸ There are precedents for this: NEM12-formatted data is wrapped in aseXML for B2B delivery; Western Power provides NEM12 files with additional header rows.

represented losslessly in the standard format – i.e. it should be possible to transform this new standard format into the corresponding NEM12 file.

The NEM already has two standard formats for interval data: NEM12 and the aseXML format used for submission of meter data to MSATS. Creating a third interval data format for the NEM would create an unnecessary burden on industry. The risk of not managing this properly is that even a minor change to the data structure will wipe out the ecosystem of tools developed for the initial standard.

5 Access by third-parties

One of the clear intended outcomes of this process is that third-party service providers should be able to compete with both retailers and DNSPs for the provision of advanced services. Standardising the most appropriate data sets and terms of access from the outset will limit the ability of incumbents to frustrate access by third parties, and will foster the development of a competitive ecosystem of tools – delivering a positive outcome for consumers.

I would be happy to discuss these issues in more detail if that would be helpful.

Yours Sincerely,

A handwritten signature in blue ink, appearing to read 'Mottel Gestetner'.

Mottel Gestetner
Senior Manager, Regulatory Affairs