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Landis+Gyr AP - PO Box 6274 South Sydney Business Hub Alexandria NSW 2015

Mr John Pierce
Chairman - Australian Energy Market Commission
PO Box A2449 Sydney South NSW 1235

21 May 2015

**Re: ERC0169 – Landis+Gyr Submission
AEMC's draft Rule on expanding metering competition and related services**

Dear Mr Pierce

We welcome the opportunity to make a submission on the AEMC's draft Rule for expanding metering competition and related services. As a global supplier of metering technology, Landis+Gyr can offer unique perspectives on the proposed arrangements based on our knowledge and experience in the industry.

We support the broad direction of the draft Rule including the acceleration of smart meters and the expansion of competition in the market. We consider these features will benefit customers in the long run through efficient demand management and access to valued services.

Our attached submission is focused on suggested improvements to the draft Rule. We offer insight on the following aspects of the proposed new framework:

- Minimum services specification - We agree with the AEMC that the meter should be capable of providing a minimum level of services. We consider that distribution services such as load control, and outage management would be efficient to include in the minimum services specification. This is due to the almost trivial additional costs of embedding these services in the hardware of the meter, and the avoided costs of installing stand-alone technology. In addition to the issue of incremental costs, we consider that the additional degree of prescription involved is unlikely to impact on future innovation in meter design and capability, or reduce a retailer's ability to differentiate their services or products.
- Acceleration of smart meters - We support the obligations in the draft Rule for all new and replacement meters to be Type 4. Given the benefits of smart meters, we are concerned that the new Rule will only commence in 2017. We consider the Final Rule could promote communication between retailers and distributors to facilitate the earlier adoption of smart meters.
- New contestable market - We support the market-led framework in the draft Rule, and the policy objective to limit regulation where possible. In particular we agree with the AEMC's decision not to impose price regulation on metering coordinators.
- Practical operation of market - We consider the final determination could provide policy guidance on issues that may arise in the new market, such as the impracticality of a distributor having to negotiate with several metering coordinators in their service areas on issues such as their demand management arrangements. Our view is that the final Rule should include principles to ensure market participants negotiate on fair and reasonable terms. We also identify concerns with cyber security and access to the metering site under the new framework.

We look forward to discussing these issues with you in greater detail. If you require any further assistance please contact Mr Milan Vrkic, General Manager Marketing and Strategy on +61 2 9690 7494.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Adrian Clark', written over a light blue horizontal line.

Adrian Clark
Chief Executive Officer

Landis+Gyr Detailed Submission

The Draft Rule reflects the changing nature of the electricity industry under the Power of Choice reforms. The reforms focus on providing customers with active tools to promote efficient demand side participation.

The modern meter is intrinsic to achieving the objectives of Power of Choice. A smart meter offers a cost effective platform to deliver valuable services to the customer, and to improve the efficiency of network services. As such, we support the AEMC's decision to adopt smart meters as the preferred technology for all new and replacement meters.

While the draft Rule broadly meets the objectives of the Power of Choice reform, we consider that customers would benefit from further refinements to the framework. Our submission is structured as follows:

- Section 1 recommends expanding the minimum services specification to include distribution services such as load control, outage management and power quality management. The incremental cost infringes in a minor way the principle that consumers should only pay for services that they value, there are collective benefits to consumers through more efficient network operations which would cost more if delivered in other ways and recovered through regulatory charges. We consider the broad based and split value characteristics of distribution services may not provide strong incentives for retailers to invest in this functionality.
- Section 2 discusses how the final Rule could incentivise early adoption of smart meters prior to the Rule commencing in 2017. We consider that promoting dialogue between the retailer and distributor may provide opportunities for retailers to install smart meters before the Rule commences.
- Section 3 supports the market led framework in the draft Rule. In particular we support the AEMC's decision not to impose price regulation on metering coordinator services. We consider there are sufficient countervailing factors that reduce the market power of the metering coordinator.
- Section 4 identifies areas where we are uncertain on the practical operation of the new market. Specifically we consider that retailer churn may present unique challenges for the market. We consider the AEMC could facilitate efficient transfer arrangements by including principles in the Final Rule that promote fair and reasonable negotiation between participants. We also raise other issues such as cyber and local security under the framework, and the arrangements for when a retailer cannot find a metering coordinator. Finally we seek certainty from the AEMC that the Rules will enable retailers to meet their obligation to provide energy data to previous customers.

1. Minimum services specification

The AEMC's draft Rule requires that any new or replacement meter must meet the minimum services specification in new Schedule 7.5.1.1 of the NER. This means the smart meter must be equipped with the hardware to provide a service even if there is no obligation for a metering coordinator to deliver that service.

We support the inclusion of minimum specifications in the Rules. Below we set out the economic benefits of delivering services through the smart meter, and explain why we consider distribution services such as load control, outage management and power quality management should be included in the specifications.

a. Benefits of delivering services through the meter

We agree with the AEMC on the benefits of providing for minimum services in the capacity of the meter. From an economic perspective, this is due to the low marginal costs of embedding services in the hardware of the meter, and the avoided costs of installing duplicative stand-alone technology. This means a smart meter is likely to have a lower opportunity costs relative to stand-alone technologies.

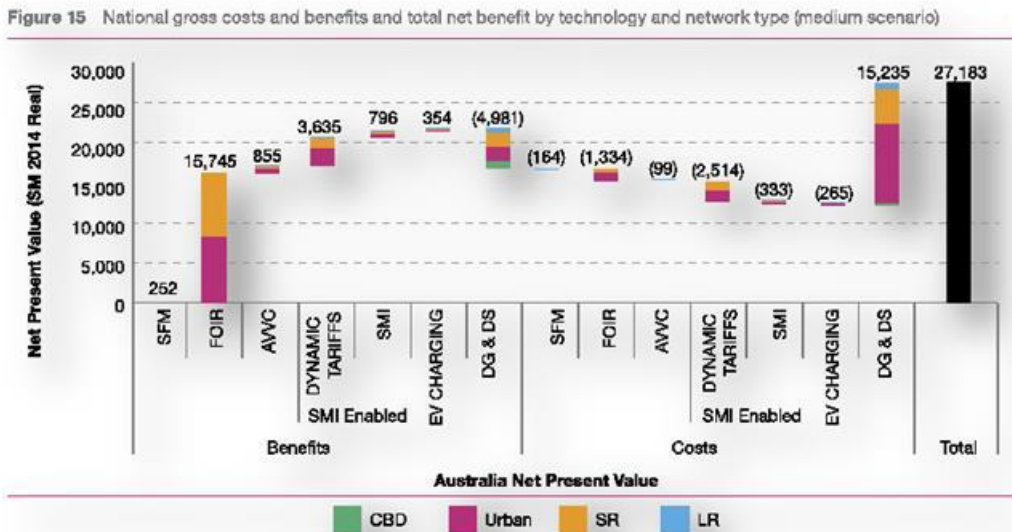
In recognition of these benefits, the United Kingdom has been reviewing its minimum functionality for a smart meter as part of Stage 2 of its rollout. In 2014, the UK Department of Energy and Climate Change published draft amendments to the Smart Meter Equipment Technical Specification (SMETS) which sought to expand the minimum functionality of smart meters. During the consultation process, the Department noted the benefits of delivering smart grid technologies from the meter:¹

“The (UK) Government is proposing to include a small number of additional functions to those included in SMETS 1. These relate mainly to additional requirements which can help to ‘future proof’ the smart metering system for the development of smart grids, helping to provide the basis for electricity Distribution Network Operators (DNOs) to effect smart grid management.”

We also observe that trials such as Smart Grid, Smart City (SGSC) have identified the benefits of providing smart grid technologies via the meter. Figure 1 below is an extract from the final report which shows the relative benefits of a range of technologies over a 20 year period. The final report highlighted that the assumed benefits were heavily dependent on the integrated nature of how the services were delivered:²

“These results show that the national integrated net benefit from the economic deployment of smart grid technologies, including customer feedback technologies and dynamic tariffs varies from around \$9.5 billion over 20 years for the low economic scenario, through to \$27 billion under the medium economic scenario and almost \$28.5 billion under the high economic scenario.”

Figure 1 - Benefits of services from Smart Grid, Smart City



Source: ARUP (2014) Smart Grid, Smart City: Shaping Australia’s Energy Future Executive Report, p46.

¹Department of Energy and Climate Change, Consultation on the second version of the Smart Metering Equipment Technical Specifications, 13 August 2012, p1 1. Link: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/42953/6129-consultation-second-version-smets.pdf.

²ARUP (2014) Smart Grid, Smart City: Shaping Australia’s Energy Future Executive Report, p46.

b. Inclusion of distribution services in minimum specifications

The minimum specifications in the draft Rule focus on the remote capabilities of the meter. Other services have not been prescribed on the basis that retailers have a commercial incentive to choose metering technology that corresponds to the needs of its customers.

We agree with the AEMC that retailer discretion will promote competition. The retailer will be in a position to tailor its service offerings to individual customers, driving innovation of services and technology. For this reason, a retailer has incentives to ‘future proof’ the meter such that it can deliver the service that customers are likely to demand.

However, we are concerned that the retailer will not have the same degree of commercial incentives to embed distribution services in the hardware of the meter. As explained in Box 1 below we consider that the split value of distribution services do not provide sufficient direct return for the retailer to invest in additional functionality. Further, the broad based nature of benefits mean that retailers could not directly market the product to the individual customer, and will therefore limited incentives to include the service.

Box 1: Reasons why there are disincentives to provide distribution services in the meter

Split values	Broad based benefits
<ul style="list-style-type: none">• A historical barrier to demand management has been the split value that accrues to segments of the supply chain.• Our view is that this underlying economic problem may occur under the new framework, and will reduce the incentive for retailers to invest in meters that enable demand management services to be delivered.• The distributor is the direct beneficiary of load control, outage management and power quality services, with limited direct value accruing to the retailer.• The retailer is therefore reliant on generating a revenue stream from the distributor to offset the additional costs. However there is significant uncertainty at the time of investment on whether the revenue will be realised.• There are many unknowns including whether the distributor will access the service, and the timing of the service. In this case the retailer bears the financial risks, with reduced incentives to invest in embedding distribution services in the hardware of the meter	<ul style="list-style-type: none">• Many of the services provided by the smart meter benefit the individual customer directly. In these cases, the retailer has a strong incentive to choose metering technology that meets the needs of the individual customer.• In contrast, distribution services are characterised by broad based benefits. For instance, load control reduces total capital expenditure required to meet a peak demand constraint on the network. While the capital savings relate to a geographic region, the benefit is spread across the entire customer base through lower network charges.• Similar issues arise with power quality monitoring, where the benefits of reliability do not directly relate to the individual customer.• Where the benefit does not accrue directly to its customer, the retailer will not have the same level of incentive to install the technology.

The benefits of distribution services have been well documented in trials such as Smart Grid, Smart City. Our view is that the potential benefits will not be fully realised if the meter cannot deliver the service. This view is consistent with the UK Department of Energy and Climate Change, who intend to include a number of smart grid services as part of updated minimum functionality specifications.³

³Please see: UK Department of Energy and Climate Change, (Draft) Smart Metering Equipment Technical Specifications Version 1.58, November 2014. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/381535/SMIP_E2E_SMETS2.pdf.

We consider that providing the distribution service through a stand-alone network device is likely to entail significantly higher marginal costs per customer. At best, this will reduce the net benefit to customers from the service relative to the lower cost in providing the service from the meter. At worst, it may lead to a significant barrier to demand management if the costs exceed the benefits.

2. Acceleration of smart meters

The AEMC's draft Rule will accelerate the penetration of smart meters for small customers. We consider that smart meters will provide benefits for these customers, while enabling networks to achieve improved efficiency and reliability.

In the sections below we suggest some minor modifications to the draft Rule to promote acceleration of smart meters prior to 2017. We also suggest a minor procedural change to the opt-out procedures, which will reduce the logistic risk faced by retailers when undertaking large rollouts in a geographic area.

a. Transitional period in the Rule

Our main concern is that the Rule will only commence in 2017. During that time, distributors will be subject to the arrangements in the current framework, and therefore will have limited incentive to install a smart meter for new customers or those requiring a replacement meter.

Our estimate is that 10 to 15 per cent of customers will have a Type 5 or 6 meter installed over the next 2 years.⁴ This means that a significant proportion of the customers will be locked into outdated meters for the next 15 years.

To put this into context, these customers will be subject to the new distribution pricing arrangements until 2030 without having tools to reduce their energy use at peak times. This places them on an unequal footing with the rest of the customer base. Alternatively the customer may opt for a smart meter, which may entail an exit fee and lead to inefficient meter churn that could have been avoidable.

We recognise it will take time to develop procedures to get the market ready for the new arrangements. However during this period, there may be benefit in promoting consultation between the distributor and retailer when a new or replacement meter is required. This would provide retailers with an opportunity to act before the Rule change by offering the customer a bundled deal that includes a smart meter.

b. Opt out

We consider the AEMC has reached an appropriate balance in constructing the opt-out arrangements in the draft Rule. Given the benefits of smart meters, it would be detrimental to a customer's interest if an outdated metering technology was installed.

The draft Rule only provides an opt-out if the existing meter is functional. In our view, this may reduce incentives for geographic rollouts. However we recognise that an opt-out in this very narrow circumstance may provide protections for customers who object to replacing a functional meter.

We are concerned that customers could opt-out with only 3 days to go until the day of installation, as set out in the draft Rule. We consider this would cause significant logistic issues for the retailer. We

⁴Our estimate is based on the average life of a meter being 15 years, which implies a replacement of about 7.5 per cent per year. Over a two year period this is likely to be 15 per cent. The number could be even more if distributors have a significant proportion of meters at the end of life or there is a material increase in new customers. At the same time, distributors may defer investment for as long as possible over the 2 year period, in which case a conservative estimate would be approximately 10 per cent.

suggest that the customer be required to contact the retailer at least 14 to 21 days before the notified time of installation.

3. New market arrangements

Landis+Gyr support the contestable market framework under the draft Rule. We consider that expansion of competition will improve the quality of metering services, and promote new technologies that benefit customers. We also support the policy intent to minimise regulation, in particular the decision not to impose price regulation on metering coordinators.

At the AEMC forum on 30 April 2015, some stakeholders raised concerns with the AEMC's decision not to impose price regulation on metering coordinator services to distributors and other access providers. The view of these stakeholders was that the metering coordinator would act as a monopoly and only provide access to the meter at \$1 less than the next best substitute.

While we recognise that the metering coordinator will have a degree of market power, we consider the extent of its power will be significantly countervailed by the following factors:

- As a potentially large customer, distributors also have significant bargaining power in negotiating with the metering coordinator. The metering coordinator has an incentive to ensure a bargain is struck as it will lose all potential revenue if the distributor walks away from the deal. In these cases, economic theory would predict that the price would not likely be \$1 less than the next best alternative. Rather the cost would lie somewhere between the marginal cost of supply and the next best alternative.
- Unlike essential services, the demand for products offered by the meter is relatively elastic due to the availability of at least two credible substitutes. The distributor can either install its own network device, or employ an alternative network or non-network activity to resolve the constraint. While these may not be the most cost-efficient solutions, they provide a degree of bargaining power in negotiations with the metering coordinator.
- For many services, the distributor will require mass deployment of the service. For example, a distributor may need at least 15 per cent of penetration in a geographic area for effective load control. Provided that all meters are capable of providing the service, this would allow distributors to enter into competitive bargaining with multiple competing metering coordinators. However we question the practicalities of distributors reaching an agreement with several metering coordinators to achieve an optimum outcome for consumers.
- The threat of having price regulation imposed in the future will also place a constraint on the behavior of metering coordinators. For this reason, we support the AEMC undertaking a rolling review to determine whether some level of price regulation is required.

4. Clarity on practical operation of market

We consider the AEMC has successfully considered a wide range of issues that will affect the practical operation of the market. We consider the AEMC could provide further policy guidance on other challenging issues that are likely to arise in the new market.

These include the transfer arrangements when customers churn retailers, security and access to a metering site, arrangements for when a retailer cannot find a metering coordinator to appoint, and certainty that the framework enables retailers to meet their obligations with providing customers with 2 years of data. These issues are discussed below.

a. Retailer churn

Customer routinely changes retailers in response to competition on price and service offerings. AEMO's latest monthly report on monthly transfer retail statistics suggests that the annual transfer rate for each jurisdiction was between 11 per cent and 25 per cent.⁵

Furthermore, there may be a need for transfer of meters if a customer moves out of the house, and the incoming customer belongs to a different retailer. The Australian Bureau of Statistics (ABS) notes that 43 per cent of households in a 2007-08 survey had moved houses over a 5-year period.⁶

In both these cases, there will be a need to ensure the efficient transfer of the 'meter asset' and services. While we support minimal regulation, we consider there may be unique challenges that arise in the transfer process:

- Transfer of meter asset – In a perfect market we would expect the meter to be transferred efficiently. The existing retailer would recoup the residual costs of the investment, and the new retailer would avoid the need to invest in a new meter. However when the two parties are competitors, the arrangements may not result in a perfect bargain. If a bargain cannot be struck there is a risk that the new retailer will simply install its own new meter, leading to inefficient market outcomes.
- Transfer of services – We also note the challenges that may arise in the transfer of information from one metering coordinator to another, in particular where each coordinator has customised communication and security systems.

We consider that the final Rule could facilitate more efficient market outcomes by setting out a principle for parties to negotiate on fair and reasonable terms. The objective should be for market participants to work together to achieve efficient investment in metering services and efficient outcomes for customers.

We also note that these issues relate to the benefits of including a robust baseline of services in the meter as discussed in section 1 of this submission. Our view is that meter churn will be minimised if the meter provides a robust baseline of services, such that the meter is valued by the incoming retailer. As noted below, it also underscores the importance of common security and communication platforms so that the incoming retailer has the ability to operate the existing asset at low cost.

b. Security and access to the meter

Physical and cyber security are crucial elements of the new framework. We support the policy to make the metering coordinator accountable for all security issues associated with the meter. However, we see some challenges in practice:

- Cyber security - Without a common platform for cyber security, each metering coordinator is likely to develop unique systems. As noted above we consider this may cause issues when a customer changes retailer and the meter is transferred to a different metering coordinator. Unless there is a shared security infrastructure across the meter population, it may be difficult for the new metering coordinator to provide cyber security if systems are not compatible. In our view, this issue should be explored in greater depth as part of the shared market protocol review to avoid unnecessary meter churn. Our view is consistent with the UK Department of Energy and Climate who emphasised the benefits of interoperability of the meter.⁷

⁵AEMO, National Electricity Market Monthly Retail Transfer Statistics, April 2015, p1.

⁶The ABS states: "According to the 2007–08 Survey of Income and Housing, of people aged 15 years and over, over one-quarter (27%) had been living in their current home for 15 years or more, 30% had been there for 5–14 years, and 43% had moved in the last five years (recent movers)." ABS, Australian Social Trends – Moving House, December 2010, p1.

⁷The Department of Energy and Climate Change stated "It is in the interests of all parties that equipment from multiple manufacturers interoperates seamlessly within customers' premises so that equipment does not have to be replaced, adding cost and creating disturbance for customers." Government Response to the Consultation on the second version of the Smart Metering Equipment Technical Specifications, July 2013, p57. The link to the DCC's considerations: <https://www.gov.uk/government/consultations/smartmetering-equipment-technical-specifications-second-version>.

- Local site security - We support the AEMC’s decision to permit distributors to have their own network devices. Our concern is that the distributor will have access to the metering site, without an obligation to consult with the metering coordinator accountable for security. We consider developing a mirror obligation to that imposed on AEMO under the draft Rule could mitigate the risk. This will require AEMO to notify the metering coordinator 2 days in advance, and follow all safety procedures set out by the metering coordinator.⁸
- Limited space for metering ‘real estate’ - We also anticipate potential difficulties with service providers installing network devices in metering sites that have limited physical space. We consider the Rules should specify that the smart meter take precedence in this situation, with the metering coordinator having ultimate discretion when such issues arise.

c. Metering coordinator event

We consider the Rules should identify the responsible party for metering services in the event that a retailer cannot find a metering coordinator. This may arise when there are a small number of market participants, or when the cost of serving a particular customer is not seen as commercially viable. In these cases, the draft Rule does not state who has responsibility for providing the service.

Further, we consider the Rules may need to expressly cater for the contingency of multiple metering coordinator failures⁹. This could be an issue if there are a limited number of participants in the market, and may lead to a metering coordinator of last resort situation.

d. Customer’s request for past energy data

We support the recent changes to the Rules, which clarify that a customer can access up to 2 years of past energy data. The Rules enable customers to seek information from previous retailers on their energy use.¹⁰

We seek clarity from the AEMC on whether the new market framework enables the previous retailer to retain this information, and the mechanism for accessing this data. We consider an example would be helpful for stakeholders in understanding their obligations.

⁸ 7.9.3e(1) of the draft Rule states: “The Metering Coordinator must provide AEMO with unrestrained access to metering installations for the purpose of carrying out such random audits provided that AEMO agrees to comply with the Metering Coordinator’s reasonable security and safety requirements and has first given the Metering Coordinator at least two business days’ notice of its intention to carry out an audit, which notice must include: (1) the name of the representative who will be conducting the audit on behalf of AEMO; and(2) the time when the audit will commence and the expected time when the audit will conclude.”

⁹ We support the policy to have AEMO review the Retailer of Last Resort provisions to ensure they are adequate for transfer of customers to a new metering coordinator in the event of a retailer failure.

¹⁰ Rule 56(B) of the National Energy Retail Rules.