Macquarie Corporate and Asset Finance Limited
ABN 49 006 198 910
A Member of the Macquarie Group of Companies

No 1. Martin Place
SYDNEY NSW 2000
GPO Box 4294
SYDNEY NSW 1164
AUSTRALIA

Telephone +61 2 8232 4502
Fax +61 2 8232 6013
Internet www.macquarie.com.au

Friday 23 November 2012

Mr Philip Weickhardt
Presiding Commissioner
The Electricity Network Regulatory
Frameworks Inquiry
Productivity Commission
LB 2 Collins Street East

Melbourne VIC 8003

MACQUARIE

Dear Mr Weickhardt,

SUBMISSION TO PRODUCTIVITY COMMISSION'S DRAFT REPORT ON INQUIRY INTO ELECTRICITY NETWORK REGULATORY FRAMEWORKS

On 9th January 2012, the Deputy Prime Minister and Treasurer Wayne Swan requested that the Productivity Commission undertake an inquiry into electricity network frameworks. The Productivity Commission ("the Commission") released its draft Report on *'Electricity Network Regulatory Frameworks'* ("Draft Report") on 18th October 2012 and requested public comment. This submission contains the views of Corporate and Asset Finance Group ("CAF") only. CAF is one of six operating groups within the Macquarie Group ("Macquarie").

Macquarie is a global provider of banking, financial, advisory, investment and funds management services. CAF specialises in lending and asset finance, engaging Macquarie Bank Limited's balance sheet to provide tailored finance and asset management solutions.

CAF has been involved in the competitive metering market in the UK since its inception in 2002, as both an adviser and an investor. CAF currently own a portfolio of over six million traditional and smart gas and electricity meters, and has invested and arranged over GBP700 million into the deregulated UK metering market. CAF has drawn on this experience when preparing this submission.

Our submission is specific to Volume 2 of the Draft Report, focusing on Chapter 9 *'Peak demand and demand management'* and Chapter 10 *'Technologies to achieve demand management'*.

Executive Summary – Smart Metering

Based on CAF's experience in the UK competitive metering market, we believe that a smart meter rollout led by energy retailers under a competitive model, will deliver the greatest benefits, innovation and choice for consumers. Such a rollout would further assist networks with forecasting and managing demand loads and better assist with determining the appropriate allocation of investment in generation and network infrastructure.

Macquarie Corporate and Asset Finance Limited is not an authorised deposit-taking institution for the purposes of the Banking Act 1959 (Commonwealth of Australia), and its obligations do not represent deposits or other liabilities of Macquarie Bank Limited ABN 46 008 583 542. Macquarie Bank Limited does not guarantee or otherwise provide assurance in respect of the obligations of Macquarie Corporate and Asset Finance Limited.

Based on our experience of other markets, a distribution business led rollout may not be the most effective option. Such a model will involve increased regulation and complicated benchmarking, of uncertain value to an innovative and evolving market. It will also carry a higher risk of failing to maximise the potential benefits to consumers, when compared to an energy retailer led competitive rollout.

With respect to draft recommendation 10.1, that '*Distribution businesses should implement the roll out of advanced metering infrastructure -smart meters- on a region-by-region basis within their network*', we believe a distribution business led rollout should only be pursued if there is clear evidence that this would benefit energy consumers. We do not believe this evidence is readily apparent.

There appear to be two key decisions to be made for the Australian market with respect to any rollout of smart metering to facilitate Demand Side Participation ("DSP") and time based pricing;

- Should the rollout and adoption of smart meters be mandated to take place over a particular time period (as has happened in the United Kingdom); and
- Under what implementation framework should smart meters be rolled out (i.e. mandated or not).

We suggest the possible mandated rollout of smart meters should be decided by energy retailers, in consultation with distribution businesses/networks and the regulators, based on a net benefit/cost to the Australian energy consumer. We note that in the United Kingdom, it was the Government's planned approach that energy supply companies '*would have responsibility for provision, installation and ongoing management of smart meters*'[1] for the following reasons:-

- An accelerated deployment ensures that the benefits from smart metering will be delivered sooner, for both NPV and carbon benefits[2] ; and
- Retaining the energy supply companies' responsibility for metering services should provide a platform to support innovation and competition between the supply companies, leading to more choice for consumers in metering and other products and services[3]

Based on our experience and also our involvement in the UK government smart metering consultation process, regarding the decision with respect to a mandated or organic roll out of smart meters, it is our opinion that the installation of smart meters should be a competitive rollout led by energy retailers for the following reasons:-

- Smart metering technology is one of the fastest developing areas in the energy sector with respect to innovation and cost reduction.
- There are significant economic, regulatory, technical and geographic variables in Australia and internationally. As a result, benchmarking and regulation to deliver better results is problematic, as it is not forward looking when trying to deliver best value to Australian energy consumers in a dynamic market.
- As demonstrated by the Victorian smart meter rollout, distribution businesses are not organisations that traditionally work well as customer facing entities, and do

---

[1] UK Department of Energy & Climate Change, '*A Consultation on Smart Metering for Energy and Gas*' May 2009, page 6, this can be found at http://www.decc.gov.uk/assets/decc/Consultations/Smart%20Metering%20for%20Electricity%20and%20Gas/1_20090508163551_e_@@_smartmetercondoc.pdf

[2] UK Department of Energy & Climate Change, '*Impact assessment of a GB-wide smart meter roll out for the domestic sector*' May 2009, page 26-27, this can be found at http://www.decc.gov.uk/assets/decc/Consultations/Smart%20Metering%20for%20Electricity%20and%20Gas/1_20090508152831_e_@@_smartmeteriadomestic.pdf

[3] UK Department of Energy & Climate Change, '*A Consultation on Smart Metering for Energy and Gas*' May 2009, page 22, section 2.14

not appear to be particularly innovative or fast adopters of new technologies and services;

- In contrast, energy retailers are customer facing organisations and are designed to interact with energy consumers in order to deliver value, innovation and choice in order to maintain and grow their customer base.

- Energy retailers and their shareholders are well placed to assess and manage the risks of a smart meter rollout, and face loss of customers / market share if their products and services are not as good as or better than their competitors.

- There are a large number of technology providers, service companies and funding organisations in Australia that are keen to participate in a competitive smart metering market providing innovative and cost effective solutions and services to energy retailers to provide to their customers.

- In short, we believe that encouraging competition is the most efficient method to deliver innovation, choice and new technology/service developments as quickly as possible.

CAF Background and Credentials

Macquarie has been involved in, and committed to, the competitive UK metering market since 2002. CAF currently own a portfolio of over 6 million traditional and smart, gas and electricity meters, and have invested and arranged over GBP700 million of equity and debt financing into various UK metering portfolios. Due to our constructive relationships with retail and commercial energy suppliers, CAF has also built the largest portfolio of smart meters in the UK, with over 500,000 installed industrial & commercial and domestic smart meters. In addition to playing an active role in the various smart metering consultation processes over the last 5 years arranged by the regulator ("Ofgem") and the Department of Energy & Climate Change ("DECC"), the CAF metering team has well over 100 years of combined UK metering experience.

Our metering capabilities are complemented by the strength of the Macquarie Group, one of the world's largest private infrastructure managers with over $A341 billion of assets under management[4]. Macquarie Bank Limited benefits from a strong yet conservative balance sheet: Macquarie holds $A3.4 billion in excess regulatory surplus capital[5].

In the UK, Macquarie is viewed as an independent third party meter owner and funder with a demonstrated history of working with "in-house" energy supplier service companies, the majority of independent participants in the smart metering market, and across manufacturers and smart meter service providers and installers.

Detailed Submission

- Smart meter selection, installation, funding, and management from an information technology perspective is a deceptively complicated business and is difficult to benchmark with any degree of confidence. In the UK, as an independent funder of smart meters, we have seen many proposals through competitive processes run by energy retailers that have a wide range of costs and embedded risks, with each submission/proposal appearing reasonable in its own right.

- With respect to benchmarking and best practice, our experience in smart metering is that organisations that competitively bid get better over time and increase their productivity. For example, an organisation that originally installed two smart meters

[4] As at 30 September 2012
[5] As at 30 September 2012 refer to Macquarie website http://www.macquarie.com.au/dafiles/Internet/mgl/au/about-macquarie-group/investor-relations/financial-disclosure/documents/2013/mgl-hy13-interim-presentation.pdf

per day per person would often triple this rate of productivity within a reasonable period of time. The danger of trying to benchmark distribution businesses against best practice and investment returns is that the wrong benchmark may be picked in the learning cycle and energy consumers end up paying more for a service that could and should have been provided more cost effectively over the medium to long term.

- CAF have had exposure to UK distribution networks with regulated meter monopolies where they are remunerated on capital invested. Our observation is that this approach results in procurement and implementation processes that may not be best practice and that can result in over servicing and over investment.
- Smart meter technology is continuing to develop rapidly to the point where smart meters that appear to meet the AEMC's minimum specifications as detailed in their draft report 'Power of Choice'[6] should shortly be available in the Australian market for prices that are several orders of magnitude less expensive than those meters installed in Victoria as a result of the mandated rollout. We anticipate technology advancement to continue at a faster pace than a regulatory review or benchmarking cycle can keep up with.
- In our experience, energy retailers sourcing smart meters through a competitive process are more likely to source appropriate and cost effective technology that is best fitted to their customers needs. For example:-
    - It is unlikely that an energy retailer will build and support separate communication infrastructure to support a smart meter roll out as they will not be rewarded for this investment. They would rather utilise existing communications infrastructure as a more cost effective solution.
    - It is unlikely that energy suppliers will adopt a "one size fits all" approach to consumers needs, but will rather provide innovative products and services facilitated by smart meters that vary from high specification/functionality, through to minimum specification smart meters, depending on their customers' needs.
- We believe that it is incorrect to assume that a market based approach would involve significant additional risks. Energy retailer shareholders should be put in the position of gaining the rewards of smart metering, but also the risks of rolling out smart meters. As happened with the Victorian smart meter rollout[7] a planned roll out using electricity distributors without competition increases the risk of:-
    - Consumers not being properly engaged by organisations, particularly when they are accustomed to a high level of engagement and customer service;
    - A lack of choice for customers and energy retailers with respect to what products and services they are able to access on both an initial and replacement basis (if their needs change); and
    - The continued roll out of more expensive and increasingly redundant technology over time without the take up and adoption of more cost effective and innovative solutions.
- An alternative proposal in an energy retailer lead deployment is that instead of energy retailers having to liaise with distribution businesses about smart meter deployments, distribution businesses should actively engage with energy retailers as to priorities on smart meter deployments in order to promote DSP and time based pricing. There is no reason why co-ordinated action between energy retailers and distribution businesses cannot take place under a market based solution.
- Based on our experience in the UK, despite the density advantages in implementation that distribution businesses appear to have, we see competitive commercial organisations such as G4S and BGSM installing tens of thousands of

[6] AEMC Draft Report '*Power of Choice*', 6 September 2012
[7] Draft Report, Box 1, Page 28 of Overview

smart meters efficiently using a 'checker board' approach to scheduling and installation. Distribution businesses should still however be able to competitively bid for a smart installation roll out in their regions, as long as the market can be made confident that there is no cross subsidisation taking place between regulated and deregulated arms of the business.

- Based on our experience in the UK, any one of the "big 3" energy retailers in Australia has sufficient size and scale to be able to roll out smart meters efficiently. Further, a market based approach supported by "light touch" regulation will ensure that the smart meters remain in use and are not stranded in the event of energy consumers changing between energy retailers. CAF has implemented "churn contracts" for smart meters amongst the "big 6" energy retailers in the UK on this very basis.
- Regulation and benchmarking exercises to prevent "gold plating", promote innovation and encouraging customer engagement from distribution businesses tasked with rolling out smart meters will be complicated. Development of regulation based on benchmarking risks delaying the roll out of smart meters by many years, compared to letting energy retailers take the lead and take the risks and rewards of efficient deployment.
- We would agree that in some cases, it may be best to promote a regional roll out to allow DSP and time based pricing to be implemented sooner rather than later. Doing this may delay or remove the need to invest further capital in distribution business infrastructure in order to meet peak demand. We see no reason why energy retailers charged with rolling out smart meters cannot be required to work closely with distribution businesses to prioritise particular customers in particular areas to realise the maximum benefits as soon as possible.
- Acknowledging that distribution businesses know where the greatest potential cost savings are within their given regions, this knowledge does not necessarily mean they are best placed to lead a smart meter rollout. Alternatively, the distribution businesses can educate energy retailers through a formal working group or body pointing them to opportunities to save. Energy retailers will then prioritise a competitive smart meter roll out in these regions faster and more cost effectively in order to minimise the costs passed on to them from distribution businesses, to the ultimate benefit of their energy customers.
- We do not believe it is correct to assume that communication infrastructure options controlled by distribution businesses to support the grid will be consistent with a mass smart meter rollout. Distribution businesses may be inappropriately encouraged to upgrade and invest in their own proprietary communications infrastructure and actually duplicate existing communications infrastructure that may be equally appropriate for, or better for a smart meter roll out.
- We agree that the AEMO could operate a central MDMS as it is independent from distributors and already has responsibility for smart meters. We also believe this model is also consistent with an energy retailer led competitive roll out. In fact it is similar to the proposed model in the UK where smart meters installed by energy retailers under a competitive model, will connect to a centralised appointed Data Service Provider appointed by the regulator.

Conclusion

Based on CAF's experience in the UK competitive metering market, we believe that the Commission's recommendation that distribution businesses should roll out smart meters is not supportable at this stage. We believe it would involve complicated benchmarking with questionable value to an innovative and evolving market, plus further regulation, with commensurate delays, in order to ensure that distribution businesses roll out smart meters efficiently to the benefit of energy retailers and their customers.

It is our belief that energy retailers leading a smart meter rollout under a competitive model are much more likely to develop the benefits, innovation and choice that energy consumers and regulators are looking to achieve through DSP and time based pricing. Clearly distribution businesses have a vital role to play in working with energy retailers to

ensure that there is prioritisation of some areas to minimise over investment in "poles and wires", however we do not believe that distribution businesses have to be responsible for any smart meter roll out in order to achieve these benefits.

We would be pleased to share our experiences from the UK contestable metering markets with both the Productivity Commission and other parties that it engages with in undertaking the Inquiry.

Yours sincerely
Macquarie Corporate and Asset Finance Limited

John Wilson
Executive Director
Corporate and Asset Finance

Bruce Mellor
Division Director
Corporate and Asset Finance

Appendix 1

Background and Credentials

CAF's Metering business is best summarised in the following key characteristics:

Well Established	▪ UK installed base: over 6 million meters – c.12% of the total UK meter population ▪ UK's largest owner of smart meters: over 500,000 installed smart meters ▪ Over 5.6 million installed traditional gas and electric meters ▪ An experienced team of over 40 people dedicated to meter funding activities
Direct Access to Funding and Capital	▪ Funding from Macquarie Bank Limited ▪ Successful recent record of fully funded deployments, especially for smart meters ▪ Track record of raising external funds for meter leasing businesses in the UK
Sector Expertise & Demonstrated Commitment	▪ Track record of industry and long-term commitment - UK metering since 2002 as an adviser and since 2003 as an investor ▪ Largest financial investor in the smart metering market in the UK since 2006 ▪ Operational expertise, supporting systems and infrastructure ▪ Strong relationship with regulator; extensive experience in Ofgem/DECC consultation processes
Market Leader	▪ Selected independently by two Big 6 suppliers to finance smart meter trials and commercial rollouts in 2011/12 ▪ The only independent meter funder with a specialist meter processing centre to handle the deployment and disposal of new and used meters
Independent	▪ Independent of the meter manufacturer, installer, maintainer, head-end and meter data management system ▪ Strong track record of successfully working with multiple partners, including meter manufacturers and in-house metering service providers and installers

Please refer to Macquarie's website for further information:
http://www.macquarie.com.au/mgl/au/corporations/leasing/energy