

# Report on international experience with smart meters (energy)

# Addendum

Prepared for: The Parliamentary Commissioner for the Environment

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### Preface



**Strata Energy Limited** specialises in providing services relating to the energy industry and energy utilisation. The company was established in 2003. Strata Energy provides advice to clients through its own resources and through a network of associate organisations. Strata Energy's consulting division, Strata Energy Consulting, has completed work on a wide range of topics for clients in the energy sector both in New Zealand and overseas.

This report was prepared by:

Phillip Beardmore, Consultant, Strata Energy

Robert Reilly, Director, Strata Energy

For further information please contact:

Bill Heaps Managing Director Strata Energy Limited Level 2, 95-99 Molesworth Street PO Box 12332 Thorndon Wellington 6011

 Phone:
 +64 4 471 0312

 Fax:
 +64 4 472 1211

 Mobile:
 021 852 843

 Email:
 bill.heaps@strataenergy.co.nz

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## Introduction and purpose

- The recent report that Strata Energy prepared for the Parliamentary Commissioner for the Environment (PCE), titled 'Report on international experience with smart meters (energy)' (Strata report), contained, amongst other things, information on the use of smart metering in Australia. That report noted that the second phase of a national cost-benefit study on mandating the rollout of smart metering in Australia was in progress. At the time of the Strata report being prepared, the Ministerial Council on Energy (MCE) was consulting with stakeholders over the findings of the national costbenefit study.
- Subsequent to the Strata report being finalised and submitted to the PCE, the MCE has met and considered the Australian national cost-benefit analysis. This addendum updates the Australian-sourced information contained in the Strata report to reflect the policy decisions made by the MCE Ministers.

## Implementation of smart meters in Australia

- 3. MCE Ministers met in Canberra on 13 June to discuss various energy-related matters. One of the key issues discussed was the mandatory rollout of smart metering in particular, the recent national cost-benefit study and the submissions received on this study.
- 4. The MCE noted that the national cost-benefit study estimates a wide range of net benefits across Australia for a smart meter rollout, with uncertainty of costs and benefits existing in the various jurisdictions. The MCE also noted that the benefits of a rollout vary significantly across the jurisdictions because of differences in existing metering assets, consumer demand profiles and network management practices<sup>1</sup>.
- 5. Consequently, there will not be a national rollout of smart metering in Australia. The jurisdictions have agreed to differ over the extent to which they roll out smart metering. Instead of a national rollout, the MCE has agreed to progress further the introduction of smart metering in Australia "by undertaking coordinated pilots and business-specific business case studies in most jurisdictions (not including South Australia and Tasmania)"<sup>2</sup>.
- 6. The status of smart metering in the various Australian jurisdictions is therefore as follows<sup>3</sup>:
  - Victoria and New South Wales (NSW) are committed to a smart metering rollout. Victoria's rollout remains as described in the Strata report. NSW is expecting to have most of its smart meters rolled out by 2017;
  - b) Western Australia (WA) and Queensland have not committed to a rollout. These jurisdictions wish to consider the matter further before making a decision. Queensland, in particular, is very clear about its desire to undertake trials and further cost modelling; and
  - c) South Australia (SA) and Tasmania appear to have rejected a smart meter rollout at this point in time.

#### A consistent national framework

- 7. Because of the federal make-up of Australia, the MCE has agreed that, although the introduction of smart metering in the various jurisdictions will be on varied timescales, the underlying regulatory arrangements for the National Electricity Market (NEM) will remain within a consistent national framework. This includes seeking consistency between the NEM and the WA wholesale electricity market and the electricity market arrangements in the Northern Territory.
- 8. A key part of the national framework is mandating that distributors will undertake any rollout of smart metering within the NEM jurisdictions<sup>4</sup>. Key benefits identified by the MCE to support this decision include:

<sup>1</sup> Smart meter decision paper, Ministerial Council on Energy, 13 June 2008

<sup>2</sup> Smart meter decision paper, Ministerial Council on Energy, 13 June 2008, p.3

<sup>3</sup> In the MCE's announcements no specific mention is made of the Australian Capital Territory (ACT) and the Northern Territory. It could be assumed that the ACT will follow the lead of NSW, consistent with the relevant assumptions made in the national cost-benefit analysis.

<sup>4</sup> Being Queensland, New South Wales, the Australian Capital Territory, Victoria, Tasmania and South Australia.

- a) better capture of many of the benefits identified for a smart metering rollout (achieved by undertaking an accelerated rollout, which is deemed unlikely under a market-led rollout approach);
- b) better management of market failure risks specific to achieving an accelerated rollout;
- c) improved timeliness of the rollout (as many of the skills and resources are already in place in the Victorian distributors' businesses); and
- reduced risks to full retail competition (e.g. by providing a common platform to all retailers, reducing lack-of-scale disadvantages to small retailers).
- 9. However, the MCE recognises the potential benefits of contestability in metering. Therefore, it does not intend for this decision to apply to larger customers, and remains open to further expansion of contestable metering beyond the rollout period. The MCE has stated that regulatory and operational arrangements in the national framework should be designed with this in mind.
- 10. As noted in the Strata report, a mandatory rollout of smart metering means that government or the regulator is making redundant, or stranding, certain existing metering assets. The MCE has agreed that distributors (the parties affected by this issue in Australia) should not be penalised for the stranding of metering-related existing assets. Hence, distributors will be able to recover their stranded asset costs via their regulated tariffs.

#### **Open standards / interoperability**

- 11. The MCE has given some consideration to the issue of open standards / interoperability. In respect of the former, the MCE is requiring smart meters to have an interface to a home area network (HAN), where the HAN "should use an internationally-supported, nationally-consistent open standard which can be integrated easily into many types of devices"<sup>5</sup>.
- 12. With respect to interoperability and communications standards, the MCE has recognised that important risks arise if there is insufficient interoperability across meters, metering management systems and communications infrastructures. Key risks that the MCE has identified in this area include reduced competition in metering provision and market power risks. The MCE is seeking advice on this issue.

#### Direct load control

13. The MCE has noted that the use of direct load control (DLC) instead of smart metering in some Australian jurisdictions achieves significant benefits. Therefore, the MCE supports continuation of non-smart meter DLC trials. In addition, to support the uptake of DLC, the MCE believes that consideration should be given to adjusting some appliance standards (e.g. air-conditioning) to include the HAN standard discussed above.

<sup>5</sup> Smart meter decision paper, Ministerial Council on Energy, 13 June 2008, p.5

#### Maximising consumer benefits

14. The MCE has recognised that consumer education programmes are critical to maximising demand response and greenhouse gas-related benefits. Therefore, the MCE has agreed to develop a significant consumer education programme to maximise demand response, greenhouse gas reductions and consumer benefits in general.

### Summary of key messages

- 15. The key messages arising from the MCE decision can be summarised as follows:
  - a) the importance of clear policy objectives. In Australia this is heightened by federalism and the potential for different jurisdictions to adopt different smart metering frameworks;
  - b) the desirability of open standards and/or interoperability across the range of smart metering infrastructure;
  - c) DLC is a viable alternative to smart metering in the achievement of demand reduction and the associated environmental benefits;
  - trials/pilots of smart metering/DLC are important inputs into cost-benefit analyses and decisions on whether or not to roll out smart metering/DLC; and
  - e) consumer education is a key component of any smart metering rollout, to assist in maximising key policy objectives such as demand response and greenhouse gas reductions.