Cost Benefit Analysis of Smart Metering and Direct Load Control

Country Energy's Submission

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countryenergy

1 Executive summary

Country Energy welcomes the opportunity to comment on the *Cost Benefit Analysis of Smart Metering and Direct Load Control: Phase 2 Report*, released for public consultation by the Ministerial Council on Energy (MCE) Standing Committee of Officials on 5 March 2008.

Country Energy offers strong in principle support for the deployment of smart meters, recognising their many potential benefits. Country Energy recognises the difficulty in determining the extent to which benefits outweigh costs for a nominated set of smart metering functionality, and that statistically valid test data needs to be developed through physical trials – trials that Country Energy is now preparing to undertake.

Country Energy's enclosed submission makes the following observtions:

- We support the distribution network business led rollout as the preferred scenario, with exclusivity for not only the period of the rollout but also the ongoing operation and maintenance of the smart metering infrastructure.

- Minimum functionality needs to be further reviewed by the technical working group in conjunction with industry trials, to conclusively prove the viability of relevant technology and validate the ability of the anticipated benefits.

- We recommend that the rollout timeframe needs to be further reviewed in conjunction with industry pilots and technology trials. Timelines and targets should be set as part of the legal and regulatory framework, taking into account jurisdictional differences. Achievement of any timeframe will be dependant on the available technology to meet the minimum functionality requirements as well as the existence of sufficent and approriately skilled resources to complete the change out program.

- Certain costs remain uncertain, as no meter is currently available to meet the minimum functionality – although such meters are expected to emerge - and Country Energy is also concerned to better understand certain assumptions used to estimate installation and communications costs.

- There is uncertainty regarding the breakdown of costs and benefits between the customer classifications of urban, rural and remote – again, Country Energy recommends validatation of any assumptions through trials.

- Regulatory reform is necessary to provide investment certainty. Country Energy fully supports the creation of a technical and regulatory working group to review the legal and regulatory framework and recommend necessary changes to support the rollout of smart meters in jurisdictions where the benefits outweigh the costs.

Country Energy believes in the potential of smart meter technology and is already preparing to invest in the validation of the business case.

Country Energy recommends a move to implementation of 'real world' trials and a staged deployment that physically tests the business case assumptions of cost and benefit, while validating the functionality specification and technology solutions.

2 Background

This submission responds to the Cost Benefit Analysis of Smart Metering and Direct Load Control: Phase 2 Report, prepared for the Ministerial Council on Energy (MCE) Smart Meter Working Group.

Coalition of Australian Governments (COAG) began the process of investigating the potential for a national smart meter program in February 2006. The MCE was asked to define a national framework and determine the policy direction. In April 2007 COAG endorsed a national rollout "where benefits outweigh costs".

The Federal Department of Industry, Tourism and Resources (DITR) were charged with being the co-ordinating body for the COAG/MCE initiative, and prepared a brief for a national cost-benefit analysis. NERA Economic Consulting were appointed lead consultant for the cost-benefit analysis along with a group of specialised consultants informing a number of areas.

Phase 1 of the cost benefit analysis involved reviewing costs and benefits for a minimum metering functionality. MCE Decision paper released 13 December 2007, ministers have agreed to support an initial set of functions to be included in the national minimum functionality for smart meters.

MCE has endorsed the creation of a technical stakeholder group to:

- Develop and recommend technical specifications, performance requirements and amendments to functions, based on a sound benefits case.
- Develop and recommend service standards, including analysis of cost implications;
- Propose supporting National Electricity Rule changes and relevant changes to WA and NT instruments; and
- Develop appropriate supporting technical documentation through standards and/or NEM procedures.
- Consider any related decisions arising from Phase 2 cost-benefit assessment[1].

Country Energy fully supports the creation of a technical working group for this purpose. We recognise that substantial risks and uncertainties remain with large smart metering programs and there is insufficient real evidence available to determine the optimal approach, functionality and technology. The final recommendation needs to be sufficiently flexible to allow for variations in technical specifications, performance requirements and functionality in line with the results of industry pilots and technology trials.

3 Methodology and approach

The timelines set by MCE for the preparation of the cost benefit analysis were very tight, exacerbated by overlapping timetables for phase 1 and phase 2. This resulted in stakeholders being required to collate detailed data for information requests as part of phase 2 of the cost benefit analysis, while at the same time being required to review papers released for public consultation from phase 1.

Country Energy has attempted to provide cost and benefit estimates requested through detailed information requests received, however acknowledge this exercise may be subject to wide margins of error as there was little opportunity for internal analysis of the data prior to submission and Country Energy does not have practical experience in smart meter implementations of this scale.

[1] MCE Decision paper, 13 December 2007 A National Minimum Functionality for Smart Meters

Country Energy notes that the scope of the analysis is to include all small residential and small commercial customers. The phase 2 overview report refers to the definition of small customer based on total annual demand[2]. Country Energy has assumed this is just a report writing error and in fact the classification used for the business case preparation is based on total annual consumption.

The phase 2 report refers to the current meter policy view for NSW with the continued roll out of electronic manually-read interval meters (type 5) for new and replacement meters. This view is inconsistent with Country Energy's current metering policy which includes the installation of a combination of electromechanical and electronic interval meters, read as accumulation meters. The assumption is made within the phase 2 report that interval meters are read as accumulation meters, as such Country Energy does not believe this difference in metering policy view will affect the overall results of the business case.

The distinction between urban and rural has been determined at a density of less than one hundred customers per square kilometre. Country Energy does not have direct data available to provide a break down of customers by classification of urban, rural and remote. This may result in some inaccuracies in estimates made by consultants for the costs and benefits applicable to rural and remote customers.

4 Key assumptions

Analysis has been performed over a 20 year time period beginning 1 July 2008. Smart meters are determined to have a useful life of 15 years, with accumulation meters assumed to have an asset life of 40 years. While Country Energy supports a 40 year life for electromechanical meters, there is some doubt over the estimated useful life of electronic meters. Country Energy has received advice from some meter manufacturers that they will only guarantee the electronic meters for 10 years.

The business case has not taken into account the costs associated with writing off existing meter stock[3], where the asset life is not yet realised. Country Energy believes that this cost should be accounted for within the business case as a relevant cost of the smart meter rollout. Writing off the metering asset will be required as an operational cost of the program and should form part of the cost recovery. Disposal of these assets is also an area of consideration.

4.1 Rollout timeframe

The rollout timeframe assumes that jurisdictions would commence with smart metering trials and planning for 2 years commencing from 1 January 2009, followed by an accelerated rollout period where all meters would be replaced by 31 December 2014[4]. This assumption is based on the availability of appropriately qualified resources to support this aggressive installation timeframe.

Analysis performed as part of the business case preparation have estimated approximately 1,300 to 2,000 installers would be required for a national roll-out of smart meters[5]; for NSW this equates to 359 to 492 installers based on estimated installation times. Country Energy believes the average installation time is understated; as such the number of installers required is likely to be higher.

The industry is currently faced with ongoing challenges in securing qualified technicians. The number of resources required to support a full smart meter rollout is significant, particularly allowing for large scale rural deployments. Country Energy is unable to confirm that this quantum of qualified resources would be available

[2] Cost Benefit Analysis of Smart Metering and Direct Load Control Overview Report for Consultation, 29 February 2008, page 14, section 3.1 refers to total annual demand below 160MWh for all jurisdictions except QLD, TAS and NT.
[3] Cost Benefit Analysis of Smart Metering and Direct Load Control Overview Report for Consultation, 29 February 2008, page 29, section 4.1
[4] Cost Benefit Analysis of Smart Metering and Direct Load Control Overview Report for Consultation, 29 February 2008, page 29 section 4.2.1
[5] Work stream 6: Transitional Implementation Costs page 54, section 4.11

to perform installations within the timeframes referred to in the phase 2 report. It is important to also note that this resource base will be required on an ongoing basis, as the useful asset life for smart meters is determined to be 15 years.

Country Energy does not believe there is sufficient time to provide labourers with electrical qualifications required to perform installations to meet these timeframes. Timeframes for rollout need to reflect the capabilities of the available labour workforce to perform smart meter rollout activities.

Country Energy would recommend that the rollout timeframe needs to be further reviewed in conjunction with industry pilots and technology trials. Timelines and targets should be set as part of the legal and regulatory framework, taking into account jurisdictional differences.

5 Assessment of costs

It is difficult to validate costs provided within the national business case for smart metering and direct load control without comparing against actual data collected through a similar rollout process. Country Energy would recommend the need to proceed with industry pilots and technology trials to validate costs prior to proceeding with a national rollout of smart meters.

Country Energy is concerned that the costs provided by Victorian distribution businesses is above the upper bound of costs estimated by EMCa within the business case. It is noted within the phase 2 report that if the actual costs were to be 5 per cent higher than high end estimate or benefits were to be 5 per cent lower than the low end estimates, the positive minimum net benefit case becomes a negative minimum net benefit in the lower bound[6]. The costs provided by Victoria indicate that the costs could be more than 5 per cent above the estimates used within the report. This level of uncertainty can only be overcome by the implementation of real world trials.

5.1 Meter cost

The consultants have recognised that there remains significant uncertainty in the costs provided within the smart meters business case. As an example the phase 2 report has determined the cost of meters in consultation with meter manufacturers, represents 46 to 62 per cent of overall transitional costs. It is noted that there is not currently a meter available in the Australian market that meets the functional specification, thus the actual costs of these meters could vary considerably from that used in the analysis[7]. Country Energy is concerned about committing to a long term rollout of smart meters where such a major cost component remains uncertain. This cost should be firmed up during the period of industry pilots, once the finalisation of the functionality specification by the technical working group has been completed and endorsed by stakeholders.

5.2 Installation cost

Installation costs account for 18 to 23 per cent of the transitional costs for a national smart meter rollout. The incidence of difficult installations and the cost of dealing with these are identified as the main area of uncertainly, which will not be known until mass rollout installations are well underway[8]. A high number of metering installations within Country Energy's distribution area are likely to occur on asbestos meter boards, particularly with older installations. Country Energy is currently planning to move forward with implementation

[6] Cost Benefit Analysis of Smart Metering and Direct Load Control Overview Report for Consultation, 29 February 2008, page 12 section 2.3 Discussion
[7] Cost Benefit Analysis of Smart Metering and Direct Load Control Overview Report for Consultation, 29 February 2008, page 195 section 18.1
[8] Cost Benefit Analysis of Smart Metering and Direct Load Control Overview Report for Consultation, 29 February 2008, page 34 section 5.1.2 Transitional Costs

of smart metering pilots and technology trials which will provide further data on incidents of difficult installations.

Country Energy is conscious that the installation time needs to include the additional time to safely remove and install meters on asbestos meter boards. Within the phase 2 analyses it has been identified that it may be possible to obtain meters with the same meter footprint as older meters being removed, thus reducing the need to drill holes in the meter board. It is important to note that where the smart meter upgrade requires removal of 2 meters and replacement with one 2 element meter, holes will need to be drilled in the meter board. Country Energy has a large number of metering sites with 2 meters due to off peak hot water installations, and a high number of these are likely to occur on asbestos meter boards.

While Country Energy has existing procedures in place to manage asbestos installations, it is also important to note that the safety concerns of removal and installation of meters on asbestos boards will be exacerbated by the number of installations of this nature likely to be visited in a single day. In older suburbs it is likely that every house in the street will contain asbestos boards.

5.3 Communications cost

Communications technology has been assumed in the business case to be Mesh Radio with Global Packet Radio Service (GPRS) fill for urban customers and Power Line Carrier (PLC) for rural and remote customers. While Country Energy recognises that these solutions appear to be cost effective, they have not yet been proven in the Australian market as such there is significant risk in relying on these theoretical costs in the business case.

PLC has been determined as the most cost effective solution for rural and remote customers; however there is uncertainty that the bandwidth will be adequate to meet the smart meters functionality specification. Should PLC be found to be unsuitable to meet the minimum functionality requirements, it may be necessary to implement a higher cost communications technology for rural and remote customers. Extensive PLC trials should be completed to verify the viability of this communications functionality and to confirm inclusion within business case.

The net benefit for rural and remote customers is higher than for urban customers, resulting from increased business efficiency benefits. It is important to ensure this net benefit is still able to be realised if PLC is not viable and an alternate communications technology is required.

6 Assessment of benefits

It is difficult to validate the benefits provided within the national business case for smart metering and direct load control without comparing against actual data collected through a similar rollout process.

The size of annual network efficiency benefits estimated by CRA is substantial, representing a saving of 14 to 18 per cent of distributors current annual operating cost requirements[9]. Country Energy would recommend the need to proceed with industry pilots and technology trials to validate that the benefits exceed the costs prior to proceeding to an aggressive rollout of smart meters.

Country Energy was unable to provide a break down of costs by customer classifications of urban, rural and remote as this information is not currently captured. As a result, consultants have had to apply assumptions and estimate the additional costs that would be reasonable for rural and remote customers to include within the business efficiency benefits of the business case. This is particularly relevant in determining the extent to

[9] Cost Benefit Analysis of Smart Metering and Direct Load Control Overview Report for Consultation, 29 February 2008, page 11 section 2.3 Discussion

which business efficiency benefits outweigh costs for installation of smart meters for rural and remote customers

6.1 Avoided cost of metering

Meter costs by type and jurisdiction used to calculate the avoided cost of new and replacement metering[10] appears to be overstated even on the low range within the phase 2 report. Country Energy's current price for electronic meters and electromechanical meters is below the low range provided within the report.

It is also noted that the replacement rates provided for in the business case appear to be quite high compared to Country Energy's current replacement rate for meters. Replacement rate is assumed at 2.7 per cent for electromechanical meters and 7.17 per cent for electronic meters[11], this equates to Country Energy replacing approximately 30,000 electromechanical and 20,000 electronic meters per annum. This is significantly higher than Country Energy's current business as usual replacement rate of approximately 10,000 meters per annum. Proposed meter replacement programs for older meter stock will inflate the existing meter replacement volumes for Country Energy; however volumes are likely to remain below those provided in the business case.

6.2 Demand response benefits

It is noted that under a smart meter rollout retailers are assumed to offer flat tariffs, Time of Use (TOU) tariffs and TOU tariffs with Critical Peak Period (CPP). Assumptions have been made within the smart meter business case regarding the take up rates for each tariff class, with approximately 55 to 60 per cent of customers remaining on flat rate tariffs.

For customers not subject to regulated retail pricing, Country Energy would expect that retailers will be more likely to pass through TOU pricing, mitigating the risks of margin erosion in retail pricing where the underlying network price is TOU.

For customers who are subject to regulated pricing it is important to note that the NSW Government has released its response to the recommendations of the Consultative Reference Committee chaired by former Premier Barrie Unsworth. In that response, the Government has said it will introduce the legislative amendments required to extend independent retail price regulation to 2013 or beyond until it is satisfied that there is sufficient competition in the retail energy market.

In this environment there may be an increased number of customers who will continue to receive flat pricing under regulated contracts. Wholesale market events have resulted in dramatic changes to retail competition. Competition has decreased substantially as retailers are forced to partially or completely withdraw from the market. This has been evidenced by Country Energy who has seen an 80% reduction in customers transferring away between January 2007 and March 2008. Significant numbers of small retail customers are moving back to ETEF-based regulated prices where side constraints prevent the movements required to move customer on cost reflective levels with TOU tariffs.

Country Energy recognises the demand response from the introduction of cost reflective pricing as a key benefit of the implementation of smart metering. Smart metering and TOU tariffs may enable a demand response, however to maximise the demand response possible a detailed customer education program would also be required.

[10] Stream 2: Network Benefits and Recurrent Costs Phase 2 – Consultation Report, page 24 Table 6: Meter costs by type and jurisdiction

[11] Stream 2: Network Benefits and Recurrent Costs Phase 2 – Consultation Report, page 112 Appendix E

6.3 Avoided cost of meter reading

Costs estimated to read an accumulation meter in rural and remote areas, appears to be understated. Costs range between $1.50 on low end and $3.00 on the upper end of the range. Country Energy's average cost for meter reading across the entire distribution area is approximately $1.80 per unit read; thus it would appear that the cost assigned to rural remote reads is understated. Country Energy recognises this as a conservative view as the benefit for rural and remote customers would be understated.

It is also important to recognise that avoided cost of special reads is likely to be understated, as the regulated charges for special reads are not always cost reflective, of rural and remote readings.

6.4 Avoided cost of current approaches to load management

The phase 2 analysis has included the avoided cost of ripple control systems for NSW and QLD within the benefits of a national smart meter rollout.

The assumed life of ripple control systems for the purpose of the business case has been determined as 20 years. Country Energy normally assumes a life of 25 years for relays, 45 years for high voltage coupling systems, and 15 years for static transmitters. The reduced life for static transmitters is primarily due to technology redundancy.

On analysis of the business case results, Country Energy believe that the avoided cost of investment in ripple control systems are under estimated for both the annual cost saving and the once-off saving from not replacing the ripple control system at the end of its life.

Country Energy's estimated annual cost for running the ripple control systems is just below the NSW annual cost of $10 million for all NSW distribution businesses. Therefore, the estimate used in the business case is low and requires further consideration.

7 Minimum national functionality

Smart meter communication technology is still in its infancy; as such it is difficult to substantiate the ability of existing or future technology solutions to perform in the Australian market without tangible results from Australian industry pilots and technology trials.

While Country Energy in principle supports the creation of a minimum national functionality, there is some concern in locking in a functionality that is unproven in its application.

Country Energy's distribution area covers 95 per cent of NSW, including a large rural customer base of which a number of customers have no mobile communications coverage. Communications technologies currently available to support smart meters are yet to be tested and proven on large scale rural deployments in Australia. As such, Country Energy is unable to conclude that this minimum functionality would be economically or technically viable for all customers on our distribution network.

As previously discussed, PLC communications solutions have been determined as the most cost effective for rural/remote customers. It is recognised that there is significant uncertainty regarding the application of PLC as a viable communications technology in Australia, due to bandwidth constraints. PLC performance may be inadequate to meet minimum functionality of smart meters; low bandwidth will also impact on the ability to

catch up if no communications are available for a period of time, limit the application of smart grid functionality and the ability to send messaging to the home area network[12].

If PLC is unable to be proven as a viable technology, higher cost communications technology may be required to meet functional requirements or alternatively revisit the minimum functionality for rural/remote customers.

Phase 2 has provided a proposed final national minimum smart metering functionality following more detailed analysis and the review of stakeholder phase 1 submissions.

MCE has endorsed the creation of a Technical Working Group, with one task to develop and recommend technical specifications, performance requirements and amendments to functions, based on a sound benefits case[13]. Country Energy fully supports the creation of this working group and acknowledges that it is difficult to finalise the minimum functionality based on theoretical costs and benefits. A review of the minimum functionality would be required following detailed industry pilots and technology trials.

7.1 Minimum functionality supported in phase 1

F9 – Remote daily reading
Country Energy in principle supports remote daily reading, where it is economic to do so. Technical feasibility needs to be determined through implementation of industry pilots and technology trials.

F10 – Power factor measurement
Country Energy supports the continued inclusion of power factor measurement in all three phase meters. We note this functionality is already included as standard in most modern meters of this type.

F11 – Import / export metering
Country Energy supports the continued inclusion of import/export functionality within Smart meters; this functionality is already included as a standard feature of most electronic meters available today.

F12 – Remote connect/disconnection
Country Energy supports the implementation of industry pilots and technology trials for remote connect/disconnection functionality. While Country Energy agrees that the benefits are likely to exceed the costs for this functionality, particularly for rural sites, it is important to perform further industry analysis to ensure safety and consumer protection is maintained.

F13 – Supply capacity control
Country Energy supports inclusion of supply capacity control functionality in a base model smart meter and the further exploration of this functionality through trials to more fully understand the benefits and costs of this functionality.

F14 – Load management at meters through a dedicated control circuit
Country Energy supports the inclusion of load management at the meter through a dedicated control circuit as part of the base functionality for smart meters. Service levels should be determined through the technical stakeholder working group.

F19 – Quality of supply and other event recording
Country Energy supports inclusion of quality of supply and other event recording functionality within any smart meters installed. There are significant benefits to the distribution business from this functionality in being able to better understand and manage network infrastructure performance.

[12] Work stream 6: Transitional Implementation Costs section 5.6.1 Overview of Technology details technology constraints of PLC, EMCa has determined PLC as a viable solution where customer density is low.
[13] MCE Decision paper 13 December 2007

F20 – Meter loss of supply detection and outage alarm
Country Energy supports the inclusion of meter loss of supply detection and outage alarms within the base model for all smart meters. This functionality should be considered standard within the meter with the distribution business then implementing systems to support this functionality based on internal business drivers.

F25 – Remote configuration
Country Energy supports the inclusion of remote configuration functionality within the base model for all smart meters.

F26 – Remote software configuration
Country Energy supports the inclusion of remote software configuration functionality within the base model for all smart meters. It is expected that there will be an increase in software changes required during the early stages of any smart meter rollout.

F29 – Plug and play device commissioning
Country Energy supports the inclusion of plug and play device commissioning functionality within the base model for all smart meters. With the extensive skilled resources required to support a rollout of smart meters, any time savings that can be made by automating functions is likely to be of significant benefit.

7.2 Additional functionalities considered

F15 – Interface for other load control devices and F16 – Interface to home area network using open standards
Country Energy is conscious that the technology available in this area is still very uncertain. Country Energy would support further review of this functionality by the technical working group, including exploration of standards to meet Australian requirements for interface to a home area network, followed by industry pilots and technology trials prior to inclusion within a minimum functionality.

CRA have estimated an avoided cost of $1.00 to $1.50 per meter by not including an optical port on the meter, due to inclusion of the HAN. Country Energy would recommend the technical working group review and agree on the need for an optical port on the meter prior to any decision to remove from future meters.

F17 – Provision of in house display
Country Energy does not support the provision of an in house display as part of the minimum functionality. This should be subject to an independent business case for the relevant distribution or retail business to determine the benefits that may be achieved. There is insufficient data available in relation to the impact of in house displays on consumer demand.

F21 – Customer supply monitoring
Customer supply monitoring technology is currently untested. Country Energy would support extensive industry trials prior to inclusion within a minimum functionality.

F22 – Real time service checking
Country Energy would support further review by the Technical Working Group prior to exclusion of this functionality.

As the underlying meter cost is zero there may be benefit in including real time service checking within the minimum functionality. Thus allowing both retail and distribution businesses to determine the use of the functionality based on business and customer drivers. The cost to retrofit for this functionality, if the need is identified at a later date, would inhibit the ability for any business to realise benefits to outweigh the costs of this functionality.

F23 – Interoperability for meters/devices at application layer and F24 – Hardware component interoperability

MCE recognises the importance of interoperability and/or open communication standards to support competition and flexibility[14]. Ministers will develop a supporting framework to promote the development of interoperability and ongoing competition in metering as part of the implementation of the mandate.

Country Energy recommends that open protocols should be standard for all smart meters and communications systems to ensure that competition is maintained among meter manufacturers and also to simplify associated systems implementations. Additional systems and interfacing layers are required if proprietary systems continue to be the only method to connect to smart meter installations.

Smart metering is still new technology and the technology is continuing to develop at an accelerated rate, interoperability at the hardware component level would allow ability to benefit from new technology advancements without losing investment in existing infrastructure and minimise stranding of assets. Ability to have multiple meters working on one communication infrastructure is advantageous to increase competitive pressure on manufacturers to improve pricing and minimise reliance on single manufacturers to support regional installations.

Consultants have reviewed standards and interoperability as part of the phase 2 report and agreed that it is important to consider further prior to a national mandated rollout of smart metering as the potential benefits from further pursuing interoperability may outweigh the likely costs[15].

Country Energy fully supports inclusion of interoperability within the tasks to be reviewed by the technical working group.

8 Assessment of rollout scenarios against the MCE required objectives

Cost analysis would indicate there are significant costs differences associated with each of the scenarios, with the distributor led roll out providing greatest net benefit nationally.

It is important to recognise that the implementation of smart meters is part of a broader “intelligent network” and therefore actual rollout programs have synergy with distribution business investments. Smart meters are a necessary foundation element of the Intelligent Network (IN), but smart meters alone are not sufficient to achieve the IN vision. This should form part of consideration of the scenarios to ensure the distribution business is able to gain full value of the network monitoring technologies available through smart metering to optimise any intelligent network solutions.

Country Energy supports the distribution business led rollout as the preferred scenario.

To ensure that the distribution business is able to continue to realise the long term benefits of the implementation of smart meters, distribution business exclusivity is required for not only the initial period of the rollout of smart meters but also for the ongoing future operation and maintenance of smart metering solutions.

[14] MCE Decision paper 13 December 2007
[15] Cost Benefit Analysis of Smart Metering and Direct Load Control Overview Report for Consultation, 29 February 2008, page 183-184

9 Conclusion

Country Energy recognises the substantial risks and uncertainties with theoretical identification of benefits and costs associated with a smart meter rollout. A smart meter rollout requires a significant capital investment, it is important to validate the costs and benefits and technology application through industry pilots and technology trials prior to commitment to an aggressive national rollout of smart meters.

Country Energy is supportive of the creation of a technical working group to develop and recommend technical specifications, performance requirements and necessary regulatory changes to support the rollout of smart metering in Australia. This process should run in parallel with implementation of industry pilots and technology trials.

Technology trials should be implemented through a coordinated national approach to ensure maximum investment return by minimising duplication. It is envisaged that trials would need to be implemented for a period of up to 3 years with end to end business processes operating to provide validation of technology and return as a proof of concept.

Regulatory support is required to assist market drivers for further investment in smart metering technology for the Australian market, driving the need for open communication protocols and standards within smart metering deployments to ensure benefits of technology advancements are able to be fully realised.