



23 May 2008

Manager, MCE Secretariat  
Department of Industry, Tourism and Resources  
GPO Box 9839  
Canberra ACT 2601

MCEMarketReform@ret.gov.au

**COST-BENEFIT ANALYSIS OF OPTIONS FOR A NATIONAL SMART METER ROLL-OUT  
(PHASE TWO - REGIONAL AND DETAILED ANALYSIS) - REGULATORY IMPACT STATEMENT**

Origin Energy Retail Limited (Origin) welcomes this opportunity to respond to the Regulatory Impact Statement (RIS) released by the Standing Committee of Officials (the SCO) in relation to the national cost-benefit analysis of a smart meter roll-out.

This submission includes both general comments and responses to specific questions contained within the RIS.

While Origin understands the purpose of the RIS and its consultation, it is unclear what regulation is to change following consultation on the information presented. On page 7 of the RIS it is stated that the primary purpose of the document is to:

Improve government decision-making processes by ensuring that all relevant information is presented to the decision maker[s] when a decision is being made.

And that:

...this RIS aims to provide a consistent, systematic and transparent process for assessing alternative policy approaches to problems being addressed. It includes an assessment of the impacts of the proposed regulation, and alternatives, on different groups and the community as a whole.

Origin does not consider that significant regulatory oversight is necessarily implied in the consideration of a national smart meter roll-out, particularly if meter provision and meter data services remain contestable. The National Electricity Rules (NER) currently deals with metering responsibility issues for various meter types and this approach is currently applied to small customers (albeit on a limited basis) in addition to large electricity customers.

While this RIS examines a range of metering options including the status quo, smart meters and direct load control under various rollout models (distributor led, retailer led, with centralised communications infrastructure etcetera) it appears to raise more questions than answers and Origin is unsure how this document will be interpreted by its intended users - governments as decision making bodies.

In terms of roll-out options Origin believes KPMG's suggested alternative to scenario 2 has significant merit. Incentivising the deployment of AMI and reducing current barriers to entry facing such technology will allow the participation of a number of different



stakeholders. Given the uncertain and rapidly evolving nature of AMI technology, this approach is a prudent alternative to a mandatory deployment to all customers within a jurisdiction.

Given the likely services and performance levels required in the Australian environment, Origin would strongly support the opportunity to test technologies and products that address the MCE's objectives and would inform market participants of feasible solutions.

This activity is currently underway as part of the Adelaide Solar Cities project, where remote communications meters are being installed, along with in-home displays and other innovative products supported by AMI technology. The roll-out options presented in the RIS will have the effect of limiting such activity in the future.

Furthermore, while Origin understands the basis the assumptions applied in the cost-benefit analysis (and replicated in the RIS), they are limiting and do not reflect current market rules and structure. As such, and given the wide range of costs and benefits and the uncertainty around the assessment of net benefits, Origin does not believe mandating a roll-out of AMI by jurisdiction is appropriate at this time.

We believe instead that alternatives, such as that suggested by KPMG (where incentives are provided to deploy AMI on a voluntary basis), coupled with the removal of current barriers to AMI deployment be given serious further consideration.

Should you have any questions in relation to this response, please contact Randall Brown, (Regulatory Development Manager) on (03) 9652 5880 or [Randall.Brown@Originenergy.com.au](mailto:Randall.Brown@Originenergy.com.au)

Yours sincerely

A handwritten signature in cursive script that reads "B J Hughson".

Beverley Hughson  
National Regulatory Manager  
Retail  
(03) 9652 5702 - [Bev.Hughson@Originenergy.com.au](mailto:Bev.Hughson@Originenergy.com.au)



## 1. General questions

*i) Do stakeholders agree with the problem definition in this RIS?*

Please refer to our comments on question 1 in section 2.2 below.

*ii) Do stakeholders wish to comment on the benefits, costs, risks and/or impacts outlined in this RIS or wish to provide any others?*

Origin provides detailed comments below, however there are a number of risks and benefits that have not received enough prominence in considering the status quo or mandated roll-out options.

### Status quo

The split-benefits problem is discussed further below, but Origin notes there are a number of issues that have discouraged AMI deployment in the current environment in addition to regulatory or market design barriers. While we note some of the regulatory barriers below, the RIS does not address the fact that for a large number of small customers, deployment of AMI may not be economic under any scenario.

### Mandatory smart meter roll-out (including DLC)

Benefits and costs associated with roll-out scenarios (contestable or exclusive) have not been fully assessed (partly because of uncertainty inherent in the assumptions underpinning the cost benefit analysis, as opposed to deliberate exclusion). The impact of competition and the efficiency gains under a contestable roll-out has not been quantified over the study period for this particular roll-out scenario.

Furthermore, the cost of monopolisation (either on a temporary or permanent basis) has not been considered for the exclusive roll-out scenario (scenario 2). We note that some stakeholders believe that an effective roll-out of AMI would feature exclusive provision through networks on a permanent basis, which would alter current arrangements under the NER.<sup>1</sup>

### Other risks and benefits

Origin believes that a mandated roll-out (regardless of who is responsible to undertake this activity) is very likely to generate significant challenges in sourcing sufficient labour to replace the existing meter stock. There are risks involved with the use of electrical contractors unfamiliar with the types of metering installations that will be encountered, as well as the new technology itself.

Origin believes risks to human safety and the cost of complex installations/remedial work has not been emphasised enough, nor has the strong likelihood of upward pressure on

---

<sup>1</sup> ENERGEX (2008), *Cost Benefit Analysis of Options for a National Smart Meter Roll-Out (Phase Two - Regional and Detailed Analyses) - Consultation Regulatory Impact Statement April 2008*, section 12, page 15.



labour costs under a mandated roll-out of AMI been dealt with in detail. We do note the difficulty in estimating such impacts; however they are no less real under a mandatory roll-out.

*iii) Can stakeholders suggest any measures to maximise the benefits and/or minimise the costs and risks of a smart meter or DLC roll-out?*

Origin would support the views put by a number of other stakeholders; that any roll-out of AMI should be undertaken with adequate technology and market trials, ensuring the technology will actually work in various geographic areas and reviewing the practical nature and extent of the roll-out when problems are encountered. Fundamentally, the deployment of meters must make commercial sense for market participants (including customers, distributors and retail businesses). The decision to pursue a mandated roll-out based on cost-benefit analysis needs to be reviewed and reconsidered if trials reveal assumptions around key cost components and the ability of technology solutions to deliver on objectives do not hold.

*iv) Do stakeholders have comments on the implementation issues or wish to raise any others?*

Origin's detailed comments are set out below

## 2. General comments on the Regulatory Impact Statement

### 2.1 International experience

On page 19 of the RIS, the discussion around international experience with AMI makes reference to the disaggregated nature of the Australian electricity supply chain relative to the market structure observed overseas. Origin agrees that the Australian (and particularly the NEM) market structure can present challenges to the deployment of AMI however, the RIS provides the example that:

...retailers in a competitive market may need to consider the life of meter hardware (15+ years) in comparison to the usual 3 years of a retail contract.

Origin is concerned that the example quoted above continues to be used in the context of contestable metering, without any evidence that it would be a realistic assumption once AMI was deployed.

We note that the quote is qualified; however we have previously put the view that it is highly unlikely that retailers would align the life of a customer retail contract with any meter hardware that may be present at the customer's premise. This kind of statement seems to presume that retailers will own meter hardware. In our view (and as we have previously stated), it is far more plausible that retailers will lease assets from third parties. In this sense, a competitive market for AMI would have some commonality with exclusive or monopoly provision of meters, since in both cases; metering costs are recovered over a longer period of time.



## 2.2 Defining the problem

1. *Do stakeholders agree with the problem description, including the fact that the split benefits problem inhibits businesses from rolling out smart meters of their own accord?*

While Origin acknowledges the deficiencies of accumulation meters in addressing allocative efficiency in the wholesale market and in the utilisation of the electricity network (and in fact, amplify these problem due to the accumulation nature of measurement), we do not agree that the split benefits problem of itself should be interpreted as 'market failure'. We note that the SCO do not refer to the market failing in the context of the split-benefits problem, however in a range of forums to date, the presence of split-benefits has been addressed in the context of market failure.

AMI technology (and metering generally) is not naturally monopolistic in nature, in contrast to traditional network assets. However, some of the communications technologies generally favoured by distribution businesses that support smart meters display characteristics that might normally be associated with monopoly infrastructure (such as the use of powerlines as the 'last-mile' communications link).

While there are grounds to consider the split benefits problem as a significant inhibitor to the roll-out of AMI, there are other barriers that have resulted from past regulatory and policy decision making.

Firstly, the chief barrier in terms of current market design is regulated retail pricing. Since the wholesale market for small customers is settled on the load profile (which effectively averages a retailer's exposure to the wholesale market), and regulated retail pricing is based on this profile, there has been little incentive for retailers to offer products requiring AMI.

Nonetheless, manually and remotely read interval meters have been installed in some numbers (particularly in New South Wales), initially through the replacement of accumulation meters at small customer sites with above average consumption. Therefore the suggestion that there are no incentives to deploy meters is not reasonable. Recent activity in New Zealand is also instructive, with all four of the major retailers either currently engaged in AMI deployment or planning to introduce such technology in the near future.<sup>2</sup>

Secondly, in a number of NEM jurisdictions, the costs of accumulation metering and associated data services are not separated from use of system charges. As a consequence of this, the installation of AMI (or even manually read interval meters) would result in the customer paying for these services twice. This discourages the participation of third party suppliers, even where installation may be viable.

The reduction in network tariffs due to business efficiency gains made available following the deployment AMI is also cited as a reason discouraging distributors to roll-out such technology (page 28 of the RIS). The passing through of business efficiency gains by a regulator is of course the corollary of competition resulting in the pass through of cost savings and other benefits to consumers.

---

<sup>2</sup> See for example: <http://www.smartmeters.com/news/New-Zealand-electrical-utilities-to-introduce-smart-meters-n100.html>



Altering the rules to allow the retention of business efficiency gains by regulated network businesses increases the distortion inherent under regulation when compared to the competitive provision of AMI.

Finally, Origin acknowledges that it is timely to assess the costs and benefits of AMI, particularly given the significant reduction in the cost of technology in recent years. However, we believe that further cost reductions are possible, and that the lack of AMI deployed at present in the market reflects variously; current regulatory constraints and the fact that at the margin, AMI is unlikely to be deployed at an acceptable cost to very small consumers in the immediate future.

Origin would conclude that the description of the problem would be appropriate if:

- It is assumed all basic and manually read meters are to be replaced with AMI;
- That the cost of an AMI roll-out at the margin recognises subsidies at some customer sites recovered through higher costs at others if AMI costs are recovered through regulated tariffs (under scenario 1); and
- The assessment of the exclusive provision of AMI incorporates the opportunity cost of monopoly provision (dead-weight loss and loss of dynamic efficiency) and the further opportunity cost of being unable to access lower prices (of improved) AMI as the cost of technology declines over time (under a mandated solution).

### 3. Comments on specific questions raised in the RIS

In this section of our response, Origin comments on each of the questions raised in the RIS.

*2. Do stakeholders have a view on the consultant's recommendation to include the HAN in the national minimum functionality?*

Origin supports the inclusion of the HAN in the national minimum functionality. This inclusion will avoid the need for meter replacement at a later time as the potential of the HAN is commercialised through retail products. For a national retailer such as Origin, the lack of HAN functionality would be a significant consideration in developing specific products and where these will be deployed based on available technology, performance levels and service levels.

*3. Can stakeholders suggest any other options that could achieve the MCE objectives more cost efficiently than the scenarios presented?*

Origin believes that the options described on page 34 of the RIS cover the possible scenarios available under which the MCE objectives might be considered. We believe that there are alternative options (such as the franchise model or KPMG's alternative contestable model) that have advantages in achieving the MCE objectives. We also note that the status quo preserves the commercial drivers for installing AMI, which has allowed the recent push to roll-out AMI in New Zealand. In addition, we agree with the statement in the RIS that retailers would roll-out smart meters "on a commercial basis" under the status quo; it is unlikely that retailers would deploy meters on non-commercial terms.



Outside of the options presented however, we believe that a non-mandated solution can deliver on a number of the MCE objectives over time via competitive tension among retailers.

We observe that a significant cost associated with a mandated roll-out is the timing set down for deployment. The shorter the timeframe the greater the costs associated with:

- Procuring sufficient skilled labour to safely and efficiently install smart meter infrastructure;
- The likelihood that improvements in technology (including lower meter costs and improved communication technologies) will be overlooked or locked out from the process; and
- The risk of stranding assets that fail to meet market requirements over the medium term.

In addition, the status quo retains existing barriers to the commercial deployment of AMI (whether this is undertaken by either distribution or retail businesses or both in concert). The status quo should be further considered in the context of policy changes that would encourage AMI deployment, such as the removal of price regulation.

*4. Do stakeholders think the status quo (i.e. a mix of accumulation, interval and smart meters) is sustainable?*

The market currently manages AMI, manually read interval meters and accumulation meters in most jurisdictions. Under a mandated roll-out of AMI, the period where the market will be required to operate with different meter types is likely to be shorter than under the status quo. However, Origin notes that managing different meter types may also be the case under a mandated smart meter (including DLC) roll-out, where a jurisdiction decides not to proceed with AMI deployment, or if there are staggered roll-out timetables.<sup>3</sup>

Current arrangements are sustainable in Origin's view. If they were not, any costs generated or opportunities missed as a consequence of the status quo would be addressed commercially, outside of any split-benefits problem. As discussed above, elements of regulation and market design have discouraged voluntary roll-out of AMI to date.

*5. Do stakeholders agree with the overall finding of the consultation reports suggesting that, for a general national case, a smart meter mandate provides higher net benefits than a DLC only scenario?*

Origin agrees with this assessment assuming a mandated deployment of either smart meters (with DLC) or DLC only. However, this is contingent on the net benefits of an AMI roll-out on a mandatory basis being positive. It is important to recognise that a DLC only scenario does not preclude the deployment of AMI under the status quo.

<sup>3</sup> See for example dot point 5 under Stakeholder impacts - retailers on page 36 of the RIS.



### Other comments on section 6.3

On page 46 of the RIS, the impact on network businesses includes the elimination of meter costs paid by networks for solar PV installations under a mandatory AMI roll-out. As a retailer of solar PV systems, Origin understands that the retailer or the customer pays for metering upgrades in Victoria, South Australia, Tasmania, New South Wales and Western Australia. We would seek to clarify the assumption in the RIS that distributors pay for meter costs associated with solar PV installation in Victoria, Tasmania and the ACT.

With regard to the assessment of roll-out scenarios against the MCE required objectives (page 54 of the RIS); Origin has previously commented on the rankings applied to each scenario in its response to the Phase 2 Cost Benefit Analysis.<sup>4</sup> Origin has articulated why it believes that a contestable roll-out scenario may result in a more rapid transmission of business efficiency benefits, due to the immediate impact of competitive cost minimisation objectives in the retail market, relative to the dependence on regulatory decision making and timing under an exclusive roll-out. Origin notes that competition is rapidly maturing in NEM jurisdictions. As such, we believe that any roll-out of metering on a contestable basis (whether mandatory or on a commercial basis) will result in cost reductions from business efficiency gains being passed through to customers.

On page 57 of the RIS, regulation is mooted as one solution to ensure that enhanced usage information is provided to customers:

To the extent that retailers do not decide to provide such additional information to customers, it would be possible to design policies requiring its provision.

Origin does not agree that regulatory intervention on information provision would be required in the event that a roll-out of AMI takes place. In the first instance, Origin believes that customers will sign up for new price and product offerings on a market contract basis, and will provide their consent to any offer with normal cooling off periods and contractual information provision. Customers are best placed to evaluate the standard of information that retailers provide and to the extent this information does not meet expectations, will be free to choose another retailer (in those jurisdictions that are fully contestable).

In terms of the utilisation of other devices (such as in home displays and the home area network more broadly), Origin believes KPMG's alternative contestable roll-out scenario, or indeed under the status quo will promote greater penetration of such devices. This is because retailers would specify their requirements with vendors competing for their business, rather than relying on a possibly limiting minimum standard of communication and messaging to such devices.

---

<sup>4</sup> See Origin (2008), *Cost-Benefit Analysis of Smart Metering and Direct Load Control - Overview Report for Consultation*, page 2 of main body.  
<http://www.mce.gov.au/assets/documents/mceinternet/Origin%5FEnergy%5FRetail%5FLtd20080512154330%2Epdf>



6. *What impact do stakeholders think the different proposed roll-out scenarios would have on competition for:*

- (a) Metering manufacture*
- (b) Metering installation and maintenance services*
- (c) Meter data services*
- (d) Retail electricity services*
- (e) Additional in-home services such as in-home displays and direct load control*

In responding to this question, Origin makes the following comments on section 7.1 of the RIS:

#### Section 7.1.1

Origin agrees that few retailers have chosen to install remotely-read meters at customer sites. However, as we discussed in section 2.2 of this response above, there are a number of reasons outside of the split-benefits problem for this outcome. Recently however, we note that retailers (including new entrant/second-tier retailers) are actively involved in interval and smart meter deployment. Over time, in the absence of any policy change, we would expect this activity to grow.

Furthermore, we accept the basis for the assumptions for scenario 1 and 2, although we note that non-participation of distributors in scenario 2 will impact significantly upon the costs and benefits determined.

Origin would again point out that the cost of exclusive provision and the associated dead weight loss of monopoly provision for a period of 15 years is not explicitly assessed in the results of the cost-benefit analysis.

The franchise model alternative has certain advantages over scenario 1, in that it is likely to lead to more efficient price discovery and allows the possibility for a single service provider to serve several regions (as opposed to 10 or more distributors deploying their own AMI systems). This model is preferable to scenario 1, but sub-optimal to KPMG's alternative to scenario 2, or the status quo in Origin's view.

#### Section 7.1.2

Origin notes that under the assumptions for scenario 2, customers have access to choice of retailer and do so "...usually on a 3 year contract."<sup>5</sup> In our experience, two years is more common for a fixed term contract, and often, no fixed term is specified for a market contract. It is unclear what relevance of a fixed term contract would have on the outcomes of the scenario itself. The assumption that retailers are more likely to lease rather than own meters is appropriate, since outcomes to date indicate this model has been used on a number of occasions in Australia and overseas.

KPMG's alternative option to scenario 2 has significant merit, and would be further strengthened if it were combined with a reduction to current barriers to AMI competition. KPMG's alternative competitive scenario that proposes subsidies explicitly recognises one problem inherent to a roll-out of smart meters that the RIS seeks to

---

<sup>5</sup> RIS page 61.



address; that outside of the split benefits issue, a universal rollout is uneconomic at the margin to very small customers (and possibly some remote customers). This may be revealed through individual customer's willingness to pay (either upfront or over an extender period of time) when confronted with the costs and benefits of AMI.

#### Table 6

The analysis of supply chain competition is largely consistent with Origin's understanding of the two scenarios; however we would make the following further comments:

- Asset ownership of meters and comms (#5): We would add that communications may be a public network, therefore not owned by the meter provider. The meter provider themselves may be ultimately owned by a network business or a financial institution. The threat of meter replacement on change of retailer will be dealt with by the relevant asset owner on commercial terms. There are a large number of remedies for this and it is not clear why speculation is required on this matter in the RIS.
- Cost recovery (#6): There are a number of approaches to cost recovery under scenario 2 (and the alternative option suggested by KPMG) in addition to transmission via retail tariffs.
- Reading of meters and basic data management systems (#7): While it may be the case that retailers would choose Meter Data Agents and Meter Providers "as a package", ultimately what will occur in the marketplace will be determined by the requirements of retailers, distributors and customers. Therefore, this may include the preservation of choice for MDAs by an MP, as the MP realises it is in its interest to allow as many MDAs to access its AMI network as possible.
- Offer of new time-related tariffs or billing arrangements (#9): Interoperability is potentially a greater concern under scenario 1, since at the end of any period of exclusivity, those networks whose systems are not interoperable or meet requirements may face the threat of meter replacement to the extent their systems were not designed to accommodate open access to third party MDAs.
- Access to meters and comms for additional services (#10): Origin would point out that the *Trade Practices Act* (Part IIIA) contains provisions to address access concerns. Origin does not agree that market power issues will emerge, since any service provider hindering access is unlikely to be re-engaged by retailers operating in a number of jurisdictions and geographic regions.
- Offer of IHD, DLC or additional new services (#11): Additional new services under scenario 1 have to be negotiated with a single service provider (the distribution business). The scope of new services is likely to be higher under scenario 2 as service providers will have strong incentives to sell their service offering to as many retailers and other parties as possible. The interoperability and open access likely in scenario 2 (or KPMG's alternate contestable scenario) will reduce, rather than increase the need for regulation.



## Responses to question 6

### (a) Metering manufacture

We believe that the scenarios will not significantly impact competition in meter manufacturing. The Australian energy market is relatively small and outcomes will not likely influence manufacturing operations overseas. However, it is possible that there is greater potential under scenario 2 for the adoption of new and emerging technologies, the provision of commercial incentives for innovation among established manufacturers and increased opportunities for new entrant manufacturers.

### (b) Meter installation and maintenance services

### (c) Meter data services

Under scenario 2 (and to a greater degree under KPMG's alternate proposal), there is greater scope for competition among MPs and MDAs than under scenario 1, since there is likely to be a more flexible approach to contracting, independent of regulatory processes. Furthermore, the potential demand for additional services (incremental to any minimum functionality) may encourage niche technology and service providers to enter the market, enhancing product offerings to consumers.

Finally, there is increased scope for other meter manufacturers (water and gas in particular) to participate under scenario 2 and KPMG's alternate scenario, since retailers and their vendors will have an incentive to share the cost of AMI among other parties who may benefit from the deployment of such technology.

### (d) Retail electricity services

Under scenario 1, Origin believes there is material risk that innovation in products and services may be limited should the minimum functionality (and associated service levels) become the maximum. The incentives for a monopoly service provider to offer improved or additional services is likely to be lower under scenario 1 compared to scenario 2, and the purchaser of such additional services will not be able to test these costs in a competitive market place. This in turn may reduce opportunities to enhance and extend retail competition into new areas, ultimately to the detriment of consumers.

The competitive incentives placed on retailers has the consequential effect that they will seek service levels and AMI technologies that will provide improved products and lower costs to end use consumers under scenario 2, or under non-mandated competitive provision of AMI.

Origin does not believe that barriers to entry or customer switching are more likely under contestable provision of AMI. We support open protocols, interoperability and open access to AMI systems, in order to maximise the number of service providers available in a geographic region or regions. It is considered more likely however that less retail market competition will occur where a single provider of AMI and associated services offers the minimum level of functionality and services, limiting the product offerings available to retailers.



(e) Additional in-home services such as in-home displays and direct load control

Again, we believe the deployment of additional services will be enhanced under scenario 2, the alternate suggested by KPMG (or indeed the status quo) when compared with scenario 1. Origin has worked with vendors for the Adelaide Solar Cities program and this has resulted in a high quality IHD product. This was achieved through commercial negotiation with vendors.

Exclusive provision of AMI is less likely to result in additional services, because the provider of AMI will take into account the design of their chosen AMI system, their regulatory obligations and service levels ahead of supporting new devices or services. Furthermore, distribution businesses may be unwilling to provide load control via a HAN if this conflicts with other network load management objectives they may seek via AMI systems.

## Section 7.2 - Impact Analysis

Origin makes the following comments on the rollout scenarios assessed in the RIS and the cost-benefit analysis.

### Section 7.2.1 Option A - A distributor-led roll-out (Scenario 1)

#### *Benefits*

The RIS identifies a number of benefits associated with scenario 1 (a distributor-led roll-out approach).

- Origin agrees that this scenario aligns "...responsibility for the roll-out with the sector where the identified benefits are highest", however these benefits are only considered 'high' in the context of the assumptions made.<sup>6</sup>
- The stated benefit (described in dot point three on page 67) might equally be considered a cost or risk. Namely, the assertion that: "meters would not have to be flexible enough to [not] operate on multiple networks", and that "proprietary systems could be used".<sup>7</sup> The benefits are supported because they will avoid "potential anti-competitive behaviour between meter service providers". Origin is unclear why:
  - The use of proprietary systems with different architectures would benefit customers and retailers (including retailers operating across multiple jurisdictions supporting those customers); and
  - Anti-competitive behaviour would emerge should there be multiple meter service providers within a geographic region. This view has not been substantiated.

Origin would seek clarification of how "more choices of communications technologies" would take place if there were "only one communications network in each region" - we would ask if this implies a single communications solution would be proposed for a distributor's entire network area. Origin does not

---

<sup>6</sup> See page 67 of the RIS and Origin's earlier comments in this response about the omission of costs and benefits from the cost-benefit analysis.

<sup>7</sup> Ibid.



believe this would be possible for most network areas and would emphasise that such a benefit is contingent on such communications technology actually supporting any agreed minimum functionality.

- Origin agrees that meters would not be churned under scenario 1 for the period of exclusivity, but notes that following the period of exclusivity, there may be substantial churn of meters if service and performance levels have not met market expectation and requirements. At the same time, meter switching under a contestable scenario would only take place on commercial terms. To the extent that the process to change a meter on transfer is too complex, the responsible party for metering will determine the merit of proceeding with a meter exchange. However, we believe that the actual incidence of meter churn will be low.
- Origin supports the open access regime described by the seventh dot point on page 67; however the quality of access and communication to devices will be dependent on the bandwidth available on the communications infrastructure chosen by a distributor under scenario 1. Furthermore, if proprietary systems are used (as discussed above), the protocols to communicate on the AMI system will have to be made available each time a third party service provider wished to offer a service to support IHDs or DLC.
- Finally, Origin supports the deployment of smart grid technologies by distributors; however it is not clear why this benefit is relevant to the RIS if it was not assessed in the cost-benefit analysis. Further, distributors are able to capture these benefits in the absence of a mandatory smart meter roll-out and are able to recover the costs of such infrastructure under the regulatory model.

#### *Risks*

- Origin agrees that upgrading meter communications will be a challenge under any scenario; however, under scenario 1, all customers in a network area will pay for technology redundancy, under scenario 2, costs would be borne by those retailers using upgrading the redundant technology only.
- The final two dot points under risks on page 68 are significant concerns for scenario 1. Relying on regulation to require technology improvements seems an inefficient approach to signally incentive. Under a contestable scenario, failing to improve deployed technology will result in a gradual loss of customers (for both the vendor, and the responsible party for AMI). The second risk of entrenching a single incumbent meter supplier is of concern, particularly given the ACCC's previous views on the where the incentive to deliver innovative services via through metering lies generally.<sup>8</sup> The risks and cost of exclusivity has not been valued explicitly for the asset lives (15 years), the cost-benefit study period (20 years) or beyond.

---

<sup>8</sup> ACCC (2005), *Applications for Authorisation - Amendments to the National Electricity Code, Victorian Metering Derogations*, page 32.



### *Retailer impacts*

- The impacts on retailers of scenario 1 may be significant. Dot point 1 under retailer impacts on page 68 of the RIS is relevant because all retailers will be subject to the same performance and service level, with little ability to negotiate improvements if a commercial case can be identified for higher standards.
- Again, reliance on regulation to achieve appropriate price and service levels is likely to be cumbersome, costly and unable to furnish the objectives that may be sought by a retailer.
- Origin does not agree that scenario 1 necessarily implies less complexity in contracting and in commercial negotiations. It is likely that Origin will have to undertake a large number of transactions with little flexibility on how these are executed with ten or more network businesses within the NEM alone. Under contestable AMI, a retail business would have more choice over the number of parties it would seek to contract with.
- While retailers have been involved in setting minimum standards in other jurisdictions, these minimums have often been influenced by the narrowest bandwidth communication technology, rather than the potential standards that may be achieved (and would be available under KPMG's alternative option, scenario 2, or the status quo). With assumptions around technology communications contained in the cost-benefit analysis, we would assume similar limitations would arise in a national forum.

### *Consumers*

- The passing-through of benefits to consumers will depend on the efficiency and effectiveness of regulation aimed at achieving this. Since a number of basic meter services are not presently unbundled from other network charges (a barrier to AMI in the status quo), quite apart from uncertainty around how to value AMI generally, even unintentionally, there is significant risk that the full benefits will not be passed through.
- "Smoothing" cost recovery is also likely under other scenarios. The comments on cost recovery models on page 69 seem to suggest under other options (including the status quo) the recovery of metering costs would be less even, or upfront. This is not a likely outcome in Origin's view.
- While there may be a common open access regime in place under scenario 1, this is not in place across (and linking) all distributors. Further, the use of proprietary systems may discourage new entrants (including other technology vendors), since they will be dependent on the protocols made available to them, which may be different for each network area.

### *Networks*

Origin considers the assessment of the impacts on distribution businesses to reflect likely outcomes of scenario 1. However, dot point 1 on page 70 of the RIS brings into question whether the deployment of AMI is to emphasise certain technology options to support a



secondary objective (such as network management) or to provide for the stated MCE objectives.

Outage management and detection systems relate to the monopoly poles and wires business of a network, and the costs of such systems where they demonstrate a net benefit can be recovered through the regulatory model covering distributors. This can occur presently, in absence of an AMI roll-out.

#### Section 7.2.2 Option B - A retailer-led roll-out (Scenario 2)

##### *Benefits*

While Origin believes KPMG's alternative proposal to scenario 2 is a preferred roll-out option; the review of benefits of retaining a contestable market for AMI appears limited in the RIS. Origin would add the following benefits to those described on page 70 for scenario 2 (or any variation of a contestable model, noting this list is not exhaustive):

- The impact that competition will have upon the reduction of AMI costs over time and the subsequent positive effect this will have on retail market competition;
- The flexibility to upgrade to new technology when it becomes commercially viable to do so;
- The likely preference for interoperability and the potential this will have to encourage new entrant service providers;
- Lower cost of regulation;
- The potential for distributors and retailers to tailor requirements and seek these services in concert during the tendering process;
- The use of market incentives to provide enhanced performance levels, which will impact upon other stakeholders (such as distributors and NEMMCO), including speed and scope of data delivery; and
- The increased likelihood that the scope of AMI would be widened to include natural gas and water metering, resulting in avoided meter reading costs for these services and the introduction of new offers.

##### *Costs*

Origin understands the basis for the assumed higher costs under scenario 2. The exclusion of distribution businesses from meter provision will impact on the range of technologies deployed. The assumption however that line carrier communications will be unavailable or will have limited application is contingent on this technology satisfactorily meeting a minimum functional specification and associated service levels. Such technology has not been tested at scale in the Australian market environment to date.

The assumption that each meter will have an additional modem does exclude the possibility of lower cost alternatives. Origin would also suggest that the cost of meter hardware will be subject to significant, ongoing competition, which will reduce projected costs over time. This is in contrast to scenario 1, where, following a tender for AMI, the regulator will set the effective price in the market through regulated meter charges for an extended period of time.



### *Risks*

Origin does not agree that mesh radio communications will face significant challenges under scenario 2. In New Zealand, mesh radio communications have been installed alongside other wireless technologies and customer switching has continued as normal.

The suggestion that mesh radio communications would favour larger retailers (whether incumbent or not) is an assertion. It would be in the interests of all retailers to maximise access to such infrastructure, in order to reduce the costs faced by any individual business.

Origin strongly disagrees with continued claims that meters would be used to stifle retail market competition. There is no evidence to support this view (and no equivalent emphasis placed on the reduction in competition among retailers and among meter services that would be certain under scenario 1). The assumption that incumbent retailers would “own the meter on the wall”<sup>9</sup> directly contradicts the comments on page 61 of the RIS.

Even if a retailer did choose to own meters directly, it faces significant risk of asset stranding if it attempted to use the device to prevent customer switching. Furthermore, it is unlikely that a market regulator would allow such activity to take place.

For an incoming retailer, incentive will rest with the service providers (both the MP and the MDA) to facilitate transfer. It will not be in the interests of such stakeholders to create barriers for a new retailer as it strongly increases the likelihood their asset will be stranded. With regard to the experience in the United Kingdom, Origin notes that metering services remain contestable and that the franchise model continues with the practice of retailers as the decision maker in relation to AMI for customers.

Similarly, the continued assumption that retailers would seek to recover metering costs over short time periods is not how the market is likely to approach cost recovery. AMI service providers will structure their prices over the lifetime of their assets, which would result in a retailer ceasing to pay these prices once the customer switched to another retailer.

Origin does not agree that AMI service providers will charge an incoming retailer up to the replacement cost of meters. Firstly, this will affect all retailers and would ultimately result in the service provider being excluded from future deployments. Secondly, it will affect the MDA and other MPs. The likely response from the market to this activity would be the stranding of assets for an AMI service provider attempting to extract such obvious rents. This could be undertaken by a retailer whose alternative service provider offered a capitalised or discounted pool of labour in order to ensure that meter replacement cost was minimised.

Furthermore, the speculation that “Market power access issues with high hardware costs could imply elements of natural monopoly” is inconsistent with own Origin’s experience in competitive meter provision among large customers, where competition has resulted in a continued decline of metering service costs.

Assertions that meter capital costs and market structure would inhibit new entrants are purely speculative. Any new entrant retailer will make a commercial assessment of a

---

<sup>9</sup> RIS, page 71.



range of costs, including network costs, energy procurement costs and metering costs. AMI is unlikely to reflect a significant proportion of overall retail costs, particularly when compared to these two categories.

Such assertions around market power and imperfect market outcomes discussed in reference to scenario 2 are in contrast to scenario 1, which assumes the market has failed and is replaced by a regulatory monopoly for the provision of AMI. Origin would urge the SCO to compare speculation of market power concerns under contestable AMI provision to the certain costs of recognised market failure through the monopolisation of the AMI market.

Origin would argue that the time required for a contestable MP and MDA market to mature is a significant supporting reason for KPMG's alternate roll-out scenario. The current barriers to entry embedded in the status quo have hindered the development of AMI service provision (even by distributors). The RIS seems to suggest in this section that because the contestable AMI market is perceived as fledgling in nature, this risk warrants that its structure should be altered to monopoly, rather than allow it to grow.<sup>10</sup>

Origin is also unclear as to why an AMI service provider would limit access to its systems as one of the potential risks of scenario 2 (or for that matter KPMG's alternative scenario or the status quo). We believe it is more plausible that the opposite would be true, in order for the service provider to amortise its investment over a larger number of market participants.

It is more likely that limited bandwidth and lack of interoperability through proprietary systems that may arise under scenario 1 will hamper new entrants of the kind described in dot point 4 on page 72 of the RIS.

Regarding uncertainties associated with network business efficiencies, part of this uncertainty is a function of the current bundled nature of metering services. If the price of basic metering services was transparent, the regulator would have greater opportunity to examine any business efficiency gains.

Finally, while Origin acknowledges some jurisdictions are not open to competition, (Tasmania, Western Australia and the Northern Territory), the majority of NEM jurisdictions and the vast majority of small customers in Australia have access to full retail contestability. Origin would question the purpose of an AMI roll-out to customers under any scenario where retail contestability is not active (and where AMI systems are less likely to be implemented with contestability in mind).

#### *Impact on stakeholders - retailers*

The RIS assumes that retailers "may end up paying for increased meter churn". If meter churn occurs at all, the costs will be borne by the retailer initiating the churn and the AMI service provider(s) affected. This will only occur if it is economic to do so.

Origin agrees that retailers could pursue further innovation under scenario 2 (or the alternates that incorporate contestability of AMI).

Finally, the RIS again assumes that contestable metering would present a barrier to entry for new retailers. Origin does not believe this will be the case; it is more likely new

---

<sup>10</sup> RIS, page 72



entrant retailers will face the same leasing costs and MDA charges as incumbents. It has not been articulated why an AMI service provider would be motivated to discriminate among its customers and such a strategy does not seem plausible.

*Impacts on stakeholders - consumers*

Higher infrastructure costs is assumed to be a component of scenario 2, however, it is equally true that ongoing competition among vendors will lower costs to consumers over time.

Origin has previously discussed in detail the unlikely outcomes of:

- Barriers to new entrant retailers and service providers;
- Meter churn on customer transfer; and
- The recovery of meter costs over the life of a customer contract, as opposed to the asset life.

*Impacts on stakeholders - networks*

The outcome of networks “losing an existing major asset base”<sup>11</sup> would only occur (outside of the limiting assumption of non-network participation) if their AMI services were not attractive to consumers of these services.

Since AMI services are not naturally monopolistic, their contestable nature means that market determined prices will maximise societal costs and benefits. Regulation will undoubtedly result in a second best outcome and would only be required if the market failed in practice.

Networks have the opportunity to leverage AMI systems to suit their particular needs through partnership with retailers and other stakeholders. The choice of communications infrastructure should not be decided by any single party under an AMI roll-out, but rather the decision should depend on what works in practice and delivers the greatest improvement in scope and quality of services to consumers.

*7. Do stakeholders think the central communications option is feasible? If not, what step would need to be taken to make it so?*

*8. Could elements of the central communications option, such as complete central data set or greater interoperability, be considered as additions to other options? Do stakeholders see benefit in having one set of official data held by a third party?*

Origin believes the central communications option may be feasible; however the reduction in competition in the market for MDA services would be a significant negative feature of this scenario.

Greater interoperability would be welcome under any scenario in Origin’s view. In terms of “one set of official data held by a third party”, Origin would expect that under any scenario, NEMMCO would hold standing data for each NMI (and potentially an Australian Energy Market Operator may hold Meter Installation Registration Number/Delivery Point

---

<sup>11</sup> RIS, page 74.



Identifier data for gas in the future) including current information required in MSATS and additional information for AMI:

- Financially Responsible Market Participant
- Responsible Person
- Local Network Service Provider
- Local Retailer/Retailer of Last Resort
- Meter type
- Meter communications type (Line carrier, GPRS, Mesh, Wi-max etc)
- MP
- MDA
- Embedded generation on site/export-import metering capability

*9. Of the roll-out models listed, which is your preferred option and why?*

*10. Are there any other models (including hybrids) that could be considered?*

We provide a combined response to questions 9 and 10 below.

Origin's preferred option based on the analysis undertaken is a variation on KPMG's alternative to scenario 2 with the following key features:

- A non-mandated solution with incentives available (via network tariffs for example) to install AMI to parties who chose to - the subsidy would be available for a period of time and would eventually reduce to zero to encourage deployment;
- Substantive pilots as part of any deployment of AMI in a market environment with end-to-end processes;
- Removal of existing regulatory barriers to AMI (including the removal of retail price regulation where competition is deemed effective); and
- The retention of contestability of AMI to encourage the maximum number of potential vendors.

This approach would allow the participation of networks and other vendors. The rate of deployment could be reviewed at agreed intervals by regulators and/or jurisdictional Governments.

*11. Are there any jurisdictional issues that stakeholders think have not been addressed in the cost-benefit analysis?*

Origin believes the cost-benefit analysis has adequately addressed these issues.



*12. Are there any further implications stakeholders wish to raise if smart meters are rolled out in only some jurisdictions or rolled out in a staged approach?*

Origin currently contends with multiple meter types for small electricity customers in all NEM jurisdictions (type 6, 5 and 4). To the extent that AMI is deployed and the roll-out is non-mandatory, retailers have the opportunity to introduce products as they become commercially viable across different jurisdictions. This flexibility will not be available under any roll-out scenario incorporating a mandated timeline, and a situation where a roll-out is mandatory in one jurisdiction would lead to even greater cost if a retailer also chose to introduce AMI related products in another jurisdiction without a mandate.

Economies of scale in product delivery are important and a non-mandated approach allows the commercial delivery over a longer time period as the potential of AMI is realised and systems to accommodate new products are introduced. Certainty can be provided for market participants and vendors through a minimum functionality specification and service and performance levels.

#### Rural and remote customer issues

*13. In light of this analysis, do stakeholders see any implications for a smart meter roll-out in rural and remote areas in comparison to urban areas?*

Scenario 1 assumes the use of PLC for rural customer communications. While Origin believes that PLC may have a role to play, it has not been tested to date to confirm that it would meet the demands of a minimum national functionality specification, or if it would meet the requirements of the market under a contestable scenario if there were no mandate to roll-out AMI.

If some line carrier solutions cannot meet requirements in the Australian market, the cost of AMI under scenario 1 for rural customers will be higher.

*14. Where do stakeholders think smart meters should be rolled out? What timeline is appropriate for specific jurisdictions and what additional jurisdictional factors should be considered in the timeline?*

Notwithstanding the mandatory roll-out assumption included in the MCE's objectives and the likely overarching policy that may be settled upon, AMI should be deployed only where it is economically viable to do so. Where it is not economic and coverage is intended to be maximised, a level of subsidisation would be warranted.

Once AMI appears to be viable (based on substantial pilot) either a commercial roll-out or a mandatory roll-out should take place at a pace that maximises the benefits of AMI, without creating logistical issues and bottle necks (such as lack of meter availability and labour shortages). Ideally, this would be coordinated across participating jurisdictions. In any event, a roll-out should proceed on a prudent basis that captures scale economy



benefits and improvements in AMI technology, balancing this against any cost premiums triggered by abbreviated or aggressive timeframes.

Ideally, a non-mandatory roll-out would result in commercial deployment in those jurisdictions with full retail contestability.

*15. Where do stakeholders think the details of a mandated smart meter roll-out should be set out, including responsibilities, timelines and cost recovery? Which aspects should sit in national or jurisdictional instruments?*

*16. What are stakeholders views on the proposed legislative model in Table 15? Are there any other issues that should be considered in the legislative framework?*

In the event of a national mandatory roll-out (or an alternative non-mandatory roll-out) of AMI, Origin's preference is for a national approach to maximise consistency across jurisdictions and avoid local issues that will ultimately add cost to participants including AMI service providers.

Origin would also raise the issue of regulatory clarity in the event of an exclusive, mandated roll-out of AMI. The traditional building-blocks approach to regulating monopoly network businesses may not be an adequate method of transparently assessing the costs of AMI. This could be due to cost allocation methodologies and the difficulties the regulator will encounter in attempting to replicate a genuine price discovery process.

With a potential future transition to a total factor productivity basis for economic regulation of monopoly networks, the assessment of efficient AMI costs may become even more difficult. This issue needs to be carefully considered if an exclusive roll-out approach is adopted as policy. Regulatory failure in this regard may have significant and costly impacts upon stakeholders and the energy market generally.

Origin is comfortable with the legislative model for a smart-meter roll-out, with the exception of consumer protection, which should be migrated to a national arrangement at the earliest available opportunity.

*17. What process should inform the design of smart meter pilots and trials? Who should be responsible for undertaking them?*

*18. What are stakeholder views around resourcing of pilots and trials?*

Origin believes that any trials need to incorporate end-to-end testing and incorporating market process and market contracts of the type that may be applied under a wide-scale roll-out. Sufficient numbers of customers need to participate and Origin notes that a number of retailers (particularly in NSW) have undertaken valuable pilot studies in the past.

Responsibility for any trials will depend on the roll-out approach adopted. Trials undertaken to date have been conducted on a commercial basis (in NSW). Origin believes that under a non-mandatory option (such as KPMG's alternative or the status quo with AMI barriers to entry reduced or eliminated), trials would be of commercial interest to



those directly involved in AMI deployment. There may be some publication of results; however a commercial roll-out will require those undertaking the trial or pilot to best manage the risks associated with meter functionality, safety and effectiveness of market products.

*19. What do stakeholders think is the best approach to the safety review?*

Origin welcomes the MCE's commitment to work with stakeholders on the safety review in the context of AMI deployment. We support the need for such a review and would encourage, to the extent possible, that it be conducted at a national level.

*20. Do stakeholders have particular issues to be considered by the review of consumer protection arrangements?*

While Origin agrees that the deployment of AMI may create some consumer protection concerns not previously encountered, we believe any review of consumer protections needs to include a national emphasis, ideally in the context of the Retail Policy Working Group with the ultimate aim to include provisions (to the extent any are new) in a national retail code. Origin detailed its view on consumer protection issues in section 5 of its response to the Phase 2 analysis.<sup>12</sup> It is sufficient to say that the principles of consumer protection arrangements will remain, whether or not AMI is introduced.

Origin does not support the view that retailer's should be compelled to pass through network price signals that are based on time of use (or perhaps critical peak) structures. This will have impacts on retail competition and ways in which retailers choose to respond to such network price signals. It may be the case that such signals are substantially replicated in a final retail tariff; however retailers should not be forced to reflect network tariffs precisely.

*21. Do stakeholders have views on different approaches to public education on smart meters, or on the funding of such campaigns?*

Origin provided comments on public education campaigns and AMI deployment in its submission on the Phase 2 cost benefit analysis.<sup>13</sup>

*22. What are stakeholder views on the need for interoperability in smart meter infrastructure and how would it be best achieved?*

Origin is supportive of interoperability where possible under any roll-out scenario, alternative or indeed the status quo. We accept there are practical issues that may affect interoperability in AMI, but believe these can be overcome. The degree to which

---

<sup>12</sup> Origin (2008), op. cit., page 6

<sup>13</sup> Ibid.



interoperability is important may depend on the roll-out scenario and the whether a mandate is required or not. The nature of the Australian retail energy market will increase the demand for interoperable systems and the quantum of benefits to consumers that such flexibility will provide.

*23. What do stakeholders think is the best approach to address data management and business interface issues?*

Origin strongly supports the coordination of the Victorian and national AMI processes and advocates national consistency in minimum standards, whether an AMI roll-out is mandated or not. Integration of work already underway is therefore supported by Origin. Critical review of progress should also be emphasised in preparing business interfaces and data management changes to allow national consistency.

*24. What do stakeholders think is the best approach to accommodating existing interval and smart meter current in use and the Victorian process?*

*25. Do stakeholders know of any other issues that may require transitional arrangements?*

National consistency of functionality will be undermined if divergent approaches are adopted in various jurisdictions. Under a non-mandated roll out on commercial terms, these differences can be accommodated through commercial agreement and negotiation. Origin notes that significant investment has already been made in some jurisdictions and any mandate of consistent functionality and performance will need to account for this. However, the continued deployment of AMI in the current environment will amplify complications under any roll out approach (but particularly scenario 1), with a mandate in place.

Existing programs such as the Solar Cities projects should be grandfathered from any mandated roll-out. Prior to any commitment to roll out AMI however, substantive trials and pilots will also inform stakeholders of the most efficient means of managing existing initiatives already in place.