30 January 2015

Mr Sebastian Roberts
General Manager - Networks Branch
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

Dear Mr Roberts

RE: SUBMISSION TO SA POWER NETWORKS REGULATORY PROPOSAL

Origin Energy Electricity Limited (ABN 33 071 052 287, "Origin") appreciates the opportunity to provide input to the Australian Energy Regulator's (AER) assessment of the regulatory proposal submitted by SA Power Networks (SAPN) under the National Electricity Rules to determine their revenue allowances for the period 2015-20.

Origin shares similar concerns to the Consumer Challenge Panel about the quantity of material submitted as part of the regulatory process. In the case of SAPN, 542 documents were lodged containing 16,807 pages. We consider that the ability of the process to engage effectively with stakeholders is hindered by the quantity of information contained in a regulatory process and the manner with which it is presented.

Origin considers that the cost data in the regulatory information notices should be consistent and comparable over time and should support the commentary and data contained in a business' regulatory proposal. Origin considered that SAPN's regulatory information notice did not provide historic and comparable data, especially for capital expenditure, nor did it adequately align with its regulatory proposal.

As a result, this limits the ability of stakeholders to develop informed positions and make quality contributions to the AER's regulatory debate. In future, we encourage the AER to make future regulatory proposals provide easily accessible, consistent and comparable data.

SAPN has proposed significant increases in its capital and operating expenditure relative to the previous regulatory period. The key driver for these increases is the requirement for SAPN to manage risk to acceptable levels in accordance with its approved Safety Reliability Maintenance and Technical Management Plan (SRMTMP).

While the SRMTMP may establish a key regulatory obligation, it does not automatically qualify SAPN's proposed costs for inclusion in the allowed revenue. Origin considers that the AER must determine whether SAPN's application of risk to justify expenditure programs is appropriate and that program and project costings are efficient.

SAPN has proposed a number of departures from the AER's Rate of Return Guidelines with respect to the calculation of the rate of return. The alternative approaches result in a relatively higher weighted average cost of capital (WACC) that will result in higher network charges without any commensurate increase in service. Origin notes that the departures proposed by SAPN results in parameters that are significantly higher than recent and historic regulatory decision, not only by the AER but also by jurisdictional regulators across various regulated industries. Origin is strongly supportive of the material relied upon by the AER as this delivers a rate of return commensurate

Origin Energy Electricity Limited ABN 33 071 052 287 • Level 45, Australia Square, 264-278 George Street, Sydney NSW 2000
GPO Box 5376, Sydney NSW 2001 • Telephone 02 8345 5000 • Facsimile (02) 9252 9244 • www.originenergy.com.au

with the efficient financing costs of a business exposed to the level of risk that applies to an Australian regulated distribution business.

Finally, Origin considers that the AER should adopt an approach to metering that is consistent with its decision for NSW. This includes the removal of exit fees and clearly defined annual and new metering charges. Both these elements are necessary to promote effective competition in metering and related services and to allow customers to access and compare the costs and benefits of different metering service options.

If you have any questions regarding this submission please contact Sean Greenup in the first instance on (07) 9507 0620.

Yours sincerely

Keith Robertson
Manager, Wholesale and Retail Regulatory Policy
(02) 9503 5674 keith.robertson@originenergy.com.au

Response to SA Power Networks Regulatory Proposals for the regulatory control period 2015-20

Origin Submission

January 2015

Contents

1 Demand Forecasts 5
2 Forecasts Opex 6
2.1 Current AER Benchmarking 6
3 Forecast Capex 9
3.1 Replacement Capex 9
3.2 Augmentation Capex 10
4 WACC 12
4.1 SAPN Proposal 12
4.2 Equity Beta 12
4.3 Market Risk Premium 13
5 Metering Services 14
5.1 Exit Fees 14
5.2 Annual Metering Fees 14

1 Demand Forecasts

Origin considers that, on balance, the system demand forecasts proposed by SAPN reflect a reasonable expectation of demand for the 2015-20 regulatory period.

The National Electricity Rules (NER) require a distribution network service provider (DNSP) to produce forecasts of load growth and key variables that are relied upon in developing forecast capital and operating expenditure.

SAPN states that it has one of the peakiest electricity demands in the world driven by the extra-ordinary demand for air conditioning during hot summers.[1]

In recent years, SAPN has not experienced the expected growth in peak demand and has prudently deferred investment in building capacity in the network.[2]

At the time of SAPN's 2010–15 regulatory proposal, the average annual growth in demand was forecast at 2.4% with a forecast peak of 3,477MW in 2014-15.[3] Expected demand levels did not eventuate with actual demand for 2014-15 falling short of forecast demand by 16.1%.

For the 2015-20 regulatory period, SAPN has forecast lower demand with zero annual growth over the period.

Origin notes that as part of the Council of Australian Governments (COAG) energy market reform implementation plan, the Australian Energy Market Operator (AEMO) has been requested to develop demand forecasts to support the AER to analyse the demand forecasts submitted by the DNSPs.

The AEMO assessment for South Australia concludes that over the outlook period, summer maximum demand is expected to remain flat as increased residential and commercial consumption is offset by increased rooftop PV penetration and increased energy efficiency.[4]

As such, the SAPN system demand forecasts for the 2015-20 regulatory period seem reasonable.

[1] SAPN Regulatory Proposal, p. 52.
[2] SAPN Regulatory Proposal, p115.
[3] SAPN Regulatory Proposal, p. 208.
[4] 2014 AEMO Transmission Connection Point Forecasting Report for South Australia, December 2014, p.12.

2 Forecasts Opex

Following changes to the NER, the AER has adopted a more holistic approach to assessing the proposed costs of regulated businesses. The most relevant aspect of the AER's assessment is the application of its economic benchmarking techniques.

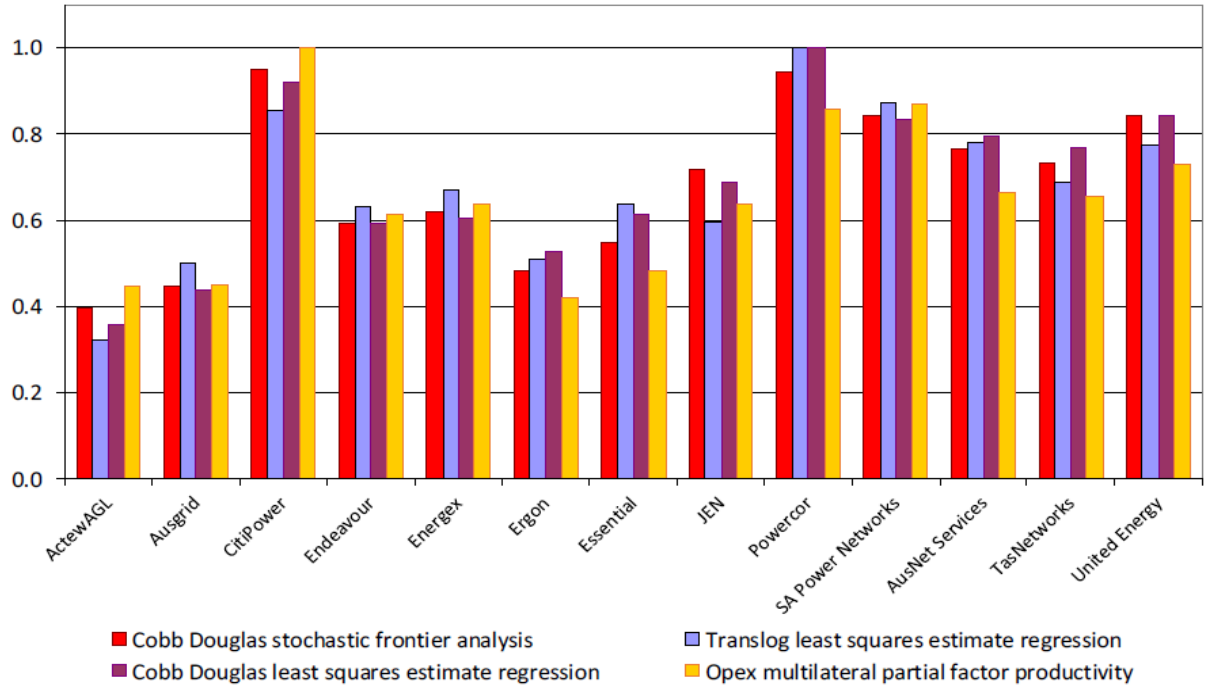
While Origin recognises that benchmarking will be the principal method to determine allowed opex and capex, we consider the step changes proposed by SAPN warrant specific interrogation.

2.1 Current AER Benchmarking

In its assessment of the NSW DNSPs, the AER applied a number of various benchmarking techniques to compare the relative efficiency of the base opex proposed by the businesses to their peers. These measures included multilateral total factor productivity (MTFP), multilateral partial factor productivity (MPFP) as well as a number econometric modelling methods.

A summary of the AER benchmarking results is reproduced in figure 1. These results indicate that, on average, SAPN is relatively efficient but is still less efficient than CitiPower and Powercor.

Figure 1: Comparison of outputs from AER benchmarking techniques



Source: AER, Draft decision Ausgrid distribution determination 2014–19 Attachment 7: Operating expenditure, p.64

However, this analysis is based on opex efficiency scores over the period 2006 to 2013. As part of its regulatory proposal, SAPN has proposed $216.8M in opex step changes. Origin recognises that step changes are not included in the base for comparative benchmarking purposes. For this reason, it is critical that the proposed base costs are properly classified and assessed accordingly.

The AER's position is that step changes should generally relate to a new obligation or some change in the DNSP's operating environment beyond its control. It is not enough to simply demonstrate an efficient cost will be incurred for an activity that was not previously undertaken.

Origin has reproduced a sample of the majority of SAPN's step changes in table 1.

Table 1: SAPN's Proposed Opex Step Changes ($M June 2015)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Finance Adjustments	1.4	1.4	1.4	1.4	1.4	**7.1**
Asset Inspections	8.6	8.8	8.9	8.9	6.9	**42.0**
WH&S	2.2	2.5	2.7	2.8	2.8	**12.9**
Regulatory Reporting	2.2	0.3	2.2	2.2	2.2	**9.2**
Demand Side Participation	1.2	3.9	8.5	9.7	10.6	**33.9**
IT	6.5	11.2	11.3	8.2	6.7	**43.9**
Telecommunications	3.8	5.0	5.4	5.7	5.8	**25.7**
Vegetation Management	7.9	7.1	6.4	5.7	4.8	**31.8**
Customer Service	1.1	0.7	1.0	0.6	1.0	**4.4**
Community Safety	1.6	1.2	0.8	0.9	0.8	**5.4**
Finance Related	4.2	4.9	5.6	6.2	6.7	**27.5**
Total	**40.7**	**47**	**54.2**	**52.3**	**49.7**	**243.8**

Origin does not accept that finance adjustments to include provision adjustments such as annual and long service leave should be accepted as a step change. Provisions are an accrual accounting practice and movements in provisions should be excluded from step changes because they do not represent the actual cost incurred in delivering network services.

SAPN has proposed a step change for asset inspections and WH&S on the basis that these are related to an increase in the level and frequency of asset inspections consistent to meet the requirements of its Safety, Reliability, Maintenance and Technical Management Plan (SRMTMP) and its duty of care under the *Workplace Health and safety Act* (2012). Asset inspections are a necessary ongoing operation and maintenance activity of operating a network. Origin accepts that over time there will be instances where the frequency of inspections will be shorter than other times. However, the activity is a recurrent operating requirement and as such should be assessed as part of the AER's broader capex and opex assessment.

A step change of $9.2M has been proposed for increased costs associated with new regulatory information notice (RIN) requirements introduced in 2014 as part of the AER's Better Regulation program. Origin considers that information and financial data collection and reporting are a core activity of any business. We recognise that SAPN may have incurred some costs to enhance systems to map data from existing systems into the RIN format. However, do not expect these costs would be material as we anticipate that the majority of information sought by the AER would be captured as a matter of course and that the mapping into the AER format would not be onerous. For this reason, the onus should be on SAPN to provide specific evidence justifying that any proposed costs reflect a prudent response to the AER's requirements.

SAPN has proposed costs to develop initiates to lower or shift peak demand and to increase involvement in demand side participation. On the basis that SAPN has forecast flat demand growth for 2015-20 and that peak demand for the 2015-20 regulatory period is forecast to be 16.1% lower than the previous period peak, Origin questions the cost benefit tradeoffs of a $34M investment in demand side activities at this point in time.

SAPN argues that its proposed IT investment avoids an additional $36.8M in labour costs associated with alternative manual options that would otherwise be required to meet its regulatory obligations. Origin considers that the AER must assess the capex/opex trade-off of this claim to determine whether this meets the requirements of a step change.

With respect to SAPN's telecommunications costs, the majority of these costs appear to be associated with the replacement of ageing systems and upgrading capability to respond to business demands for improved data collection, management and retention. Origin does not consider that general business enhancements are a new obligation. Improving performance and outcomes should be an expectation of any business and for this reason Origin considers that these costs should be considered as part of SAPN's base costs.

SAPN states it has responded to a clear mandate arising from its Customer Engagement Program to develop a more sustainable long term approach to vegetation management. SAPN claims that its customer engagement provides for a willingness to pay for enhanced vegetation management practices in line with community preferences. Origin considers that the robustness of SAPN's assessment of willingness to pay must be scrutinised to determine whether there has been a representative sample of customer responses, that preferences reflect customer responses and that the proposed step change costs reflect the customer's willingness to pay.

SAPN cites that the AEMC's rule change with respect to network pricing is expected to require the DNSPs to offer new cost reflective tariffs. SAPN is proposing a step change cost to educate and support customers and to work with retailers in the transition to the new tariffs. Origin considers pricing is a fundamental and ongoing function of any business. In a competitive environment, businesses are constantly improving the effectiveness and efficiency of their prices to remain competitive. Regulated business should be treated no differently and should be adopting an approach of continuous improvement when it comes to tariff efficiency to achieve improved network performance and meet customer expectations. For these reasons, customer education and engagement costs should be considered as part of SAPN's base expenditure.

3 Forecast Capex

For the 2010-15 regulatory period, the AER approved a capex allowance of $1,710.9M (nominal). In response, SAPN's actual capex over the same period was $1,526M (nominal).

SAPN has stated that the reason for the slight underspend was attributable to lower capacity upgrades and customer connection requirements largely driven by lower than anticipated demand growth and cost efficiencies.[5]

For the 2015-20 regulatory period, SAPN has proposed an increase in total capex of 63% relative to 2010-15. The proposed 2015-20 program is made up of 32% replacement, 36% augmentation, 7% customer connections and 25% non-network costs.

3.1 Replacement Capex

SAPN's proposed replacement capex of $792M compares to actual replacement expenditure over the 2010-15 period of $382M (excluding safety related replacements), an increase of 107%.[6]

SAPN states that during the 2010-15 regulatory period, it increased the frequency and scope of its asset inspections which resulted in the identification of an increased number of defects. This led to an increase in network risk which it states exceeds the acceptable risk levels under its ESCOSA approved SRMTMP.

SAPN also states that it has a legal obligation through South Australian legislation to comply with the approved SRMTMP. As a result, SAPN claims that increased defect rectification work is required to return the network risk level to acceptable levels.

A breakdown of SAPN's replacement program is set out in table 2.[7]

Table 2: SAPN's Disaggregated Replacement Capex ($M June 2015)

	Total 2010-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total 2015-20
Poles	n/a	40.8	50.4	56.0	58.8	59.0	265.0
Pole Top Structures	n/a	13.5	14.3	14.4	14.7	14.6	71.6
Overhead Conductors	n/a	9.7	13.1	14.9	15.9	16.0	69.6
Underground Cables	n/a	5.0	5.2	5.0	5.3	5.4	25.9
Service Lines	n/a	3.4	3.5	3.4	3.5	3.4	17.1
Transformers	n/a	14.4	15.9	16.0	15.8	15.8	77.8
Switchgear	n/a	20.9	20.9	20.4	19.9	18.3	100.5
SCADA & Comms	n/a	10.5	14.8	14.1	12.9	11.2	63.6
Other	n/a	14.2	16.7	17.1	17.0	16.1	81.1

The largest component of SAPN's replacement capital program is pole replacement.

SAPN notes that in 2007, it began to transition to a "replace-before-fail" philosophy for its most critical assets. This was to manage its aging network and increased asset failure rates. In 2010, SAPN increased the frequency of its inspection cycles in critical regions. As a consequence, it found

[5] SAPN, Regulatory Proposal, p. 175.
[6] SAPN Regulatory Proposal, p. 182.
[7] Taken from Reset RIN, 'Repex Worksheet'.

significantly more defective poles than anticipated leading to an increase in the volume of pole replacements and life extensions beyond what was envisioned in its previous regulatory proposal.[8]

SAPN states that it poles expenditure forecast aims to estimate the prudent and efficient level of pole replacement to allow it to comply with the approved SRMTMP.

SAPN has used the following two methods to forecast pole replacement:

1. a condition-based risk management (CBRM) model that uses asset age and other asset information, such as condition, to make predictions of the state of the assets in the future, and in turn, the risk of failure. This model has been used to determine the volume of replacement activity (pole replacement and pole plating) that will be required to manage the level of risk back to acceptable levels; and
2. a predictive model that uses historical volume and cost data associated with inspections, defect and replacements to develop historical trends that are then used to estimate defect and replacement volumes and costs in the future.

SAPN states that these two models forecast similar replacement activity levels over the next regulatory period and indicate that SAPN will need to replace or extend the life of 1.3% of its pole population each year over the next regulatory period in order to meet the acceptable risk levels in accordance with the SRMTMP.

Origin considers that if there are legal obligations associated with complying with the approved SRMTMP, then this establishes a regulatory obligation. However, that does not automatically qualify SAPN's proposed pole replacement costs or any other costs for inclusion in the allowed revenue. Irrespective of whether the SRMTMP is a regulatory obligation, Origin considers that a full investigation of the reasonableness of SAPN's methods and its application of risk in its CBRM and predictive models is essential to satisfy stakeholders that risk is being appropriately quantified and applied.

Irrespective of whether risk is the driver of capex or whether it is prescriptive network planning requirements, Origin considers the AER benchmark assessment techniques apply in both instances provided that the necessary normalising adjustments are made to ensure operational requirements specific to SAPN are captured. Origin recognises that as a result this may involve a greater balance between category assessment and partial benchmarking that may have applied in other jurisdictions. This should nevertheless provide for the testing of the efficiency of capex unit costs and therefore the total proposed program.

3.2 Augmentation Capex

SAPN's demand driven augmentation for the 2010-15 regulatory period is $436M compared to its approved allowance of $677M.

It is now proposing a program of $884M for the 2015-20 regulatory period.

SAPN highlights that its augmentation expenditure covers a number of components including demand, reliability, environmental, strategic and safety. Of these components, safety expenditure accounts for 36%, which represents a 19 fold increase relative to the 2010-15 regulatory period.

Notwithstanding the potentially different components of its augmentation, the costs proposed by SAPN are inconsistent with the expenditure reductions proposed by the NSW and the Queensland DNSPs, despite the fact that all DNSPs are now facing environments of little or no demand growth and stable or lower network security and reliability performance obligations.

[8] SAPN, Pole Replacement Expenditure Justification, Attachment 20.15, p. 15.

Origin considers that SAPN must demonstrate which regulatory obligations or environmental factor is driving its significant augmentation increase of which we expect the AER to scrutinise closely the basis and necessity of the proposed increase to meet this obligation.

4 WACC

4.1 SAPN Proposal

SAPN has proposed a WACC return of 7.62%. This is lower than the returns proposed by Energex and Ergon of 7.75% and 8.02% respectively, but still above the AER's NSW draft decision of 7.15%.

SAPN has implemented the AER's trailing average approach in accordance with the AER's proposed transitional arrangements as set out in the Rate of Return Guidelines. Origin supports the AER's move to using a trailing average approach and its proposed transitional arrangements.

However, SAPN has departed from the AER's Rate of Return Guidelines to derive an estimate for the equity beta and the market risk premium (MRP).

SAPN argues that treating its business as lower than average risk would seem appropriate, however, the risks for electricity network businesses have changed significantly in recent years with the advent of solar panels, smart technology associated with enabling customers to make better consumption decisions and improvements in technology associated with energy storage. Collectively, SAPN argues that these changes call into question whether the potential for disconnection from the grid might be significant enough to put at risk the viability of the whole regulated price recovery system.[9]

SAPN argues that it is incumbent upon the AER to identify how these risks are accommodated in the overall allowed return on capital. Furthermore, SAPN puts forward that given these risks there is no basis to continue the trend of reducing regulated returns on the assumptions that energy businesses are low risk.[10]

4.2 Equity Beta

The NER requires that the return on equity for a regulatory control period must be estimated such that it contributes to the achievement of the allowed rate of return objective.

SAPN has proposed an equity beta point estimate of 0.91, well in excess of the equity beta of 0.7 approved by the AER in its recent draft decision for NSW. It quotes the findings of its consultant SFG Consulting that a beta of 0.7 is incorrect in that the AER's Australian sample data is too small and the estimate too variable in response to the choice of statistical method.

For its NSW decision, the AER accepted the equity beta estimates derived by its consultant (Henry 2014). This empirical analysis used a comparator set of nine Australian energy network firms, using available data from 29 May 1992 to 28 June 2013 and showed an extensive pattern of support for an empirical equity beta within a range of 0.3 to 0.8.

The AER considered the equity beta estimates presented by Henry were generally consistent with other empirical studies based on Australian energy network firms. The AER also considered that international comparators were less representative of the benchmark efficient entity and therefore should not be used as the primary determinant of the equity beta range or point estimate.

The AER did, however, consider that the international evidence provided some limited support for an equity beta point estimate towards the upper end of its empirical range.

With respect to the concerns raised by SAPN regarding the threat to the viability of the whole regulated price recovery system, Origin considers that the financial risk exposure faced by regulated businesses remains relatively low. Despite the recent impact of solar uptake, regulated businesses still carry no volume risk under a revenue cap.

[9] SAPN Regulatory Proposal, p. 307.
[10] SAPN Regulatory Proposal, p. 309.

As noted by the AER's consultants on its NSW Draft Determination (McKenzie and Partington):[11]

> …it is hard to think of an industry that is more insulated from the business cycle due to inelastic demand and a fixed component to their pricing structure. In this case, one would expect the beta to be among the lowest possible and this conclusion would apply equally irrespective as to whether the benchmark firm is a regulated energy network or a regulated gas transmission pipeline.

Origin considers that if the consequences of the environment risk raised by SAPN were a significant and quantifiable threat, the market would have already incorporated these risks into the pricing of publicly listed network stocks. It is not apparent that the energy stocks sampled have demonstrated significantly higher levels of volatility over recent years in response to the risks highlighted by SAPN. Furthermore, based on the AER's consultant's analysis (Henry), this does not appear to extend also to SAPN's publicly listed owner (49%), Spark Infrastructure.

As highlighted, the regulatory framework which applies to regulated network businesses creates a very low business and financial risk environment that Origin considers is unparalleled. For these reasons, Origin endorses the AER's approach to determine systematic risk based on empirical studies based of Australian energy network firms. Origin also agrees that international comparators should not be used as primary determinants of risk to the extent that the risks faced by these firms are not directly comparable to Australian conditions.

Origin also notes that the Henry data supports an argument for an equity beta lower than the upper range adopted by the AER. However, Origin considers that a beta of 0.7 is balanced on the basis it is a modest step down from previous regulatory determinations, provide a certain and predictable outcome for investors and provides a balance between the views of consumer groups and the DNSPs.

4.3 Market Risk Premium

The AER's Rate of Return Guidelines sets out its proposed approach to estimating the expected return on equity, including the relevant material that it proposes to use to inform its final estimate of the expected return on equity.

SAPN has proposed a MRP estimate of 7.72% based on the views of its consultant SFG Consulting. SFG Consulting largely use 'the same universe of information'[12] as used by the AER. This includes the outputs of a weighting of historic averages, dividend discount model and independent valuation reports.

While the information used by SFG Consulting and the AER is consistent, what differs is the judgement regarding the extent to which different information should be relied upon to determine the estimate of the MRP. Specifically:

- the material relied upon by SAPN produces an estimate of the MRP that is significantly higher than the historic decisions by regulators, including decisions by jurisdictional regulators across multiple regulated industries; and
- the material relied upon by the AER produces an estimate that is stable and consistent with historic decisions.

Origin considers that with respect to the MRP, the material relied upon by the AER is commensurate with the efficient financing costs of a business exposed to the level of risk that applies to an Australian regulated DNSP and should be preferred over the estimated provided by SAPN.

[11] AER NSW DNSPs Draft Decision, Attachment 3: Rate of Return, p. 236.
[12] SAPN Regulatory Proposal, p. 317.

5 Metering Services

As part of the AER's Framework and Approach for SAPN, it proposed the following changes to the classification of meters:

- all type 6 metering related services, other than metering investigation requested by customers, from standard control to alternative control services; and
- all type 5 metering related services from negotiated to alternative control services.

The classification of these services as alternative control opens up the potential for competition in the provision of these services. Origin considers that there are two barriers to promoting competition in metering services. The first is the existence of exit fees that act as a constraint to customers switching to an alternative service provider. The second is opaque unbundled meter charges that do not allow customers to make fully informed decisions on the benefits of switching to an alternative provider of services.

Origin addresses these issues in turn.

5.1 Exit Fees

In its Draft Determination for NSW, the AER decided not to impose an exit fee for customers who switch to an alternative metering provider. As a result, it chose to classify residual metering costs as a standard control service and to recover these costs through network tariffs.

Under this approach, the annual charge for existing customers will include capital cost recovery. The metering charge for a new customer, on the other hand, will not include a capital cost as they will have made an upfront capital contribution for the installation of an alternative meter. In this instance, the capital cost of the meter will be transferred into the regulated asset base (RAB) and recovered through network charges. As a result, the customer will not be exposed to a metering exit fee.

Origin supported this decision for NSW as we consider it will promote competition in unregulated metering services. Origin considers that this decision should also extend to SAPN.

5.2 Annual Metering Fees

SAPN states that it uses a metering pricing model (MPM) to generate cost reflective prices for metering services including meter provision and installation services, and for transfer and exit fees to be applied to customers who may transfer to an alternative provider when competition is introduced into type 5 and 6 metering services. It also states that using the MPM it has developed annual metering charges for each of its type 5 and 6 meters.

However, having reviewed SAPN's Regulatory Proposal, the ACS Metering Tariff Development Methodology, the ACS Metering Pricing Model and Tariff and the Metering Business Case, there is a significant lack of clarity and transparency around the respective metering charges and costs. For example, it is not clear what: (1) the annual metering charges are for each respective metering type; (2) the new or upgraded metering costs are; or (3) the annual metering costs that apply in the event that a customer upgrades with SAPN.

It is important these charges are clear, transparent and set at an efficient level.

In setting efficient prices, Origin encourages the AER to consider costs that fall within an efficient range that also ensure the annual metering charges for existing meters are compatible with encouraging entry into the market for meter provision. Promoting efficient market entry will allow customers to obtain advanced metering infrastructure from a range of competitive providers and therefore benefit from products and services that they could not otherwise access.