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19 March 2013

Chris Pattas
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Dear Sir

Issues Paper: Better Regulation Expenditure Forecast Assessment Guidelines for Electricity Distribution and Transmission

Thank-you for the opportunity to provide input to the Issues Paper *Better Regulation Expenditure Forecast Assessment Guidelines for Electricity Distribution and Transmission*, released by the Australian Energy Regulator in December 2012 (the "Issues Paper").

Aurora Energy Pty Ltd, ABN 85 082 464 622 (Aurora) is an incorporated, State Government owned fully integrated energy and network business, with complementary activities in telecommunications and energy-related technologies. Aurora provides electricity generation, retail and distribution services to more than 270,000 customers in the Tasmanian jurisdiction. In this document, reference to Aurora should be taken as reference to Aurora in its capacity as the provider of distribution network services licensed by the Regulator under the Electricity Supply Industry Act 1995.

Aurora supports the move to clarify information requirements for the distribution determination process: one of the most challenging aspect of its recent distribution determination was ascertaining exactly what data the AER required. Aurora also supports the move towards consistency in assessment methodology, recognising that the certainty given is of benefit to those subject to regulation. It is important that benchmarking helps inform the AER's decision making to ensure efficient expenditure as opposed to becoming a end in and of itself given the non-homogeneity of NSPs.

The attachment to this letter provides Aurora's answers to the questions posed in the Issues Paper. Aurora supports and endorses the response of the Energy Networks Association to the Issues paper.

If you have any questions, please address them to the contact noted above.

Yours faithfully

Anton Voss

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ATTACHMENT TO AURORA SUBMISSION TO ISSUES PAPER *BETTER REGULATION EXPENDITURE FORECAST ASSESSMENT GUIDELINES FOR ELECTRICITY DISTRIBUTION AND TRANSMISSION*

This attachment to Aurora's submission to the Issues Paper *Better Regulation Expenditure Forecast Assessment Guidelines for Electricity Distribution and Transmission* released by the Australian Energy Regulator in December 2012 (the "Issues Paper") provides Aurora's answers to the questions posed by the Australian Energy Regulator (AER) in the Issues Paper.

In this document, reference to Aurora should be taken as reference to Aurora Energy Pty Ltd ABN 85 082 464 622 in its capacity as the provider of distribution network services on mainland Tasmania, licensed by the Regulator under the Electricity Supply Industry Act 1995.

Responses to Questions

This section of the attachment to Aurora's submission to the Issues Paper provides Aurora's answers to the questions posed by the AER in the Issues Paper.

For ease of identification, the questions posed by the AER are presented in boxed text.

Scope of the consultation

Question 1

> Should we anticipate the application of some assessment techniques to gas service providers as part of this consultation?

Aurora has no comment on this issue.

Question 2

> Do stakeholders have any preliminary comments on the development of guidelines that will be different for transmission and distribution businesses?

Aurora expects that there would need to be at least a difference between guidelines applicable to TNSPs in jurisdictions where subdivision 3 of division 2 of part 5 of the NEL applies, and those in jurisdictions where it does not.

Should consultation be separate for these businesses?

Aurora does not consider that there needs to be separate consultations, but supports the move for separate working groups for detailed analysis.

Question 3

How should linkages between expenditure assessment, information collection and storage, cost allocation and incentive arrangements be dealt with in the development of our overall assessment framework?

Aurora considers that the efficient costs of preparing and maintaining all information required to satisfy the AER's requirements should be considered by the AER to be "regulatory obligations or requirements" when assessing expenditure forecasts. Additionally, such costs should be excluded from the operation of any incentive scheme.

Aurora expects that the incremental cost of storage should be relatively small in terms of the quantity of storage required. Aurora notes, however, that there is an implicit requirement in the RINs served on Aurora to maintain backwards compatibility for 10 years for all IT systems that produced primary data used by Aurora during the distribution determination and in the production of the responses to the reporting RINs, with a similar requirement likely to have been placed (and to be placed) upon other parties subject to RINs. The costs associated with maintaining otherwise unserviceable and/or superseded IT systems are unlikely to be trivial, and forecasting such would be challenging. Aurora also notes that such costs would not be incurred by an efficient NSP in the absence of the AER's requirement for information availability.

Revealed costs and incentives

Question 4

Have we appropriately characterised the role of benchmarking in expenditure assessments...?

Aurora considers that the AER has not appropriately characterised the role of benchmarking in expenditure assessments.

Benchmarking of various aspects is properly used as a "sanity check", identifying where a particular forecast varies significantly from its peers. It should be noted, however, that an "outlier" forecast (either above or below the average) is not necessarily incorrect, rather that it is worthy of more detailed examination. Such an approach was used by the AER during its assessment of Aurora's capex forecasts during the most recent distribution determination.

In the Issues Paper, however, the AER indicates that it may use benchmarking as a test of the effectiveness of the incentive regimes imposed upon given NSPs.

> Have we ... set an appropriate objective in expanding and formalising our approach in consultation with stakeholders?

Aurora has no comment on this question.

Question 5

> Do stakeholders have views on the use of revealed costs and the reliance on incentive mechanisms, and how this should change with the increased reliance on benchmarking to assess expenditure allowances?

Revealed costs and benchmarking (of revealed costs and other indices) both have a part to play in assessing expenditure forecasts. Revealed costs indicated how much was historically spent by an NSP, and benchmarked revealed costs indicate how much was spent by peers. Both are useful tests for the reasonableness of an expenditure forecast. Neither is appropriate for assessing whether an expenditure forecast is correct, appropriate or efficient: what happened in the past is not necessarily an indicator of what will happen in the future; and what is appropriate for one's peers may not be appropriate for oneself. The only way to test whether an expenditure forecast is correct, appropriate and efficient is to make a proper assessment of the forecast. The use of benchmarked indices may provide a clue as to where an expenditure forecast differs from that of the peer group, but provides no indication as to whether such a variation is justified.

Incentive mechanisms are designed to drive a certain behaviour; for example, the EBSS is designed to continually decrease opex by penalising NSP expenditure in excess of a downward-ratcheting "efficiency frontier". Aurora is uncertain why the AER would choose to stop using incentive schemes, especially given that the AER argued strongly to be given increased abilities to create incentive schemes during the recent pricing rule changes and, further, that the use of benchmarking uses, to an extent, revealed costs.

Aurora notes, however, that the use of incentive schemes presupposes that a party will not act without financial incentive. This axiom may render various aspects of economic analysis simpler, but may not be met in reality. Aurora notes that the axiom is not met in its own case: Aurora's strategic focus as a Government owned business is to meet customer needs at the lowest, sustainable cost. Additionally, incentive schemes may have a negative impact on customer prices and service in the longer term.

Expenditure assessment principles

Question 6

> Are there any other principles that you think that should be added to this list? Should we include principles that guide the selection of the assessment techniques to be applied in the framework and approach stage, from the list of appropriate techniques (that will be) outlined in the Guideline? If so, do you think that the principles outlined here provide appropriate guidance on technique selection?

Aurora considers that the principles given in Box 3 of the Issues Paper are sufficient for the purposes of guiding selection of assessment techniques. Aurora notes, however, that the second sentence of Principle 2,

> However, in some instances we may find benefit in using a subjective project review

introduces unnecessary uncertainty, in particular, around the meaning of "benefit". The principle would not suffer from the deletion of this sentence.

Question 7

> Are there any assessment techniques that should be considered as forming part of the guidelines? What are the relative benefits and shortcomings of each of the approaches and how could the latter be addressed?

Aurora does not consider that the guideline should prescribe any method of assessment.

Aurora has no conceptual difficulty with assessment methods used by the AER in the past, or proposed in the future (except, perhaps, TFP). Each has its relative merits and can provide valuable insights into the expenditure forecasts. Aurora has concerns that the various methods may be used inappropriately, whether because the wrong method is used for a given data set, or the data set itself is inadequate for the analysis being performed.

Category based assessment

Question 8

> Do stakeholders agree with our general approach of attempting to derive quantitative relationships between expenditures and drivers? Are there better, more cost effective alternatives to assessing disaggregated expenditures?

Aurora understands the attractiveness in being able to find a functional relationship between expenditure and a few, well chosen variables. Aurora does not consider

that there is merit in attempting to derive quantitative relationships between expenditure and drivers. Electricity networks are complex. Even a small distribution network such as that operated by Aurora has more than 300 feeders of different lengths and loadings traversing differing terrain types and serves population densities ranging from CBD to sparse rural. A proper approximation would require an extremely complex and possibly unworkable function. Conversely, a useable function assumes a degree of uniformity that is not present, rendering questionable any results obtained. In addition, any functional relationship will only describe what has happened; there is no guarantee that the conditions leading to the function will continue for the forecasting period.

The Issues Paper does not make a case for why expenditures need to be disaggregated. Aurora understands that the changes made to the pricing rules that resulted in this Better Regulation series of consultations removed the need for the AER to consider disaggregated expenditure proposals.

Question 9

> Do stakeholders have any in-principle comments about the level of expenditure disaggregation given our expectation that lower levels of aggregation e.g. by asset type, are likely to be conducive to more robust benchmarking and other quantitative analysis?

In principle, errors compound. In consequence, a forecast based upon an aggregate of multiple lower level forecasts is liable to have a larger error term than a forecast of the same quantity made using a sequence of that quantity.

Economic benchmarking techniques

Question 10

> Do stakeholders agree that economic benchmarking will be an important adjunct to more detailed expenditure assessments?

Aurora agrees that economic benchmarking *may* be an important adjunct to more detailed expenditure assessments. The qualification exists because, while the techniques have the potential to provide useful information, their implementation and the subsequent approach to analysis of results is, as yet, unknown.

Expenditure assessment process

Question 11

> Do stakeholders agree that the first-pass process described above is a useful and appropriate application of expenditure assessment techniques?

Aurora supports the introduction of this preliminary, high-level assessment of an expenditure forecast, and observes that the "first-pass process" described in the Issues Paper seems reasonable.

Aurora does, however, have a concern about the resourcing implications for both the AER and the NSPs. During the recent distribution determination process for Aurora's current regulatory control period, the AER made many supplementary requests for information to inform their assessment of Aurora's regulatory proposal. Attending to these requests took considerable time and resources on Aurora's part. Introducing the first-pass process means that both the AER and the NSP will have significantly less time to review, request, provide and analyse the necessary information. Aurora recognises that the more structured format for regulatory proposal supporting information to be implemented by the AER may address these concerns. Aurora notes, however, that many of the supplementary questions received by Aurora related to information provided in response to the RIN, a significant part of which was already in a prescribed format.

Aurora also observes that, based on interactions with the AER and its engineering consultants during the expenditure forecast assessment process, engagement between Aurora and the engineering consultant at an earlier stage of the process would have been beneficial to both sides.

Expenditure incentive schemes

Question 12

> Do stakeholders have any views on the relationship between the assessment tools that we have identified, and our existing incentive schemes? Given the interrelationship between the two, and that our incentive schemes are to be revised over 2013, what processes should we follow to ensure there are appropriate incentives on NSPs to make efficiency gains, while at the same time implementing appropriate expenditure assessment techniques?

Aurora understands the incentive schemes and benchmarking to be related, but not interchangeable. Conceptually, expenditure incentive schemes are intended to encourage the NSP to the most efficient expenditure. This efficient expenditure become the "revealed costs", which are inputs to expenditure benchmarking. In the absence of confidence that efficient revealed costs are being used, benchmarking becomes simply a comparison of peer-groups, rather than a useful tool for assessing

the efficiency of forecasts. Given this, Aurora is uncertain why the AER would seek to limit the application of incentive schemes.

Please refer, also, the Aurora's response to question 5 of the Issue Paper.

The guideline, benchmarking report and determinations

Question 13

> Do stakeholders have any comments on how best to manage the interrelationships between the guidelines, F&A processes, determinations and annual benchmarking reports?

Aurora has no comment on this question.

Question 14

> How would it be best to maintain a degree of consistency in assessment techniques and associated data reporting, while at the same time allowing improvements in techniques?

The AER has a significant data set from the initial round of pricing reviews, and DNSPs respond to annual RINs. Aurora expects that these data should form the basis of the AER's information requirements.

Question 15

> Are there any ways the expenditure assessment process, including in preparing NSP forecasts, could be improved by linking the Guidelines, the F&A process and the NSP's obligation to notify us of its forecasting methods?

Aurora has no comment on this question.

Timing and transition issues

Question 16

> Keeping in mind the preference to use up to date and nationally consistent data in all benchmarking analysis, what would be the best time to issue RIN templates?

Aurora recommends that a RIN should be issued as early as possible to allow NSPs time to understand what is being sought, to seek clarification from the AER where necessary and, most importantly, work out how to query their systems to extract the

relevant data. Notwithstanding this, the timing should align with each business' regulatory years and regulatory periods.

> Would these need to be for all NSPs? How frequently should we do this?

It is not clear whether this question applies to "all NSPs" in the NEM, or "all NSPs" in the jurisdiction of interest. Given the resourcing required to complete the annual RIN directed at allowing the AER to monitor compliance with its distribution determination, Aurora does not support the idea of being required to complete extra RINs.

Question 17

> Should we try and limit the collection and analysis of benchmarking data to annual benchmarking reports? Alternatively, should we focus our effort on benchmarking analysis at each draft and final decision stage, with less attention to annual benchmarking reports?

Aurora prefers the first option – to limit the collection and analysis of benchmarking data to annual benchmarking reports. To do otherwise gives the impression that the annual benchmarking serves limited purpose.

Question 18

> Are there alternative, more flexible means to gather data for benchmarking purposes in annual reports and in determinations, such as requests outside the NEL provisions?

Aurora notes that the AER possesses extensive information gathering powers, so the option for ad hoc data requests always exists. Aurora also notes that the collection of such data by NSPs often involves a serious amount of resourcing, which cost is ultimately borne by the customer. Aurora further notes that the existence of the EBSS effectively restricts the opex of distributors: expenditure used to address increasing regulatory information gathering and reporting is not available for maintenance of network assets.

Question 19

> Should we be considering the alignment of regulatory years and of regulatory control periods for transmission and distribution NSPs to overcome some of these challenges?

While the alignment of the regulatory control periods may reduce data analysis issues, the staggered nature of regulatory control periods provides an opportunity for regular review of the effectiveness of the benchmarking and assessment process,

and to include learnings from one revenue determination into the process applied to the following determination. .

If so, should regulatory years reflect the Australian reflect financial year?

Aurora has no comment on this question.

How would the alignment of regulatory control periods be best achieved?

The cost of a distribution/determination is significant: decreasing the duration of regulatory control periods increases the number of determinations and, in consequence, the costs to customers. Aurora's preferred approach to aligning regulatory control periods, if such is desired, is to extend, rather than diminish, the duration of the periods. Aurora considers that this is best done "by intention" from the start of a determination process, rather than the method that was adopted to cope with the pricing rule changes made in 2012, which is unnecessarily, administratively complex.

Holistic approach

Question 20

We are interested in your views on the holistic approach to the selection and establishing reporting requirements for economic benchmarking techniques.

Aurora has no concerns about the use of a "holistic approach", provided that the assessment techniques are chosen to fit the data, rather than being chosen to provide a preferred result.

Efficiency and productivity measurement

Question 21

Have we identified all the relevant economic benchmarking techniques and, if not, are there other economic benchmarking techniques that should be considered?

The AER has identified all of the common benchmarking techniques.

Relating productivity to the AER's task

Question 22

> We are interested in your views on how economic benchmarking techniques should be applied in our decision making process regarding expenditure. Specifically, we are interested in your views on using these techniques to assist us to form a view on the efficiency of base expenditure and expenditure forecasts...

Aurora considers that benchmarking should be used as a screening test for assessing whether forecast expenditure is plausible, and to identify which areas of a forecast require more detailed assessment.

> We are interested in your views on how economic benchmarking techniques should be applied in our decision making process regarding expenditure. Specifically, we are interested in your views on ...measurement of the likely pace at which productivity improvements may be made over a regulatory control period.

Aurora has no comment on this question.

Inputs, outputs and environmental variables

Question 23

> Should the AER separate DNSPs into groups for the purposes of economic benchmarking? If so, how should the groupings be determined?

Aurora considers that benchmarking may only provide a meaningful result if it is used for the comparison of similar entities. This leads to the conclusion that grouping is required. The small number of DNSPs in the NEM renders this problematic.

The alternative to grouping is to benchmark using dimensionless quantities or, potentially, "density" quantities (such as "value per unit length", or "value per customer"). Care must be taken when using this approach that the quantities benchmarked are meaningful, and that the analysis recognises the nature of ratios of these benchmarking quantities.

Question 24

Are our criteria for selecting inputs appropriate? Are there any additional criteria that should be added?

The criteria for selecting inputs given in Table 4 indicates that the intention is to model a business in its entirety. Aurora is unconvinced that such complexity is either necessary or, indeed, efficient.

Question 25

Are the assets and operate and maintain variables appropriate for economic benchmarking?

Aurora considers that the two input variables "assets" and "operate and maintain" are inadequate to provide the degree of benchmarking desired by the AER. While apparently chosen to align with "capex" and "opex", they do not consider the interactions between capex and opex (assets – plant - are used for maintenance), nor the different types of assets or opex.

At the very least, Aurora would expect differentiation between:

- assets directly associated with:
  - the provision of "transport of power" network services – poles, wires, transformers, etc.'
  - the provision of other network services – metering, meter data services, public lighting, etc.;
- assets used to build, operate and maintain the assets directly associated with the provision of services – trucks, ladders, etc;
- assets indirectly associated with the to the provision of services, such as IT for "corporate" systems;
- operate and maintenance of assets directly associated with:
  - the provision of "transport of power" network services – poles, wires, transformers, etc.'
  - the provision of other network services – metering, meter data services, public lighting, etc.;
- operate and maintenance of assets used to build, operate and maintain the assets directly associated with the provision of services – trucks, ladders, etc;
- operate and maintenance of assets indirectly associated with the to the provision of services, such as IT for "corporate" systems;
- operate and maintenance of other functions necessary for the provision of network services, such as corporate functions.

Question 26

> What indices can we use to derive price and quantity information for the operate and maintain variable for economic benchmarking?

Aurora has no comment on this question.

Questions 27, 28 & 29

> Is the one-hoss shay assumption appropriate for the measurement of capital services provided by individual distribution system assets?

> Does the 'portfolio effect' apply to populations of distribution assets? Assuming the one-hoss shay assumption is appropriate for individual assets, does the portfolio effect negate the one-hoss shay assumption when using populations of assets in economic benchmarking?

> If the one-hoss shay assumption does not appropriately describe the deterioration profile of DNSP assets, which deterioration profile is most appropriate?

In general, Aurora considers that the "one-hoss shay" assumption is appropriate for the measurement of capital services provided by individual system assets in that, given appropriate maintenance and operation, the capability of an asset is, for all intents and purposes, constant until it fails.

Empirically, the population failure rates should be approximately a "bathtub curve". When estimating replacement requirements using failure rate functions, the historical rates of asset installation must be taken into account. The general result for a constant asset installation rate is a constant asset replacement rate with a time-lag about equal to the average life of the asset. In the event that the rate of asset installation is not constant, no such conclusion can be drawn, and modelling is required.

Question 30

> Should we measure asset quantities using physical or value based methods?

Aurora considers that it is imprudent to lock in a method: the choice of measurement is dependent upon the result being sought and the assets being measured.

Question 31

> Assuming the one-hoss shay assumption is appropriate for individual distribution assets, would the existence of the portfolio effect render the use of physical measures of capital quantities inappropriate for economic benchmarking?

It is not possible to provide a general answer to this question. The result would vary according to the data set being considered.

Question 32

> How should we derive the value of a DNSP's capital stock for the purpose of determining quantity of assets?

Aurora expects that the value should be the undepreciated, unoptimised value of the assets used in the system. Given a one-hoss shay assumption, depreciation is irrelevant. Asset value optimisation has been effected to arrive at a desirable regulatory outcome, but does not provide a true indication of asset value.

Question 33

> What index should be used to inflate historical asset prices into real terms?

Aurora considers that whichever index is used should adequately reflect the difference between the historical and current installed costs of a given asset.

Question 34

> Is RAB depreciation an appropriate measure of the annual contribution of capital to the provision of outputs?

Aurora does not consider RAB (regulatory) depreciation to be an robust measure of the annual contribution of capital to the provision of outputs – there is a range of issues. For example, assets are retained in service despite having zero depreciated value. Additionally, many RABs have suffered a degree of “optimisation” in the past and will, under the revised pricing regime, undergo similar optimisations in future, meaning that the RAB is not necessarily an accurate measure of capital in the business.

Question 35

> What prices should be used to weigh assets and the activities involved in operating and maintaining those assets?

Aurora has no comment on this question.

Question 36

> Do the prices of inputs materially differ across jurisdictions within Australia, or could the AER use the same prices as weights for inputs across jurisdictions?

Aurora does not consider it appropriate to use the same prices as weights for inputs across jurisdictions unless the prices are the same across jurisdictions.

Question 37

> Are our criteria for selecting outputs appropriate? Are there any additional criteria that should be considered?

Aurora has no comments on this question.

Question 38

> If customer numbers are used as an output for economic benchmarking, should these customer numbers be separated into different classes? If so what are the relevant customer classes for the purpose of economic benchmarking?

Aurora does not consider that customer number is an output. Customer numbers meet the criteria for an environmental variable, in the same way that peak demand meet the criteria for an environmental variable.

Question 39

> Have we identified all the relevant outputs? Which combination of outputs should we use in economic benchmarking?

Aurora has no comments on this question.

Question 40

Despite multiple studies using volume of energy delivered as an output, we are not convinced that this is appropriate. What are stakeholder's views on the use of energy delivered as an output?

"Energy delivered" is not relevant to network planning and operation, except in the context of "energy not delivered" from a point of view of reliability and security. The rate of energy delivery drives network design (as noted in the Issues Paper).

Question 41

It would appear that much network expenditure is ultimately intended to maintain the reliable supply of electricity. This might include the management of peak demand, network capacity and investment to ensure that networks are secure. Given this, is it appropriate to use measures of reliability as an output variable?

Measures of reliability are of use in economic benchmarking only when the aspects of reliability considered are within the control of the NSP.

Question 42

Are our criteria for selecting environmental variables appropriate?

Aurora has no comment on this question.

Question 43

Have we identified all the relevant environmental variables?

Aurora suggests that regulatory and legal obligations constitute an environmental variable.

Question 44

Which combination of environmental variables should we use in economic benchmarking?

Aurora has no comment on this question – there is insufficient information.

Expenditure categorisation

Question 45

> Do you agree with this list of expenditure drivers? Are there any others that should be added?

Aurora considers the listed expenditure drivers to be sufficient.

Question 46

> To what extent do you think the expenditure drivers are correlated with each other? Given this level of correlation, should we examine the impact on expenditure of each one, or can this list be consolidated?

Aurora considers that some of the drivers are uncorrelated (for example, "customer requests" is almost completely uncorrelated with the other, listed drivers). There is a greater correlation between others, such as weather affecting asset condition and vegetation effects. Aurora does not consider that consolidation of the drivers in the list is desirable.

Details of driver based assessments

Question 47

> Do you think that the network segments outlined above provide a useful demarcation of the costs of customer-initiated network extension and/or augmentation?

Aurora considers that the network segments outlined would be adequate for the task, in that they are basically those used in Aurora's current distribution determination. Aurora has less familiarity with the network characteristics of other NSPs, and is loathe to provide unlimited support for such segmentation. To ensure future usefulness, the expenditure should be sub-categorised in with the same categories used in the repex model.

> Do you think that there are significant cost differences in installing connection point assets and in network extensions between overhead and underground assets?

There are significant cost differences between the costs of overhead and underground assets.

What alternative asset type demarcations would be more appropriate?

Aurora has no comment on this question.

Question 48

Do you agree with separating customer-requested expenditure by connection point assets, extensions, and augmentations? Do you think total expenditure for each service (excluding new connections services) is a sufficient degree of disaggregation? Should further sub-categories be identified?

Aurora considers that, for completeness, customer requested expenditure should be disaggregated into the three categories given in the question but sub-categorised using same categories as the "repex" model.

Question 49

Do you agree with separating new customer connections expenditure by the connection point, extension, and augmentation components?

Please see the responses to questions 47 & 48.

Do you think that the number of new connections, length of network extensions added, and size of capacity added are useful measures of the volume of work and expenditure required for new connection services?

Aurora considers that the number of new connections, length of network extensions added, and size of capacity added are useful measures of the volume of work and expenditure required for new connection services.

Should these categories be disaggregated into more detailed categories reflecting the type of work undertaken by the NSP to account for factors that drive changes in new connections expenditure over time?

Aurora has no comment on this question.

Question 50

> Do you think the system growth expenditure driver category should be distinguished by expenditure directed at addressing different service standard issues, such as harmonics, voltage variance, ferro-resonance, and system fault levels? Would the benefits of distinguishing expenditure into these sub-categories for forecasting the timing and scope of changes in expenditure trends over time outweigh the added complexities from doing so?

Aurora is unconvinced of the benefits of distinguishing expenditure into the given sub-categories for forecasting the timing and scope of changes in expenditure trends over time. The interaction between solutions may render measurement of the outputs challenging.

Question 51

> Do you think that the network segments outlined above provide a useful demarcation of the costs of general load driven network extension and/or augmentation? What alternative asset type demarcations would be more appropriate?

Aurora considers that the given segmentation would be adequate. The categorisation of distribution feeders is unnecessary; the SCNRR-style categorisation of feeders is unworkable in Tasmania, as was discussed with the AER during the distribution determination process for the current regulatory control period.

Question 52

> Do you think the above asset types are sufficient in capturing the cost differences associated with activities to address deterioration in asset condition? What other asset types may be suitable?

Aurora considers that the given categories would be adequate.

Question 53

> Do you think cost differences between emergency rectification activities and other activities to address deteriorating asset condition are sufficient to require separate categorisation?

Aurora considers that the cost differences between emergency rectification activities and other activities to address deteriorating asset condition are sufficient to require separate categorisation.

Question 54

> Do you think cost differences between non-emergency prevention activities and non-emergency rectification activities to address deteriorating asset condition are sufficient to require separate categorisation?

Aurora considers that the cost differences between non-emergency prevention activities and non-emergency rectification activities to address deteriorating asset condition are sufficient to require separate categorisation.

Question 55

> Do you think cost differences between non-emergency replacement activities and non-emergency maintenance activities are sufficient to require separate categorisation?

Aurora considers that the cost differences between non-emergency replacement activities and non-emergency maintenance activities are sufficient to require separate categorisation. Aurora also considers that the activities are sufficiently different to require separate categorisation.

Question 56

> Do you think the approach to using benchmarking and trend assessment for routine and non-routine maintenance is reasonable? Are there any alternatives which might be more effective?

Aurora considers that benchmarking and trend assessment may be reasonable for routine maintenance. For non-routine maintenance, benchmarking and trend assessment may be less useful, due to the ad hoc nature of the maintenance.

Question 57

> Given the relative predictability of maintenance cycles and activities, do you consider it feasible to construct a deterministic maintenance model, such as that described above?

Aurora considers that it is feasible to attempt to construct a deterministic model for routine maintenance activities.

Question 58

> Do you think that expenditure directed at altering network infrastructure or management systems to ensure compliance with a changed regulatory obligation can be disaggregated in a way that improves accuracy in forecasting and efficiency assessments?

Aurora agrees that expenditure to ensure compliance with a changed regulatory obligation can not be disaggregated in a way that improves accuracy in forecasting and efficiency assessments.

Question 59

> Do you think cost differences between emergency rectification activities and other activities to address third-party actions are sufficient to require separate categorisation?

Aurora considers that cost differences between emergency rectification activities and other activities to address third-party actions are sufficient to require separate categorisation

Question 60

> Do you think expenditure on managing vegetation growth should be distinguished from expenditure on third-party stochastic events?

Aurora considers that expenditure on managing vegetation growth should be distinguished from expenditure on third-party stochastic events.

> Should expenditure on third-party stochastic events be distinguished into sub-categories?

Aurora considers that expenditure on managing non-fault third-party stochastic events need not be distinguished into sub-categories.

Question 61

> Do you think general measures of network size and type are sufficient measures for investigating differences in third party expenditure across service providers? What other measures may be useful?

Aurora has insufficient information to provide a response to this question.

Question 62

> Do you think overheads should be separately reported, or included on a fully-distributed basis in the expenditure driver-activity-asset categories, or both?

Aurora considers that overheads need only be separately reported. Reporting on a fully distributed basis is a function of the operation of the CAM, which is not being assessed.

Question 63

> How do you think overhead expenditure should be distinguished and assessed? How would you define any overhead expenditure sub-categories?

Aurora has no comment on this question.

Other issues in category based assessment

Question 64

> How material do you think are changes in input prices on overall expenditure levels? What forecasting and modelling approaches do you think can reliably account for the impact of input price changes on expenditure without introducing overly burdensome reporting requirements?

Aurora has no comment on this question.

Question 65

> What categorisation of different inputs do you think provides a sufficient understanding of both how input prices may change over time, as well as how input prices may vary across geographical locations?

Aurora has no comment on this question.

Question 66

> Do you consider optimism bias and/or strategic misrepresentation to be a material issue in the cost estimation for non-routine projects? Do you consider downward biases in cost estimation to materially outweigh regulatory incentives to over-estimate expenditure? To what extent do you consider there to be a consistent downwards bias in initial project cost estimates?

Aurora has no comment on this question.

Question 67

> What should be our approach to cost estimation risk factors and addressing potential asymmetric estimation risk? Would techniques such as reference class forecasting be beneficial? How would any techniques to address asymmetric cost estimation risk interact with potential incentive schemes (for either opex or capex)?

Aurora has no comment on this question.

Question 68

> Do you think our established approach to assessing debt and equity raising costs remains appropriate? What modifications or alternative techniques would you suggest?

Aurora has no comment on this question.

Question 69

> Do stakeholders have any in-principle views on how demand forecasts should be derived and assessed?

Aurora considers the approach given in page 117 of the Issues Paper is reasonable, but notes that temperature correction should only be applied to historical data if temperature is to used as an input variable for demand forecasting.

Question 70

> Do you think that the network segments outlined above provide a useful demarcation of the expenditure incurred to address various expenditure drivers?

The feeder categories given (CBD, Urban, Rural Short and Rural Long) are not appropriate for Tasmania, not the least because any given Aurora distribution feeders may supply a combination of community types.

> Do you think that there are significant cost differences in building, repairing, or replacing network assets based on region in which the work is being done?

The costs for building, repairing or replacing network assets are not significantly different between areas in Tasmania, although Aurora recognises that this may not be the case for DNSPs with larger service areas.

> What alternative asset type demarcations would be more appropriate?

Aurora is unconvinced that there is a need for feeder demarcation. Possibly feeder voltage (11/22 kV, 33 kV, 66 kV, higher) may be more useful if demarcation is required.

Question 71

> For the purposes of comparative analysis of various expenditure categories, do have any views on how to best control for difference in approaches to cost allocation, capitalisation and outsourcing?

Aurora has no comment on this question.

Question 72

> Do you think our conceptual framework for the assessment of related party contracts is reasonable? What other techniques may be appropriate? Should we apply the same conceptual framework when assessing the efficiency of related party margins on an ex post basis?

Aurora has no comment on this issue.

Question 73

> Do you think our conceptual framework for assessing self-insurance is appropriate? What other techniques may be appropriate?

Aurora has no comment on this issue.

Question 74

> Do stakeholders have any in principle views on how benchmarks should be derived and applied?

Aurora has no comment on this issue.