RIN Response

Part A

General

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1. General

In this document Aurora will set out its responses to questions raised by the AER within the Regulatory Information Notice (RIN) issued to Aurora by the AER on 21 April 2011.

Aurora has responded to each of the questions raised by the AER in its RIN and these are provided in the following chapters of this RIN Response.

This document provides Aurora's RIN Response to the following paragraphs detailed in the RIN:

RIN paragraph 1 – General;

RIN paragraph 2 – Classification of services;

RIN paragraph 3 – Control mechanisms;

RIN paragraph 6 – New customer connections and contributions;

RIN paragraph 7 – Other entities;

RIN paragraph 8 – Pass through events;

RIN paragraph 9 – Weighted average cost of capital;

RIN paragraph 10 – Corporate income tax – setting the tax base;

RIN paragraph 11 – Non-network alternatives;

RIN paragraph 12 – Efficiency benefit sharing scheme;

RIN paragraph 13 – Demand and customer number forecasts;

RIN paragraph 14 – Unit costs and expenditure escalators;

RIN paragraph 15 – Transitional matters;

RIN paragraph 16 – *Alternative control services*;

RIN paragraph 17 – Fee bases and quoted *alternative control services*;

RIN paragraph 18 – Standard metering and public lighting services; and

RIN paragraph 19 – STPIS data.

2. Matters listed at Paragraph 1

2.1. 1.1 RIN requirements

RIN paragraph 1.1(a) requires Aurora to provide all information required in each Regulatory Template in accordance with:

(i) the instructions therein; and

(ii) the service classifications set out in the Framework and Approach Paper;

Aurora has provided all information in each Regulatory Template in accordance with the instructions therein and the service classifications set out in the Framework and Approach Paper.

2.1.1. Cost Allocation Method

Section 1.1(b) of the RIN requires Aurora to, provide ... the applicable approved cost allocation method, or where the cost allocation method has not yet been approved by the AER, the proposed cost allocation method;

Aurora's CAM is appended as primary attachment AE067 – Cost Allocation Methodology (CAM) to Aurora's Regulatory Proposal.

2.1.2. Policies, Strategies & Procedures

RIN paragraph 1.1(c) requires Aurora to provide for the purposes of the preparation of the regulatory proposal:

(i) all Policies and Strategies and Procedures used; and

Refer RIN template 7.2, for the list of policies, strategies and procedures that were used in the preparation of Aurora's Regulatory Proposal.

(ii) all consultant's reports commissioned and relied upon in whole or in part.

The following consultant's reports are appended as attachments to Aurora's Regulatory Proposal and were used in the preparation of Aurora's Regulatory Proposal:

- AE013 – Aurora Distribution Network ISG Strategy 2012 – 2017;
- AE043 – Aurecon System Strategic Planning Capacity Report – Executive Summary;
- AE044 – Aurecon System Strategic Planning Capacity Report – Central;
- AE045 – Aurecon System Strategic Planning Capacity Report – East Coast;
- AE046 – Aurecon System Strategic Planning Capacity Report – Hobart East;
- AE047 – Aurecon System Strategic Planning Capacity Report – Hobart West;

- AE048 – Aurecon System Strategic Planning Capacity Report – North Coast;
- AE049 – Aurecon System Strategic Planning Capacity Report – North East;
- AE050 – Aurecon System Strategic Planning Capacity Report – North West;
- AE051 – Aurecon System Strategic Planning Capacity Report – Sorell;
- AE052 – Aurecon System Strategic Planning Capacity Report – South;
- AE053 – Aurecon System Strategic Planning Capacity Report – Tamar;
- AE054 – Aurecon System Strategic Planning Capacity Report – West Coast;
- AE055 – Futura Report – Proposed Non-network Initiatives;
- AE056 – ACIL Tasman Load Forecasting Methodology;
- AE057 - ACIL Tasman Load Forecast;
- AE058 - ACIL Tasman New Customer Connections Forecasts;
- AE059 - ACIL Tasman Energy Forecast Review & Audit Report;
- AE061 – Parson Brinkerhoff Capex & Opex Benchmarking Study;
- AE062 – Benchmark Economics Report (Benchmarking);
- AE063 – GHD Bushfire Mitigation Strategy Review;
- AE068 – Deloitte's Corporate & Shared Services Cost Allocation Methodology Study;
- AE069 – Tax Asset Base (Deloitte's Report);
- AE070 – KPMG Audit Report on Aurora Energy Regulatory Models; and
- AE071 – SKM Report – Aurora Energy Annual Material Cost Escalators.

The following consultants reports have been appended as attachments to Aurora's RIN Response:

- Aurora Network IT Strategy Review Marchment Hill;
- Minutes of Gartner Briefing for SmartGrid DMS Historian; and
- The Boland Report.

2.1.3. Cross References

RIN paragraph 1.1(d) requires Aurora to provide a table that references, for the instances where Aurora has responded to a paragraph in this Schedule 1 (excluding 1.1(a) above) as part of its regulatory proposal, where each of those responses are located in its regulatory proposal.

The following table provides a cross reference for RIN Responses contained within Aurora's Regulatory Proposal.

RIN Paragraph	Regulatory Proposal Paragraph
1.1	–
1.2	–
1.3	Section 25.3.6
2.1	Chapter 6
2.2	–
3.1	Chapter 32 & 33
4.1	–
4.2	–
4.3	Chapter 7, 13, 14 Section 4.17, 11.4, 12.4, 18.4, 25.3.9
4.4	Chapter 15
4.5	–
4.6	–
4.7	–
4.8	–
4.9	–
4.10	–
4.11	–
4.12	–
4.13	–
4.14	Section 11.3
5.1	Section 12.4
5.2	Chapter 13, 14 Section 11.4, 12.4, 16.5.2, 18.4,
5.3	Section 16.6,
5.4	Section 12.3
5.5	–
5.6	–
5.7	–

RIN Paragraph	Regulatory Proposal Paragraph
5.8	–
5.9	–
5.10	–
5.11	Section 12.3
5.12	–
5.13	–
5.14	–
5.15	–
5.16	–
5.17	–
5.18	–
5.19	–
6.1	Chapter 28
6.2	–
7.1	–
7.2	–
7.3	–
7.4	–
7.5	–
8.1	Chapter 24, 26, 27 Section 25.3.5
8.2	–
9.1	Chapter 20
9.2	Chapter 20
10.1	–
10.2	–
10.3	–
10.4	Chapter 22.4
11.1	–
11.2	Chapter 14
11.3	Chapter 14
11.4	Chapter 14
12.1	Chapter 24 & 32
13.1	10.1, 10.2 & 10.3
13.2	–
13.3	–

RIN Paragraph	Regulatory Proposal Paragraph
13.4	–
13.5	–
14.1	–
14.2	Section 17.4 & 17.5
14.3	–
15.1	Chapter 5
15.2	Chapter 5 & 19
16.1	Chapter 33
16.2	Chapter 33
16.3	Chapter 6
16.4	Chapter 33
16.5	–
16.6	–
16.7	–
16.8	–
16.9	–
16.10	–
16.11	–
16.12	–
16.13	–
16.14	–
16.15	–
16.16	–
17.1	Chapter 33 (table 130)
17.2	–
17.3	–
17.4	–
17.5	–
18.1	–
18.2	–
18.3	–
18.4	–
18.5	–
18.6	–
18.7	–

RIN Paragraph	Regulatory Proposal Paragraph
18.8	Chapter 33 (tables 126, 127, 128)
18.9	Chapter 33 (tables 126, 127, 128)
18.10	Chapter 17
19.1	–
19.2	–
19.3	Section 25.3.6
19.4	–

2.2. 1.2 RIN requirements

RIN paragraph 1.2(a) requires Aurora to, with the exception of information on capital expenditure, where historical information provided in the Regulatory Templates differs from information provided to OTTER in accordance with Electricity Industry Guideline No. 2.2:

(i) identify all differences; and

(ii) explain each difference identified in the response to paragraph 1.2(a)(i);

Aurora's Ring Fenced Accounts (RFA's) have been used as the basis for determining the operating expenditure provided in the RIN templates. At an aggregate level, the RFA's and the RIN templates align, however, at the individual category level, there are differences.

For comparison purposes, Aurora has been required to back-cast its historic costs as reported in the RFA's to align with the AER's prescribed RIN categories. The differences result from mapping Aurora's work categories into the new RIN categories.

The following table shows how Aurora's work categories have been mapped to the RIN categories in comparison to the RFA's categories.

Work Category	**RFA Grouping**	**RIN Grouping**
ARURE	Underground Network	Ground Mounted Substations
RMSSM	Ground Mounted Substations	Operating Costs Other
RMDSR	Ground Mounted Substations	Zone Substations
AIQMO	Overhead Network and Structures	Maintenance Other
AIOCI	Overhead Network and Structures	Connection Asset Repair
RMOTC	Overhead Network and Structures	Vegetation Management
AROIL	Overhead Network and Structures	Maintenance Other
SOSCR	System Operations	Fee Based Services

2.3. 1.2 Differences and allocators

RIN paragraph 1.2(b) requires Aurora to, with the exception of information on capital expenditure, where historical information provided in the Regulatory Templates, was not directly available from the financial systems of Aurora and allocators have been used to disaggregate information:

(i) identify the allocators used, including the allocators used to convert information from Aurora's statutory reporting year to the regulatory year which commences on 1 July 2012; and

(ii) explain the allocator used including how it has been derived and applied.

Allocators used:

- overheads applied for alternative control metering, unregulated metering and alternative control fee based services were determined by using the Customer Connections unit rates model as the data is not recorded in the financial system;

- overheads applied to Network Services external work for the Bass Strait Islands (Hydro) and Electrical Safety Inspections (Work Place Standards) were determined by using the overhead allocation model for each year as the data is not recorded in the financial system; and

- the majority of discrete cost splits were sourced from the financial system with the remainder allocated to Materials & Other in line with the RFA.

The following is a description of the allocators used:

Overheads applied to alternative control metering, unregulated metering and alternative control fee based services

For work performed by the Customer Connections group within Network Services there are no overheads applied in the financial system when labour hours are costed to jobs. Therefore to find the value of overheads applied to this type of work the values were taken straight from the Customer Connections unit rates model. This model is created each year and is based on the volume of work to be performed and how much team, group, divisional and corporate overheads will be applicable to each work category.

Overheads applied to Network Services external work

For work performed on the Bass Strait Islands and Electrical Inspections the overheads applied to this work are not recorded in the financial system therefore the values for this work have been sourced from the overhead allocation model. Each year Network Services creates an overhead allocation model to allocate overheads (team, divisional and corporate) to all types of work performed.

Discrete cost splits

For the historic discrete cost splits the labour, subcontractor and overhead costs were sourced from the financial system with the remaining costs being allocated to "materials and other" to ensure the totals align with the RFAs. Also for the years 2010/11 and 2011/12 the budgeted program of work (POW) does not have the detail which splits costs into the discrete form, therefore for these years Aurora has assumed the percentage splits for these costs by individual work category to be the same as in the 2012/13 POW (because the 2012/13 POW does have this level of detail).

2.4. 1.3 RIN requirements

RIN paragraph 1.3(a) requires Aurora to, where the regulatory proposal varies or departs from the application of any component or parameter of the efficiency benefit sharing scheme, demand management incentive scheme or service target performance incentive scheme set out in the Framework and Approach Paper, for each variation or departure explain:

(a) the reasons for the variation or departure, including why the departure is appropriate;

(b) how the variation or departure aligns with the objectives contained in the relevant scheme; and

(c) how the proposed variation or departure will impact the operation of the relevant scheme.

Aurora does not propose to depart or vary any of the AER's incentive scheme, with the exception of a delayed introduction of the customer service component of STPIS, which is described in detail in section 25.3.6 of Aurora's Regulatory Proposal.

3. Matters listed at Paragraph 2

3.1. 2.1 RIN requirements

RIN paragraph 2.1 requires Aurora to identify and explain, if any proposed service classification in the regulatory proposal departs from a service classification set out in the Framework and Approach Paper for:

(a) the reasons for the departure, including why the proposed service classification is more appropriate; and

(b) how the treatment of the service will differ under the proposed service classification in comparison to that in the Framework and Approach Paper.

Aurora does not propose to depart from the service classifications set out in the Framework and Approach paper, this is discussed in detail in chapter 6 of Aurora's Regulatory Proposal.

3.2. 2.2 RIN requirements

Paragraph 2.2 of the RIN requires Aurora to, if the proposed service classifications in the *regulatory proposal* depart from any of the service classifications set out in the Framework and Approach Paper:

(a) provide, in a second set of Regulatory Templates, all information required in each Regulatory Template in accordance with the instructions contained therein, modified as necessary, to incorporate the proposed service classifications; and

(b) identify and explain where the Regulatory Templates differ.

Not applicable: Aurora does not propose to depart from the service classifications set out in the Framework and Approach paper.

4. Matters listed at Paragraph 3

4.1. 3.1 RIN requirements

RIN paragraph 3.1 requires Aurora, for the proposed forecast revenues that Aurora estimates to recover from providing direct control services over the *Forthcoming Regulatory Control Period* to:

(a) provide:

(i) formulaic expressions for the basis of control mechanisms for *standard control services* and for *alternative control services*; and

(ii) a detailed explanation and justification for each component that makes up the formulaic expression;

(b) demonstrate:

(i) how Aurora considers the control mechanisms are compliant with the Framework and Approach Paper; and

(ii) for *standard control services*, how Aurora considers the control mechanisms are also compliant with clause 6.2.6 and part C of Chapter 6 of the NER.

For *Standard Control Services*, please refer to chapter 32 of Aurora's Regulatory Proposal and AE073 – Other Revenue Adjustments Methodology, which is appended as an attachment to Aurora's Regulatory Proposal.

For *Alternative Control Services*, please refer to chapter 33 of Aurora's Regulatory Proposal and AE073 – Other Revenue Adjustments Methodology, which is appended as an attachment to Aurora's Regulatory Proposal.

5. Matters listed at Paragraph 6

5.1. 6.1 For the forecast contributions

Paragraph 6.1(a) of the RIN requires Aurora to, for the forecast Contributions to identify all Regulatory Obligations Or Requirements that affect new customer Contributions:

In the *Forthcoming Regulatory Control Period*, the following Regulatory Obligations or Requirements are expected to directly affect the new customer Contributions collected by Aurora:

- part K, chapter 6, of the National Electricity Rules permits the collection of Contributions; and
- certain provisions of the National Energy Customer Framework will both permit the collection of Contributions and provide a framework for the collection of Contributions.

Capital contributions are discussed in chapter 28 of Aurora's Regulatory Proposal.

Paragraph 6.1(b)(i) of the RIN requires Aurora to, for the forecast Contributions … explain … the methodology for forecasting Contributions for the *Forthcoming Regulatory Control Period*;

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Paragraph 6.1(b)(ii) of the RIN requires Aurora to, for the forecast Contributions … explain … changes to the methodology for forecasting Contributions that have occurred during the *Current Regulatory Control Period*.

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5.2. 6.2 For the forecast capital expenditure which relates to Contributions explain:

Paragraph 6.2(a) of the RIN requires Aurora to, for the forecast capital expenditure which relates to Contributions explain ... where the portion of New Customer Connection-Based Capital expenditure forecast in the *Forthcoming Regulatory Control Period* that is met by allocated Contributions forecast in the *Forthcoming Regulatory Control Period* for each customer category in table 3.1.1 of Regulatory Template 3.1 is either 10 per cent greater or less than the portion in the *Current Regulatory Control Period*;

Based upon the data provided in table 6.12.2 of Regulatory Template 6.12, all categories in table 3.1.1 of Regulatory Template 3.1 appear to vary in excess of 10%. The upwards variation in all cases are due to the increased quantum of Contributions resulting from the expected introduction of the NECF into the Tasmanian jurisdiction on 1 July 2012.

The sole downwards variation is due to a single instance of expenditure in that asset type during the *Current Regulatory Control Period* that is not repeated in the *Forthcoming Regulatory Control Period*.

Paragraph 6.2(b) of the RIN requires Aurora to, for the forecast capital expenditure which relates to Contributions explain ... the depth of connections funded by Contributions (specifically, the extent to which the Contribution relates to Shallow Connection Costs and Deep Connection Costs, and the extent of works required for 'deep' connections);

Aurora intends the Contributions to be collected in compliance with the NECF, which is expected to be implemented in the Tasmanian jurisdiction on 1 July 2012. Accordingly, in the *Forthcoming Regulatory Control Period* the depth of connections funded by Contributions will vary with the consumption characteristics of the customers seeking connection to the Aurora distribution network or seeking modification of existing connections with the Aurora distribution network. That is, small customers (as defined in the NERL) will contribute towards Shallow Connections, and large customers (as defined in the NERL) will contribute towards both Shallow Connection Costs and Deep Connection Costs.

The extent of works required for Deep Connections depends upon the demand characteristics of the new customer.

6. Matters listed at Paragraph 7

6.1. 7.1 Identify and describe all other entities

Paragraph 7.1of the RIN requires Aurora to, Identify and describe all other entities which:

(a) are a Related Party to Aurora and contribute to the provision of *distribution services*;

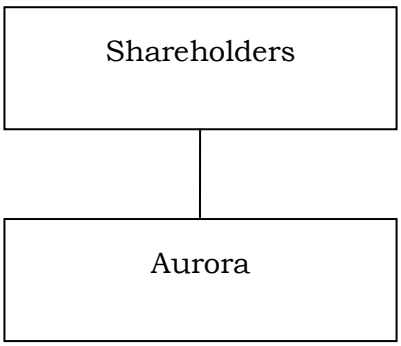
There are no entities that meet the definition of "Related Party" as per the RIN.

(b) have the capacity to determine the outcome of decisions about the Aurora's financial and operating policies.

Aurora's shareholders have the capacity to determine the outcome of decisions about Aurora's financial and operating polices.

6.2. 7.2 Provide a diagram of the organisational relationships

Paragraph 7.2 of the RIN requires Aurora to, provide a diagram of the organisational structure depicting the relationships between all the entities identified in the response to paragraph 7.1.



6.3. 7.3 Identify

Paragraph 7.3 of the RIN requires Aurora to, identify:

(a) all arrangements or contracts between Aurora and any of the other entities identified in the response to paragraph 7.1 which relate directly or indirectly to the provision of *distribution services*; and

(b) the service or services the subject of each arrangement or contract.

There are no arrangements or contracts between Aurora and any of the other entities identified in the response to paragraph 7.1 which relate directly or indirectly to the provision of distribution services.

6.4. 7.4 For each service identified in Paragraph 7.3:

Paragraph 7.4 of the RIN requires Aurora to, for each service identified in the response to paragraph 7.3:

(a) provide:

(i) a description of the process used to procure the service; and

(ii) supporting documentation, including but not limited to requests for tender, tender submissions, internal committee papers evaluating the tenders, contracts between Aurora and relevant provider;

(b) explain:

(i) why that service is the subject of an arrangement or contract (i.e. why it is outsourced) instead of being undertaken by Aurora itself;

(ii) whether the services procured were provided under a stand alone contract or provided as part of a broader operational agreement (or similar);

(iii) whether the services were procured on a genuinely competitive basis and if not, why; and

(iv) whether the service (or any component thereof) was further outsourced to another provider.

Not applicable: There were no services identified in the response to Paragraph 7.3 of the RIN.

6.5. 7.5 For each arrangement or contract identified in the response to Paragraph 7.3(a)

Paragraph 7.5 of the RIN requires Aurora to, for each arrangement or contract identified in the response to paragraph 7.3(a) provide:

(a) a copy of the arrangement or contract which sets out the obligations of both the other entity and Aurora;

(b) a breakdown of all services provided as part of that arrangement or contract;

(c) a breakdown of costs for each service provided as part of the arrangement or contract, including separately identifying overheads, any profit margin or management fee and incentive payments;

(d) a breakdown of all costs included in the contract price; and

(e) any methodologies, including consultant's reports, or assumptions used to determine components of those costs included in the contract price.

Not applicable: There were no services identified in the response to Paragraph 7.3(a) of the RIN.

7. Matter Listed at Paragraph 8

7.1. 8.1 For each *pass through event* proposed in the Regulatory Proposal excluding those prescribed in the NER:

Section 8.1(a)(i) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER ... provide ... a description;

Section 8.1(a)(ii) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER ... provide ... the proposed associated Materiality Threshold;

Section 8.1(b)(i) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER ... explain ... whether the proposed associated Materiality Threshold applies to both positive and negative *pass* through events;

Section 8.1(b)(ii) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... why the proposed Materiality Threshold is appropriate;

Section 8.1(b)(iii)(1) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... how the *pass through event* is not already provided for ... in the defined *pass through event* definitions in the NER (and does not conflict with or undermine the *pass through event* defined in the NER);

Section 8.1(b)(iii)(2) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... how the *pass through event* is not already provided for ... through the operating expenditure or capital expenditure allowances (e.g. the insurance or self insurance components);

Section 8.1(b)(iii)(4) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... how the *pass through event* is not already provided for ... through any other mechanism or allowance;

Section 8.1(b)(iv) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... whether the scope or type of *pass through event* is clearly identifiable over the *Forthcoming Regulatory Control Period*;

Section 8.1(b)(v) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... whether the *pass through event* is uncontrollable, i.e. a prudent service provider through its actions could not have reasonably prevented the *pass through event* from occurring or substantially mitigated the cost impact of the *pass through event*;

Aurora proposes the following additional pass through events for the *Forthcoming Regulatory Control Period* with the relevant reference to Aurora's Regulatory Proposal providing a detailed description:

- natural disaster event – Regulatory Proposal section 27.2.1;
- bushfires event - Regulatory Proposal section 27.2.2;
- storms event - Regulatory Proposal section 27.2.3;
- industry restructure event - Regulatory Proposal section 27.2.4;
- retailer of last resort event (ROLR) - Regulatory Proposal section 27.2.5;
- carbon tax event - Regulatory Proposal section 27.2.6;
- insurer credit risk event - Regulatory Proposal section 27.2.7;
- liability above insurance cap event - Regulatory Proposal section 27.2.8; and
- feed in tariff event - Regulatory Proposal section 27.2.8.

For those pass through events where Aurora has proposed a Materiality Threshold of one percent, Aurora has been guided by recent AER decisions, regulatory precedent, and the likely impact on its own operations from the application of the proposed, and alternative, materiality thresholds.

Aurora notes that:

- a one percent threshold has been defined as being 'material' by the Queensland Competition Authority (QCA), the Independent Price and Regulatory Tribunal of NSW (IPART), and the AER in past decisions. There is therefore considerable precedent for the use of this threshold by Aurora; and
- a one percent materiality threshold will allow the recovery of costs that are 'material', 'serious' and 'significant' for Aurora, in the context of the definitions in the NER and NEL, given Aurora's past experience with significant exogenous events. The proposed threshold therefore allows the recovery of costs which would meet the ordinary meaning of the word "material" in respect of clause 6.6.1 of the NER.

Aurora notes that the ROLR event provided for in the NECF reforms does not have a materiality threshold and Aurora therefore proposes that no materiality threshold provisions be imposed for this event. Aurora considers for all other events where no materiality threshold applies that this is appropriate because if these events occur, the costs will be an ongoing expenditure requirement for Aurora and not a discrete quantifiable pass through amount.

For each of the proposed pass through events, Aurora considers that the event is uncontrollable for the following reasons:

Natural disaster event

Aurora designs its distribution network to remain operational under normal environmental conditions with a certain degree of engineering conservatism built in. Natural disaster events are, by definition, not normal environmental conditions. It is economically undesirable to build a network to withstand extreme environmental conditions, because the customer base pay for an event that may never happen. By introducing a natural disaster event as a pass through, the customers see the economic benefit of a network built for normal conditions in relatively reduced, on-going tariffs, but bear the risk as a one off payment when an extreme event occurs.

Bushfires event

Aurora's ability to mitigate against bushfire is limited to vegetation management and undergrounding its distribution network in bushfire prone areas. Aurora's scope for vegetation management is controlled by chapter 8A of the TEC in conjunction with Aurora's standing easement around it's assets: in effect Aurora can clear vegetation from no more than 6 metres on either side of the centre line of its pole lines. It is not economically feasible to underground the distribution network in bushfire prone areas.

Storms event

Aurora designs its distribution network to remain operational under normal environmental conditions with a certain degree of engineering conservatism built in. Storm events are, by definition, not normal environmental conditions. It is economically undesirable to build a network to withstand extreme environmental conditions, because the customer base pay for an event that may never happen. By introducing a storms event as a pass through, the customers see the economic benefit of a network built for normal conditions in relatively reduced, on-going tariffs, but bear the risk as a one off payment when an extreme event occurs.

Industry restructure event

While Aurora is 100 percent owned by the Tasmanian Government, Aurora would not be materially involved in the analysis underpinning any decision by the Tasmanian Government to restructure the electricity supply industry. This is because such matters are regarded as policy by the Tasmanian Government. Further, although Aurora may provide input into any analysis of costs of restructure options, precedent in other States suggests that such involvement would be limited to the provision of costing forecast data under scenarios, upon which Government would base elements of its decision.

Accordingly, it is not possible for Aurora to foresee either whether an industry restructure event will occur or the nature of the industry restructure event at the time of lodging its Regulatory Proposal: such an event is outside the control of Aurora and its management.

Retailer of last resort event

A RoLR event is beyond the control of Aurora in its capacity as a DNSP.

Liability above insurance cap event

Aurora designs its distribution network to remain operational under normal environmental conditions with a certain degree of engineering conservatism built in, and insures against events that have a high impact upon Aurora. Events with a liability exceeding the insured amount are clearly uncontrollable by Aurora, and the insurance cap is imposed by the insurer, a party over whom Aurora has no material control. By introducing a Liability Above Insurance Cap event as a pass through, the customers see the economic benefit of a network built for normal conditions in relatively reduced, on-going tariffs, but bear the risk as a one off payment when an extreme event occurs.

Carbon tax event

The introduction of a Carbon Tax is a Federal Government policy issue. Aurora is unable to have any material influence on Federal Government Policy decisions, hence the event is uncontrollable by Aurora.

Insurer credit risk event

Aurora is not able to control the solvency of an independent company.

Feed in tariff event

The imposition of a feed-in tariff regime is a government policy decision. Aurora has input to, but no control over, government policy decisions.

Section 8.1(b)(iii)(3) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... how the *pass through event* is not already provided for ... through the WACC (events which affect the market generally and not just the provider are systemic risk and already compensated through the WACC); ...

The risks recognised in the WACC rate are those risks that have the potential to affect the entire market, not only Aurora as a DNSP. The *pass through events* proposed by Aurora in section 2.2, are unlikely to have a material effect upon the consolidated Australian market. Accordingly, Aurora considers that the pass through event is not already provided for in the WACC rate.

Section 8.1(b)(vi) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... whether the *pass through event* cannot be self-insured and why;

Aurora does not propose to self insure during the *Forthcoming Regulatory Control Period.*

Section 8.1(b)(vii) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... whether the party who is in the best position to manage the risk is bearing the risk; ...

The risks associated with any event with the capacity to affect Aurora can be considered to be either diversifiable or non-diversifiable.

In the case of a diversifiable risk, the risk can be borne by Aurora through its statutory accounts, Aurora through self-insurance, a third party insurer, or a combination of these approaches if an insurance excess mechanism is in place such that Aurora bears the cost of an event up to a certain threshold whereupon the insurer bears the remainder of the risk.

In the case of non-diversifiable risk, the risk can only be borne by Aurora.

Recognition of this non-diversifiable risk can be either in the form of an upfront charge to Aurora's customers, or in the form of a pass through mechanism to allow Aurora to recover costs in the event of a pass through event.

The pass through mechanism with a materiality threshold acts as a risk-sharing mechanism in the same way that the insurance excess acts as a risk-sharing mechanism for diversifiable risks.

Additionally, the nomination of a set of non-diversifiable events to be subject to a pass through mechanism restricts the risk borne by parties other than Aurora.

Aurora considers the nominated pass through events to be non-diversifiable and of a magnitude that warrants risk sharing between Aurora and its customer base.

Section 8.1(b)(viii) of the RIN requires Aurora to, for each *pass through event* proposed in the *regulatory proposal* excluding those prescribed in the NER explain ... whether the passing through of the costs associated with the *pass through event* would not undermine the incentive arrangements within the regulatory regime.

Aurora understands the incentive arrangements within the regulatory regime to be DMIS, STPIS and the EBSS.

- for the DMIS, please refer to chapter 26 and section 24.4, of Aurora's Regulatory Proposal;
- for the STPIS, please refer to section 25.3.5. of Aurora's Regulatory Proposal; and
- for the EBSS, please refer to chapter 24 of Aurora's Regulatory Proposal.

Aurora considers the following for each of the proposed *pass through events* not undermining the incentive arrangements within the regulatory regime:

Natural disaster event

Repair costs incurred due to a natural disaster event are not within the purview of the STPIS. The EBSS is directed at efficiency in operating expenditure associated with "business as usual". Costs associated with a natural disaster event are not business as usual. To remove the potential of a natural disaster event to undermine the operation of the EBSS it would be appropriate for the AER to exclude operating expenditure associated with an natural disaster event from consideration when applying the EBSS.

Bushfires event

Repair costs incurred due to a bushfire event are not within the purview of the STPIS. The EBSS is directed at efficiency in operating expenditure associated with "business as usual". Costs associated with a bushfire event are not business as usual. To remove the potential of a bushfire event to undermine the operation of the EBSS it would be appropriate for the AER to exclude operating expenditure associated with an bushfire event from consideration when applying the EBSS.

Storms event

Repair costs incurred due to a storm event are not within the purview of the STPIS. The EBSS is directed at efficiency in operating expenditure associated with "business as usual". Costs associated with a storm event are not business as usual. To remove the potential of a storms event to undermine the operation of the EBSS it would be appropriate for the AER to exclude operating expenditure associated with a storms event from consideration when applying the EBSS.

Industry restructure event

An industry restructure event is unlikely to have an effect upon reliability of supply or telephone answering and is therefore without the purview of the STPIS. While any over-runs or savings in operating expenditure resulting from an industry restructure event nominally fall within the EBSS, such an event is not part of normal DNSP operations, nor is it within the control of Aurora. To remove the potential of an industry restructure event to undermine the operation of the EBSS it would be appropriate for the AER to exclude operating expenditure associated with an industry restructure event from consideration when applying the EBSS.

Retailer of last resort event

A RoLR event will have no effect upon reliability of supply or telephone answering and is therefore without the purview of the STPIS. The EBSS is directed at efficiency in operating expenditure associated with "business as usual". Costs associated with a RoLR event are not business as usual. To remove the potential of an RoLR event to undermine the operation of the EBSS it would be appropriate for the AER to exclude operating expenditure associated with a RoLR event from consideration when applying the EBSS.

Liability above insurance cap event

Repair costs incurred due to a liability above insurance cap event are not within the purview of the STPIS. Aurora seeks to remove costs associated with a liability above insurance cap event from the scope of the EBSS on the grounds that they are not part of normal business operation.

Carbon tax event

A carbon tax event is unlikely to have an effect upon reliability of supply or telephone answering and is therefore without the purview of the STPIS. While the on-going administration of a carbon tax event would fall under the general definition of a "business-as-usual" process, the initial setup costs are not, and Aurora has not included the assumed costs associated with the putative introduction of a carbon tax event in its operating expenditure or capital expenditure forecasts. To remove the potential of a carbon tax event to undermine the operation of the EBSS it would be appropriate for the AER to exclude operating expenditure associated with a carbon tax event from consideration when applying the EBSS.

Insurer credit risk event

An insurer credit risk event is unlikely to have an effect upon reliability of supply or telephone answering and is therefore without the purview of the STPIS. While any over-runs or savings in operating expenditure resulting from an insurer credit risk event nominally fall within the EBSS, such an event is not part of normal DNSP operations, nor is it within the control of Aurora. To remove the potential of an insurer credit risk to undermine the operation of the EBSS it would be appropriate for the AER to exclude operating expenditure associated with an insurer credit risk event from consideration when applying the EBSS.

Feed in tariff event

Costs associated with the imposition of a feed-in tariff regime are not within the scope of the STPIS. The EBSS is directed at efficiency in operating expenditure associated with "business as usual". Costs associated with a feed in tariff event event are not business as usual. To remove the potential of a feed-in tariff event to undermine the operation of the EBSS it would be appropriate for the AER to exclude operating expenditure associated with a feed-in tariff event from consideration when applying the EBSS.

7.2. 8.2 For *pass through events* incurred in the previous and *Current Regulatory Control Periods*:

Section 8.2(a) of the RIN requires Aurora to, for *pass through events* incurred in the *Current Regulatory Control Period* provide ... the number of each positive and negative *pass through events* incurred;

Section 8.2(b) of the RIN requires Aurora to, for *pass through events* incurred in the *Current Regulatory Control Period* provide ... a description of each *pass through event*;

Section 8.2(c) of the RIN requires Aurora to, for *pass through events* incurred in the *Current Regulatory Control Period* provide ... the impact of each *pass through event*;

Section 8.2(d) of the RIN requires Aurora to, for *pass through events* incurred in the *Current Regulatory Control Period* provide ... the cost incurred by each *pass through event*; ...

Section 8.2(e) of the RIN requires Aurora to, for *pass through events* incurred in the *Current Regulatory Control Period* provide ... the percentage impact on revenue of each *pass through event*.

There have been no pass through events in the current or *Previous Regulatory Control Periods*.

8. Matters listed at Paragraph 9

8.1. 9.1 Departure from SORI parameters

Paragraph 9.1 of the RIN requires Aurora to; identify each proposed departure from a *WACC* parameter as specified in the Statement of Regulatory Intent.

Table 96 of Aurora's Regulatory Proposal sets out the WACC parameters as specified in the Statement of Regulatory Intent (SORI) on the revised WACC parameters (distribution) published by the AER in May 2009 and the WACC parameters proposed by Aurora.

Discussion of these parameters can be found in Aurora's Regulatory Proposal at chapter 20 and in AE066 – Cost of Capital 2012 – 2017 Electricity Distribution Revenues which is appended as an attachment to Aurora's Regulatory Proposal.

8.2. 9.2 For each proposed departure from SORI

Paragraph 9.2 of the RIN requires Aurora to, for each proposed departure identified in the response to paragraph 9.1, provide all supporting consultant reports and Documents including:

(a) the underlying data (and references to the source of the data);

(b) assumptions and calculations used to transform data;

(c) modelling code(s) relating to any simulations or econometric methods used;

(d) all estimation outputs from any regression results; and

(e) the results of any statistical tests conducted to demonstrate the robustness of the data, including the code used to conduct these tests.

Discussion of these parameters can be found in Aurora's Regulatory Proposal at chapter 20 and in AE066 – Cost of Capital 2012 – 2017 Electricity Distribution Revenues which is appended as an attachment to Aurora's Regulatory Proposal.

9. Matters listed at Paragraph 10

9.1. 10.1 Tax asset base

Paragraph 10.1(a) of the RIN requires Aurora to, provide the following information ... tax asset values based on Aurora's records or tax asset values assessed by the Australian Taxation Office (where available) from an appropriate and justifiable starting point to 2012-13. The starting point may be the date regulation commenced (1998) by either applying comprehensive and reliable tax depreciation records at the date of regulation, or the financial year where records and sufficient information are available to establish the tax asset values at the date regulation commenced via roll forward of tax asset values from prior years to the date of regulation;

Tax asset values from 1 July 2007 to 30 June 2012 are provided in the RIN Regulatory Template:

- table 5.6 provides the Tax Asset from Aurora's tax asset values as assessed by the ATO from 1998 to 2007; and
- table 3.7 provides the ATO tax asset base for standard control assets from 2002/03 to 2016/17.

Notes

The Electricity Companies Act 1997 requires Aurora to comply with Part 10 of the Government Business Enterprises Act 1995. Aurora is required to calculate a tax equivalent as if it were a company subject to Commonwealth income tax laws.

Aurora's tax asset register was inherited from the Hydro-Electric Corporation on 1 July 1998 at disaggregation of that company into the existing three electricity companies. The tax asset register, as maintained in Aurora's financial systems, was updated from that point in accordance with business requirements at that time. Matters that have been identified are discussed below.

Standard Control Assets

The tax asset base for standard controlled assets was derived as at 1 July 2007 by:

- extracting tax asset data from Navision as at 1 July 2002 and adding additions and disposals for 2002/03 to 2006/07 derived from the historic cost asset register. Prior to 1 July 2002 Aurora used the (now decommissioned) financial system FAMIS. Data extraction from FAMIS is now not possible, therefore the starting point of 1 July 2002 was chosen;
- applying a prime cost tax depreciation rate rather than a diminishing tax depreciation rate as applied in the company's tax register;
- applying appropriate tax asset lives; and
- categorising the assets to the required RIN asset categories.

The above process was subject to independent review and assurance by Deloitte as outlined in their report, which is appended as attachment AE069 – Tax Asset Base (Deloitte's Report) to Aurora's Regulatory Proposal.

Meters and Public Lighting

Prior to the 2003/04 financial year meters and public lighting were expensed to the profit and loss of the regulated Distribution Business for both accounting and tax purposes.

The treatment of meters and public lighting assets changed in the 2003/04 financial year and these assets were capitalised in the fixed asset register for tax purposes and treated as a pooled asset. As such they were depreciated for tax purposes using a diminishing rate of 37.5% per annum. The change in treatment was consistent with the change in tax legislation at that time.

Paragraph 10.1(b) of the RIN requires Aurora to, provide the following information ... for the years 1998-2002, in accordance with regulatory templates 5.6.1, 5.6.2 and 5.6.4 provide the relevant information requested therein at an aggregate level;

The information has been recreated and provided at an aggregate level in the RIN Regulatory Template at table 5.6. Information regarding asset disposals and customer contribution for Standard Control Assets is not available.

Paragraph 10.1(c) of the RIN requires Aurora to, provide the following information ... for the years 2002/03-2006/07, in accordance with regulatory templates 5.6.1, 5.6.2 and 5.6.4 provide the relevant information requested therein in accordance with Aurora's tax asset classes level;

The information has been recreated and provided at the required level in the RIN Regulatory Template at table 5.6.

Paragraph 10.1(d) of the RIN requires Aurora to, provide the following information ... provide other relevant information as per instructions contained in regulatory templates 5.6.1 to 5.6.4.

The Deloitte report, *Australian Energy Regulator Asset Review*, noted above, is relevant, which is appended as attachment AE069 – Tax Asset Base (Deloitte's Report) to Aurora's Regulatory Proposal.

9.2. 10.2 Provide all information Aurora relied on

9.3. 10.3 Provide the origin and the source of information

Paragraph 10.2 of the RIN requires Aurora to, provide all information Aurora relied on to complete and relies on to substantiate the data provided in Regulatory Template 5.6. This information includes any consultant report, Australian Taxation Office tax assessments, audit report or report from an independent auditor of the findings of an agreed upon procedures engagement (the report and any separate report developed for management in respect of the engagement should be provided as an attachment to Aurora's *regulatory proposal*).

Paragraph 10.3 of the RIN requires Aurora to, provide the origin and source of information provided in respect of paragraph 10.2.

Aurora has no consultants reports in relation to the tax asset base other than the independent review and assessment described in the response to RIN 10.1(a).

There is no ATO Assessment notice.

There is no specific audit report. The Auditor-General provides an overarching Auditor's Independence Declaration which forms part of the Financial Statements in Aurora's Annual report.

Other supporting information is contained within AE069 – Tax Asset Base (Deloitte report), which is appended as an attachment to Aurora's Regulatory Proposal

9.4. 10.4 Explain tax asset base

Paragraph 10.4(a) of the RIN requires Aurora to, explain ... how the opening tax asset values for the chosen starting point have been determined;

The starting point for the opening tax asset value is 1 July 2002. This is when Aurora commenced to use Navision as it financial system. Tax asset values data is not available prior to that point in time. Prior to 1 July 2002 Aurora used the now decommissioned financial system FAMIS. Data extraction from FAMIS system is not possible, therefore the starting point of 1 July 2002 was chosen.

Paragraph 10.4(b) of the RIN requires Aurora to, explain ... how assets have been segregated to separately identify whether they are *Regulatory Asset Base* or non-*Regulatory Asset Base* assets;

Assets associated with the provision of *Standard Control Services* have been allocated to the Regulatory Asset Base. Assets associated with the provision of metering services, public lighting services, excluded services or other unregulated distribution services provided by Aurora are not allocated to the Regulatory Asset Base.

Paragraph 10.4(c) of the RIN requires Aurora to, explain ... how *standard control* assets have been segregated into asset classes, including identification of the asset classes;

Standard Control assets are segregated into asset classes using the method adopted under the OTTER regime. The asset classes are:

- Overhead Subtransmission Lines (Urban);
- Underground Subtransmission Lines (Urban);
- Urban Zone Substations;
- Rural Zone Substations;
- SCADA;
- Distribution Switching Stations (Ground);
- Overhead High Voltage Lines Urban;
- Overhead High Voltage Lines Rural;
- Voltage Regulators on Distribution Feeders;
- Underground High Voltage Lines;
- Underground High Voltage Lines SWER;
- Distribution Substations HV (Pole);
- Distribution Substations HV (Ground);
- Distribution Substations LV (Pole);
- Distribution Substations LV (Ground);
- Overhead Low Voltage Lines Underbuilt Urban;
- Overhead Low Voltage Lines Underbuilt Rural;
- Overhead Low Voltage Lines Urban;
- Overhead Low Voltage Lines Rural;
- Underground Low Voltage Lines;
- Underground Low Voltage Common Trench;
- HVST Service Connections;
- HV Service Connections;
- HV Metering CA Service Connections;
- HV/LV Service Connections;
- Business LV Service Connections;
- Business LV Metering CA Service Connections;
- Domestic LV Service Connections;
- Domestic LV Metering CA Service Connections;
- Emergency Network Spares;
- Motor Vehicles;
- Minor Assets;
- Non-System Property;
- Spare Parts; and

- NEM Assets.

Paragraph 10.4(d) of the RIN requires Aurora to, explain ... how depreciation has been calculated for each of the asset classes identified, including the following:

(i) depreciation method (that is, whether based on prime cost or diminishing value); and

(ii) tax depreciation profile (including the tax life used and justification as to why the tax life adopted is appropriate).

Depreciation has been calculated using a prime cost basis in accordance with future requirements of the Roll Forward Model for *Standard control services* provided by the AER.

Paragraph 10.4(e) of the RIN requires Aurora to, explain ... how expenditure and depreciation on work-in-progress is accounted for, including when it is recognised (that is, on an as incurred or at year end basis);

The tax asset register is based upon an "as incurred" approach, in accordance with OTTER's 2007 Pricing Determination.

Paragraph 10.4(f) of the RIN requires Aurora to, explain ... how tax losses are taken into account and whether losses are carried forward to the closing tax asset values;

There are no tax losses associated with Aurora's regulated distribution business, and there has been no impact on closing tax asset values for the distribution business.

Paragraph 10.4(g) of the RIN requires Aurora to, explain ... where disposals have occurred, how the value of disposals are determined (that is, whether based on net book value or sale proceeds).

Disposals have occurred with respect to corporate assets only. Network assets are retired from the asset register when fully depreciated.

The basis of valuing disposals is proceeds from sale.

10. 11.1 Matters listed at Paragraph 11

10.1. Identify policies and strategies

Paragraph 11.1 of the RIN requires Aurora to, identify the Policies and Strategies and Procedures provided in response to paragraph 1.1(c)(i) which relate to the selection of efficient non-network solutions.

The following documents relate to the selection of efficient non-network solutions and are appended as attachments to Aurora's Regulatory Proposal:

- AE017 – Network Management Strategy;
- AE034 – Management Plan 2011 – Demand Management; and
- AE055 – Futura Report – Proposed Non-network Initiatives.

10.2. 11.2 Explain

Paragraph 11.2of the RIN requires Aurora to, explain:

(a) the extent to which the provision for efficient non-network alternatives has been considered in the development of the forecast capital expenditure proposal and the forecast operating expenditure proposal; and

(b) how expenditure allocated to demand management or other non-network alternatives in the *Current Regulatory Control Period* under the EPI has been spent.

Refer to chapter 14 of Aurora's Regulatory Proposal and AE034 – Management Plan 2011 – Demand Management, which is appended as an attachment to Aurora's Regulatory Proposal.

There has been no expenditure allocated in the C*urrent Regulatory Control Period.*

10.3. 11.3 Identify each non-network project

Paragraph 11.3(a) of the RIN requires Aurora to, identify each non-network Project that Aurora has ... commenced during the *Current Regulatory Control Period* ...

Refer to chapter 14 of Aurora's Regulatory Proposal and AE034 – Management Plan 2011 – Demand Management, which is appended as an attachment to Aurora's Regulatory Proposal.

Paragraph 11.3(b) of the RIN requires Aurora to, for each non-network Project identified in the response to paragraph 11.3, provide a description, including cost and location.identify each non-network Project that Aurora has ... selected to commence during, or will continue into the *Forthcoming Regulatory Control Period.*

Refer to chapter 14 of Aurora's Regulatory Proposal and AE034 – Management Plan 2011 – Demand Management, which is appended as an attachment to Aurora's Regulatory Proposal.

10.4. 11.4 For each non-network project provide a description, including cost and location.

Paragraph 11.4 of the RIN requires Aurora to, For each non-network Project identified in the response to paragraph 11.3, provide a description, including cost and location.

Refer to chapter 14 of Aurora's Regulatory Proposal and AE034 – Management Plan 2011 – Demand Management, which is appended as an attachment to Aurora's Regulatory Proposal.

11. Matters listed at Paragraph 12

11.1. 12.1 For the purposes of applying the efficiency benefit sharing scheme

Paragraph 12.1 of the RIN requires Aurora to, for the purposes of applying the *efficiency benefit sharing scheme:*

(a) identify:

(i) all cost categories proposed to be excluded from the operation of the *efficiency benefit sharing scheme;*

(ii) Aurora's proposed approach to adjusting the forecast and out-turn demand growth for carry-over amount during the *Forthcoming Regulatory Control Period*

(b) explain:

(i) for each cost category identified in response to paragraph 12.1(a):

(1) the reasons for the proposed exclusion; and

(2) why the cost category is uncontrollable.

Cost categories proposed to be excluded from the operation of the EBSS are discussed in section 24.2 of Aurora's Regulatory Proposal.

Aurora's proposed approach to adjusting for carry-over amount is discussed in chapter 32 of Aurora's Regulatory Proposal and the methodology and worked examples are contained in AE073 – Other Revenue Adjustments Methodology, which is appended as an attachment to Aurora's Regulatory Proposal.

Reasons for the exclusion of the cost categories from the operation of the EBSS and why the cost category is uncontrollable are given in section 24.6 of Aurora's Regulatory Proposal.

12. Matters listed at Paragraph 13

12.1. 13.1 – Methodology for demand and customers numbers

Paragraph 13.1 of the RIN requires Aurora to, provide and describe the methodology used to prepare the following forecasts:

(a) maximum demand;

Refer to section 10.1 of Aurora's Regulatory Proposal. Additional detailed information is appended to Aurora's Regulatory Proposal AE056 - ACIL Tasman Load Forecasting Methodology.

(b) energy; and

Refer to section 10.2 of Aurora's Regulatory Proposal. Additional detailed information is appended to Aurora's Regulatory Proposal AE059 - ACIL Tasman Energy Forecast Review and Audit Report.

(c) customer number.

Refer to section 10.3 of Aurora's Regulatory Proposal. Additional detailed information is appended to Aurora's Regulatory Proposal AE058 - ACIL Tasman New Customer Connections Forecasts.

Two sets of customer number forecasting were used by Aurora in the development of the capital expenditure program. One was generated in-house, the other by ACIL Tasman using Aurora data. The in-house forecasts were used in the preparation of indicative tariffs for Aurora's Regulatory Proposal. The ACIL Tasman forecasts were used in the development of the Customer Connections capital expenditure category.

In-house: The customer number forecasting model is an Excel spreadsheet that calculates the average number of new customers for the period 2000 to 2010. This average value is used as an annual increment to existing customer numbers for the *Forthcoming Regulatory Control Period*. The model is attached.

12.2. 13.2 Provide

Paragraph 13.2(a) of the RIN requires Aurora to, provide … the forecasting model(s) Aurora used in the joint planning process to forecast consumption…

Aurora is unable to provide the forecasting models. The models are owned and run by UES, who provide Aurora with a report.

A report is appended to Aurora's Regulatory Proposal AE058 - ACIL Tasman New Customer Connections Forecasts and Aurora's paper is AE060 – Aurora Consumption Model (Energy Forecast). Aurora's consumption model is appended to the RIN.

Paragraph 13.2(b) of the RIN requires Aurora to, provide … the most recent … consumption forecast report…

The most recent load forecast report is provided as attachment AE057 – ACIL Tasman Load Forecast to Aurora's Regulatory Proposal.

Paragraph 13.2(c) of the RIN requires Aurora to, provide … weather normalised maximum demand data for the Previous and *Current Regulatory Control Periods* (per year) for individual transmission substations, zone substations and connection points (if available). Where Aurora's approach to weather normalisation has changed, additionally provide historically consistent weather normalised maximum demand data using Aurora's current approach. If this data is unavailable, explain why.

The available data is provided in RIN Templates 6.3 – 6.6.

Weather-normalisation was not used in the *2008 Distribution Network Connection Ten-Year Consumption and Maximum Demand Forecast* of December 2008 by Utility Engineering Solutions however, for the purposes of the 2010 load forecast, substation data has been weather normalised back to the Sept 2004/August 2005 period: this data has been provided. Weather normalised data for earlier years is not available as Aurora did not have a requirement for this data.

Feeder data are not currently weather corrected because Aurora has not previously had the need for weather corrected feeder load data.

12.3. 13.3 Explain

Paragraph 13.3(a) of the RIN requires Aurora to, explain … the drivers and assumptions used in the forecasting model(s) (specifically assumptions relating to economic growth, customer numbers and policy changes and provide the associated models to forecast this data);

Assumptions used in the model are contained within attachment AE060 – Aurora Consumption Model (Energy Forecast), which is appended as an attachment to Aurora's Regulatory Proposal.

Paragraph 13.3(b) of the RIN requires Aurora to, explain… whether any weather correction is applied to the data used in the forecasting model(s);

No weather correction was applied directly in Aurora's modelling, although the growth factors adopted from NIEIR incorporated weather correction. For more information, refer to the AE060 Aurora Consumption Model (Energy Forecast), which is appended to Aurora's Regulatory Proposal.

Previous energy consumption forecasts for previous pricing investigations did not use weather normalisation.

Paragraph 13.3(c) of the RIN requires Aurora to, explain… how peak demand indices are determined;

The peak demand indices are determined by UES. Available information is contained in the 2008 Distribution Network Connection Ten-Year Consumption and Maximum Demand Forecast of December 2008 by Utility Engineering Solutions, which is appended to Aurora's response to the RIN.

Paragraph 13.3(d) of the RIN requires Aurora to, explain… how Aurora forecasts *maximum demand*, including whether Aurora forecasts *maximum demand* for each individual sub-transmission feeder, zone substation and HV feeder as well as a system wide forecast;

Refer to Aurora's response to paragraph 13.1(a) of the RIN Response.

Paragraph 13.3(e) of the RIN requires Aurora to, explain… whether Aurora proposes to use the forecasting model(s) it used in the joint planning process for the purposes of its *regulatory proposal*;

Aurora is unable to provide the forecasting models. The models are owned and run by UES, who provide Aurora with a report.

Aurora does propose to use the results of the maximum demand forecasting in both its Regulatory Proposal and the joint planning process.

Paragraph 13.3(f) of the RIN requires Aurora to, explain … how Aurora reconciles *load* forecasting for the entire *distribution network* with the various *load* forecasts for each of its upstream *connection points* and each *region*, including an explanation of the relationship between the forecasts for distribution *substations*, HV feeders, zone *substations*, *connection points* and the system wide forecast (if applicable);

Paragraph 13.3(g) of the RIN requires Aurora to, explain… any calibration processes undertaken within the model (specifically whether the load forecast is matched against actual historical *load* on the system and substations);

This is discussed in the 2008 Distribution Network Connection Ten-Year Consumption and Maximum Demand Forecast of December 2008 by Utility Engineering Solutions, which is appended to Aurora's response to the RIN.

Paragraph 13.3(h) of the RIN requires Aurora to, explain… whether Aurora forecasts both coincident and non-coincident maximum demand at the feeder, connection point, distribution substation and zone substation level, and how these network level forecasts reconcile with the system level forecasts (including how various assumptions that are allowed for at the system level relate to the network level forecasts);

UES, engaged by Aurora, forecasts both coincident and non-coincident maximum demand at feeder, connection point (Transend-owned terminal substation), and zone substation level in their 2008 Distribution Network Connection Ten-Year Consumption and Maximum Demand Forecast of December 2008.

System level forecasts are aggregates of lower level forecasts. More information is contained within the 2008 Distribution Network Connection Ten-Year Consumption and Maximum Demand Forecast of December 2008 by Utility Engineering Solutions.

Paragraph 13.3(i) of the RIN requires Aurora to, explain... whether Aurora records historic *maximum demand* in MW, MVA or both;

With the exception of a small quantity of HV feeders and some older zone substations, Aurora has records of historic demand in MW and MVA from 2004/05. Prior to this, and in relation to the exceptions, records are generally only in MVA.

Paragraph 13.3(j) of the RIN requires Aurora to, explain ... the probability of exceedence that Aurora uses in network planning;

The probability of exceedence that Aurora uses in network planning is generally 50%.

Paragraph 13.3(k) of the RIN requires Aurora to, explain... the approach that Aurora uses for system development that is referred to at page 18 and Appendix H of the Distribution System Planning Report 2010 as a conjunction of deterministic planning standards and group firm philosophy;

Augmentation of zone substation power transformers and subtransmission cabling is undertaken where the electrical load or forecast electrical load, on the transformer or subtransmission system, is greater than either the transformer nameplate rating or cyclic thermal rating of the subtransmission system giving consideration to the following:

- as a group of interconnected substations, spare zone transformer capacity is used to support load or forecasted load for neighbouring zone substations and terminal substations. This is performed by using the interconnectivity of those stations through the high voltage conductor and cable network; and
- a deterministic planning standard of N-1 where there is insufficient transfer capacity using group firm principles.

Paragraph 13.3(l) of the RIN requires Aurora to, explain... the contingency planning process, in particular the process used to assess high system demand;

The system forecast load is used to identify where limitations on the system may appear.

The contingency forecast assessment for the major and HV system uses:

- 10% POE; and
- temperature corrected data.

Where equipment including power transformers, conductors and cabling is constrained the following is used:

- power transformer emergency rating , where defined; and
- cable cyclic rating.

In the management of the constraint or limitation the following is also considered:

- predicted weather temperature;
- load transfer to adjacent power transformers and or HV feeders;
- group firm principles;
- customer communication (only if risk is significant);
- evaluation of spares holdings (mainly in the power transformer);
- predetermined switching plans; and
- load shedding of customers (most likely at the feeder level) and rotational planning to manage this for an extended period.

Paragraph 13.3(m) of the RIN requires Aurora to, explain… how risk is managed across the *network*, particularly in relation to *load* sharing across feeders and non-network solutions to peak demand events;

Load Sharing Across Feeders

Load sharing across feeders is the process of transferring customer load from one feeder to another. Following the transfer, the feeders have new configurations or supply footprints.

There is always risk associated with any transfer within its dynamic phase and later in the reconfigured arrangement.

The considerations employed cover:

- system connectivity i.e. function of the elements within the system;
- reliability of supply (present and future);
- known loading limitations;
- load profiles;
- procedures for transfer e.g. transfer load (current) across switches involved;
- emergency or cyclic ratings;
- predicted weather events e.g. cold weather forecast; and
- known condition of assets involved.

The above considerations are evaluated to assess the overall level of risk associated with the transfer. In the dynamic transfer i.e. undertaking the transfer, a risk matrix assessment is not applied. However when undertaking system planning for general load transfers these are evaluated at a high level and the generic risk assessment is used to understand the level of risk and as a consequence any mitigation measures which may need to be enacted.

Non-network Solutions to Peak Demand Events

Where load sharing across feeders cannot be implemented at times of peak demand events, mobile generation options are evaluated with respect to suitability to addressing the excess peak demand.

Paragraph 13.3(n) of the RIN requires Aurora to, explain… how the normal and emergency ratings are used in determining capacity for individual zone *substations* and sub-transmission feeders;

Zone substations power transformers use the name plate data for load management. The associated subtransmission cable uses thermal, cyclic and emergency ratings. These values are used to establish load and spare capacity in the zone substations network.

Paragraph 13.3(o) of the RIN requires Aurora to, explain… where Aurora proposes to commence or continue a Demand-Related Capex Project or Program during the *Forthcoming Regulatory Control Period* on a HV feeder … for each feeder from the zone *substation* that is the connecting zone *substation* for the relevant HV feeder, and any other feeders that the relevant HV feeder can transfer *load* to or from:

(1) assumed future load transfers between feeders;

(2) assumed feeder underlying load growth rates (exclusive of transfers and specific customer developments);

(3) assumed specific customer developments, and associated demand assumptions;

(4) existing embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

(5) assumed future embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

(6) existing Demand Management Programs, and the associated assumptions on the impact on demand levels;

(7) assumed future Demand Management Programs, and associated assumptions on the impact on demand levels; and

(8) the diversity between feeders.

There are four Demand-Related Capex Projects that meet the criteria outlined in paragraph 13.3(o) which are subject to the Regulatory Investment Test (RIT) and are listed below:

- Proj00111 F97014 Re-insulate to 66 kV OH from Rosebery Substation to Bluestone Mine;
- Proj00138 1A of 2 South Arm Zone Install Feeder A subtransmission UG cable;
- Proj00138 2 of 2 South Arm Zone Install Feeder A subtransmission submarine; and
- Palmerston - Support Deloraine due to irrigation growth + reg.

Aurora has provided responses to Paragraphs 13.3(o)(i)(1) to 13.3(o)(i)(8) below for each project listed above.

Proj00111 F97014 Re-insulate to 66kV OH from Rosebery Substation to Bluestone Mine

This particular feeder is a dedicated radial supply to an industrial connection with no available interconnections with adjacent feeders for load transfers. This project will be triggered by a Transmission Upgrade that is forecast towards the end of the *Forthcoming Regulatory Control Perod* as identified through an independent System Capacity Planning Project. Refer West Coast Strategic Area Plan NW#30141808. As such the requested information regarding this project does not relate to the project objective.

(1) assumed future load transfers between feeders;

The assumed load transfers are zero.

(2) assumed feeder underlying load growth rates (exclusive of transfers and specific customer developments);

Assumed underlying Load Growth Rates is in the order of 4.6% (Winter Peak Demand (MVA) 10 PoE between 2010 and 2017 '2010 Distribution Network Connection Maximum Demand Forecast).

(3) assumed specific customer developments, and associated demand assumptions;

There are no specific customer developments.

(4) existing embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

There are no existing embedded generation capacity.

(5) assumed future embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

There are no forecast embedded generation capacity.

(6) existing Demand Management Programs, and the associated assumptions on the impact on demand levels;

There are no existing Demand Management Programs.

(7) assumed future Demand Management Programs, and associated assumptions on the impact on demand levels; and

There are no Forecast Demand Management Programs.

(8) the diversity between feeders.

The Feeder Diversity is unknown.

Proj00138 1A of2 South Arm Zone Install Feeder A subtransmission UG cable

This project (and its sister project – Proj00138 2 of 2) included the provision of HV Sub-transmission feeders into the South Arm to supply a new South Arm Zone Substation. The Zone Substation Project was identified to be required by 2017 through an independent System Capacity Planning Study, AE046 – Aurecon System Strategic Planning Capacity Report –Hobart East, which is appended as an attachment to Aurora's Regulatory Proposal. This is a staged development whereby the Zone Substation is deferred past the *Forthcoming Regulatory Control Period* by utilising the HV Sub-transmission Feeders at Distribution voltages. These feeders (and future Zone Substation) will manage a Transmission Utility Capacity constraint on Rokeby Terminal (Transmission owned substations) and secondarily provide transfer capacity and voltage support to the long Rokeby Terminal radial distribution feeders 28223 & 28228.

(1) assumed future load transfers between feeders;

A detailed transfer capacity study at the distribution feeder level is not available. In addition this project is scheduled toward the end of the *Forthcoming Regulatory Control Period*, as such a detailed study is not available.

(2) assumed feeder underlying load growth rates (exclusive of transfers and specific customer developments);

Assumed underlying Load Growth Rates is in the order of 7.7% (Winter Peak Demand (MVA) 10 PoE between 2010 and 2017).

(3) assumed specific customer developments, and associated demand assumptions;

There are no specific customer developments.

(4) existing embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

There are no existing embedded generation capacity.

(5) assumed future embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

There are no forecast embedded generation capacity.

(6) existing Demand Management Programs, and the associated assumptions on the impact on demand levels;

There are no existing Demand Management Programs.

(7) assumed future Demand Management Programs, and associated assumptions on the impact on demand levels; and

There are no forecast Demand Management Programs.

(8) the diversity between feeders.

The Feeder Diversity is unknown.

Proj00138 2of 2 South Arm Zone Install Feeder A subtransmission submarine

This project (and its sister project – Proj00138 1 of 2) included the provision of HV Sub-transmission feeders into the South Arm to supply a new South Arm Zone Substation. The Zone Substation Project was identified to be required by 2017 through an independent System Capacity Planning Study, AE046 – Aurecon System Strategic Planning Capacity Report –Hobart East, which is appended as an attachment to Aurora's Regulatory Proposal. This is a staged development whereby the Zone Substation is deferred past the *Forthcoming Regulatory Control Period* by utilising the HV Sub-transmission Feeders at Distribution voltages. These feeders (and future Zone Substation) will manage a Transmission Utility Capacity constraint on Rokeby Terminal (Transmission owned substations) and secondarily provide transfer capacity and voltage support to the long Rokeby Terminal radial distribution feeders 28223 & 28228.

(1) assumed future load transfers between feeders;

A detailed transfer capacity study at the distribution feeder level is not available. In addition this project is scheduled toward the end of the forthcoming *Regulatory Control Period*, as such a detailed study is not available.

(2) assumed feeder underlying load growth rates (exclusive of transfers and specific customer developments);

Assumed underlying Load Growth Rates is in the order of 7.7% (Winter Peak Demand (MVA) 10 PoE between 2010 and 2017).

(3) assumed specific customer developments, and associated demand assumptions;

There are no specific customer developments.

(4) existing embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

There are no existing embedded generation capacity.

(5) assumed future embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

There are no forecast embedded generation capacity.

(6) existing Demand Management Programs, and the associated assumptions on the impact on demand levels;

There are no existing Demand Management Programs.

(7) assumed future Demand Management Programs, and associated assumptions on the impact on demand levels; and

There are no forecast Demand Management Programs.

(8) the diversity between feeders.

The Feeder Diversity is unknown.

Palmerston - Support Deloraine due to irrigation growth + reg

The objective of this project is to defer the establishment of a proposed Westbury Terminal Substation (Transmission utility project) to manage the Transmission Utility Capacity constraints on Railton Terminal and Hadspen Terminal (Transmission owned substations). Refer AE053 – Aurecon System Strategic Planning Capacity Report – Tamar, which is appended as an attachment to Aurora's Regulatory Proposal. Reinforcement of the distribution system will provide transfer capacity from Railton and Hadspen onto Palmerston Terminal during the summer (high irrigation) period where overhead infrastructure in significantly de-rated.

(1) assumed future load transfers between feeders;

A detailed transfer capacity study at the distribution feeder level is not available. In addition this project is scheduled toward the end of the *Forthcoming Regulatory Control Period*, as such a detailed study is not available.

(2) assumed feeder underlying load growth rates (exclusive of transfers and specific customer developments);

Aurora has assumed underlying Load Growth Rates is in the order of 16.74% (Summer Peak Demand (MVA) 10 PoE between 2010 and 2017).

(3) assumed specific customer developments, and associated demand assumptions;

There are no specific customer developments.

(4) existing embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

There are no existing embedded generation capacity.

(5) assumed future embedded/distributed generation capacity, and associated assumptions on the impact on demand levels;

There are no forecast embedded generation capacity.

(6) existing Demand Management Programs, and the associated assumptions on the impact on demand levels;

There are no existing Demand Management Programs.

(7) assumed future Demand Management Programs, and associated assumptions on the impact on demand levels; and

There are no forecast Demand Management Programs.

(8) the diversity between feeders.

The Feeder Diversity is unknown.

Paragraph 13.3(p) of the RIN requires Aurora to, explain… for each zone *substation* (or relevant *substations* for a sub-*transmission* line):

(i) assumed future *load* transfers between related *substations*;

Refer to column (i) of NW-#30188664-v1-RIN_Response_13-3(p)_Substation Parameters, which is appended as an attachment to Aurora's RIN Response.

(ii) assumed underlying *load* growth rates (exclusive of transfers and specific customer developments);

Refer to column (ii) of NW-#30188664-v1-RIN_Response_13-3(p)_Substation Parameters, which is appended as an attachment to Aurora's RIN Response.

(iii) assumed specific customer developments, and associated demand assumptions;

Refer to column (iii) of NW-#30188664-v1-RIN_Response_13-3(p)_Substation Parameters, which is appended as an attachment to Aurora's RIN Response.

(iv) existing embedded/distributed *generation* capacity, and associated assumptions on the impact on demand levels;

Refer to column (iv) of NW-#30188664-v1-RIN_Response_13-3(p)_Substation Parameters, which is appended as an attachment to Aurora's RIN Response.

(v) assumed future embedded/distributed *generation* capacity, and associated assumptions on the impact on demand levels;

Refer to column (v) of NW-#30188664-v1-RIN_Response_13-3(p)_Substation Parameters, which is appended as an attachment to Aurora's RIN Response.

(vi) existing Demand Management programs, and the associated assumptions on the impact on demand levels;

Refer to column (vi) of NW-#30188664-v1-RIN_Response_13-3(p)_Substation Parameters, which is appended as an attachment to Aurora's RIN Response.

(vii) assumed future Demand Management programs, and associated assumptions on the impact on demand levels; and

Refer to column (vii) of NW-#30188664-v1-RIN_Response_13-3(p)_Substation Parameters, which is appended as an attachment to Aurora's RIN Response.

(viii) diversity with related substations.

Aurora interprets diversity to mean the non-coincident peak load of adjacent substations.

With the present zone substation fleet, all transformers in the individual zone are operated as a meshed transformer arrangement i.e. the bus sections are normally run in parallel so that they reasonably equally share their load and thus there is minor variations of non-coincident peak load on individual transformers.

The Aurora zone substation fleet also interacts with the transmission company's substations as these both supply the HV network, mainly in Hobart i.e. the transmission substations, via Aurora's HV network supply.

Given this implication then it is best understood how geographically the individual stations relate to each other. For purposes of this explanation the supply area in Hobart urban area, being the area where there is sharing of load amongst Aurora zones substations and transmission terminal substations. These can be categorised as follows:

- Hobart city:
  - involves zone substations, East Hobart and West Hobart; and
  - involves terminal substation North Hobart.

- Hobart urban south:
  - involves zone substations, Sandy Bay; and
  - involves terminal substation Kingston.

- Hobart urban north:
  - involves zone substations, Newtown, Derwent Park and Claremont; and
  - involves terminal substation Chapel St and Bridgewater.

- Hobart urban east:
  - involves zone substations, Bellerive, Cambridge and Geilston Bay; and
  - involves terminal substation Rokeby.

Being categorised geographically each area's substations have very similar loading profiles due to supplying the same load area and also having a high coincident of the customer demographics. Thus the non-coincident load of this group, certainly at peak loading times is very similar.

It is only where each of the substations connect to an adjacent category that the timing of non-coincident peak loads may be different.

Given that within the *Forthcoming Regulatory Control Period* 2012 to 2017 there is no augmentation of the above zone substation power transformers or their associated subtransmission circuits then the manner of how they have been planned to operate and load share it is of limited value in the understanding of the timing on non-coincident individual loads as the loads are being managed adequately.

12.4. 13.4 For each of the methodologies provided, explain

Paragraph 13.4(a) of the RIN requires Aurora to, for ... [the Energy Consumption Forecasting methodology], explain ... the methodology;

Paragraph 13.4(b) of the RIN requires Aurora to, for... [the Energy Consumption Forecasting methodology], explain ... how assumptions and inputs have been used and why these are reasonable;

Refer to AE060 – Aurora Consumption Model (Energy Forecast), which is appended as an attachment to Aurora's Regulatory Proposal.

Paragraph 13.4(c) of the RIN requires Aurora to, for ... [the Energy Consumption Forecasting methodology], explain ... the data set to which the forecasts relate;

The data set used is the historic energy consumption data for the period 1 July 2002 to 28 February 2011 extracted from Aurora's billing systems.

Paragraph 13.4(d) of the RIN requires Aurora to, for... [the Customer Number Forecasting methodology], explain ... which probability of exceedence has been used;

There is no PoE built into the either forecast of customer numbers.

Paragraph 13.4(e) of the RIN requires Aurora to, for ..... [the Maximum Demand Forecasting methodology], explain ... the models used (including the model's key inputs and assumptions);

Refer to AE060 – Aurora Consumption Model (Energy Forecast), which is appended as an attachment to Aurora's Regulatory Proposal.

Paragraph 13.4(f) of the RIN requires Aurora to, for ... [the Customer Number Forecasting methodology], explain ... a global (or top-down) and spatial (bottom-up) forecasting processes;

In-house: the customer number forecasting process used a top-down forecasting process.

ACIL Tasman: the methodology is described in the report *Aurora New Customer Connections Forecast* of February 2011, provided as attachment AE058 to Aurora's Regulatory Proposal.

Paragraph 13.4(g) of the RIN requires Aurora to, for... [the Customer Number Forecasting methodology], explain ... the weather normalisation methodology, how weather data has been used, and how Aurora's approach to weather normalisation has changed over time

No weather correction or normalisation was used in either modelling approach.

Paragraph 13.4(h) of the RIN requires Aurora to, for... [the Energy Consumption Forecasting methodology], explain ... an outline of the treatment of spot *loads* and *load* transfers within the forecasting process; ...

Spot loads and load transfers were not explicitly considered in the modelling.

Paragraph 13.4(i) of the RIN requires Aurora to, for... [the Energy Consumption Forecasting methodology], explain ... any appliance models, where used, or assumptions relating to average *customer* energy usage (by *customer* type).

No appliance modelling was considered as part of the energy consumption forecasting. Assumptions relating to average customer energy usage patterns are contained in the Consumption Model Paper.

Paragraph 13.4(j) of the RIN requires Aurora to, explain ... how the forecasting methodology used is consistent with, and takes into account, historical observations (where appropriate);

The forecasting methodology extrapolates historical consumption. More information is contained within AE060 – Aurora Consumption Model (Energy Forecast), which is appended as an attachment to Aurora's Regulatory Proposal.

Paragraph 13.4(k) of the RIN requires Aurora to, explain... how the resulting forecast data is consistent at different levels of aggregation.

The forecasting methodology provides forecasts by certain aggregated tariff classes. Consumption related to a particular tariff can be obtained by taking an appropriate proportion of the relevant tariff class forecast. The system-wide consumption forecast will be an aggregate of the individual tariff class forecasts.

Paragraph 13.4(l) of the RIN requires Aurora to, explain… how the forecasts resulting from these methods and assumptions have been used in determining the following:

(i) capital expenditure forecasts;

(ii) operating and maintenance expenditure forecasts; and

(iii) relevant inputs to the *post-tax revenue model*.

In house: these forecasts were used solely for indicative tariff modelling in Aurora's Regulatory Proposal. They were not used in the development of capital expenditure or operating expenditure forecasts, nor were they used in the PTRM.

ACIL Tasman: these forecasts were used in the development of the Standard Control – System Capex – Demand Related - Customer Intiated capex forecast. They were not used in any operating expenditure forecasting, nor were they used in the PTRM.

12.5. 13.5 Provide

Paragraph 13.5 of the RIN requires Aurora to, provide:

(a) evidence that any independent verifier engaged has examined the reasonableness of the method, processes and assumptions in determining the forecasts and has sufficiently capable expertise in undertaking a verification of forecasts; and

(b) all documentation, analysis and models evidencing the results of the independent verification

Aurora has prepared two customer number forecasts, the first was prepared by Aurora and second was prepared independently by ACIL Tasman, there are no significant departures between the two forecasts and Aurora has not engaged a third party to review the forecasts.

Aurora engaged an independent party, UES, to provide forecasts of maximum demand. UES' approach to forecasting has not been subsequently independently verified. Consequently Aurora is unable to provide evidence of independent verification.

ACIL Tasman were engaged to audit and review Aurora's energy consumption forecast. Their report *Energy forecast for Aurora Energy, 2012/13 to 2016/17* is attached. Aurora considers that ACIL Tasman has sufficiently capable expertise in undertaking a verification of forecasts.

13. Matters listed at Paragraph 14

13.1. 14.1 For unit rates associated with plant or equipment

Paragraph 14.1(a) of the RIN requires Aurora to, for unit rates associated with key items of *plant* or equipment ... identify the unit rates used in the estimation of the forecast capex proposal.

Refer to attachment AE083 – Aurora's Proposed Program of Work, which is appended as an attachment to Aurora's Regulatory Proposal, this contains most unit rates for the forecast capital expenditure proposal. All of Aurora's unit rates have been built from the bottom up.

Paragraph 14.1(b)(i) of the RIN requires Aurora to, for unit rates associated with key items of plant or equipment ... provide ... source material and evidence which demonstrates each unit rate reflects efficient costs; ...

Paragraph 14.1(c) of the RIN requires Aurora to, for unit rates associated with key items of *plant* or equipment ... identify:

> (i) the date each unit rate was developed and whether the unit rates used in the forecast capex proposal are the same as that used by Aurora for day-to-day Project and Program estimation:
>
> (ii) if the unit rates are not the same, the areas of difference;

Paragraph 14.1(d) of the RIN requires Aurora to, for unit rates associated with key items of *plant* or equipment ... explain:

> (i) each area of difference identified in the response to paragraph 14.1(c)(ii); and
>
> (ii) how it has been developed with reference to the responses to paragraph 14.1(a).

All projects that are unique (classified by Aurora as an A type) have been calculated by a desk-top design. An experienced designer has looked at the general scope of the project, and estimated the project based on experience using the same methodology utilised by Network Services in the development of the costings in the annual program of work cycle. The Estimate IDs are stored in Aurora's Works Management System, are very detailed, and of a standard that would allow a project manager to schedule resources, order all materials and organise contractors.

The methodology and the assemblies used in the calculation of these rates are the same as used on a daily basis by Aurora's designers. The only difference is that these estimates have been produced as a desk-top design with the aid of a high level project scope.

For high volume, repetitive unit rates, refer to AE075 – Unit Rates Model Procedure, which is appended as an attachment to Aurora's Regulatory Proposal, which explains in detail how unit rates are developed.

Paragraph 14.1(b)(ii) of the RIN requires Aurora to, for unit rates associated with key items of *plant* or equipment ... provide ... the historical unit rates for key items of *plant* and equipment for capital and operating expenditure;

Aurora reviews quarterly (or as required) the unit costs of key items of *plant* and equipment in the works management system (WASP). While this maintains the currency of the data, WASP does not store historical rates, nor the date which any have been changed. As such, Aurora is not able to provide the historical unit rates for key items of *plant* and equipment for capital and operating expenditure.

13.2. 14.2 For labour and materials escalators

Paragraph 14.2(a) of the RIN requires Aurora to, for labour and materials escalators ... identify the labour and material escalators used in the estimation of the forecast capex proposal and the forecast opex proposal;

Aurora engaged Sinclair Knight Mertz (SKM) to provide the cost escalators for Aurora's Regulatory Proposal. The escalation factors represent SKM's calculated estimate of likely cost escalation components to account for the predicted movement in underlying drivers affecting the cost of undertaking Capital and operating expenditure work over the period from June 2009/10 to June 2016/17.

The escalators are specific to the operating environment faced by Aurora, and based on the most up-to-date information available at the time of compilation.

Escalation rates are established for the various Asset Categories within the SKM cost escalation model. All Projects in the Aurora program of work have been individually apportioned to system asset classes and the escalation factors applied appropriately.

SKM's Report is appended to Aurora's Regulatory Proposal as attachment AE071 – SKM Report – Aurora Energy Annual Material Escalators.

Paragraph 14.2(b)(i) of the RIN requires Aurora to, for labour and materials escalators ... provide ... the escalator used in percentage terms for each *regulatory year* from the Base Year to the end of the *Forthcoming Regulatory Control Period*;

Paragraph 14.2(b)(ii) of the RIN requires Aurora to, for labour and materials escalators ... provide ... a copy of the model(s) that have been used to derive and apply the escalators, including any proprietary model(s) provided by a third party;

Material cost escalation rates: The material escalation rates used in the estimation of the forecast capital expenditure and operating expenditure were established on advice by SKM based on analysis drawn from its in-house "Capital Expenditure Cost Escalation Model". The escalators assess the long-term trends in the costs of distribution equipment such as transformers, circuit breakers, conductors and poles, used in the construction and maintenance of the distribution network; as well as other equipment used in undertaking work on the network, such as vehicles, plant and tools. The materials portion of Aurora's capital expenditure is escalated across the 45 regulatory asset categories using the SKM materials escalators. Materials used in the provision of operating expenditure activities have been escalated using the SKM materials escalator for "Distribution Equipment". Refer to section 17.4 of Aurora's Regulatory Proposal.

Labour cost escalation rate: The labour cost escalation rate is applied to the portion of capital and operating expenditure costs allocated to labour (as distinct from materials, contractors and other). Aurora has set this escalation rate at CPI, therefore not forecasting any real increases in labour costs for the *Forthcoming Regulatory Control Period*. Refer to section 17.5 of Aurora's Regulatory Proposal.

Aurora is unable to provide the model(s), as information on escalators was provided to Aurora by SKM in the form of a completed report. SKM's Report is appended to Aurora's Regulatory Proposal as attachment AE071 – SKM Report – Aurora Energy Annual Material Escalators.

Paragraph 14.2(b)(iii) of the RIN requires Aurora to, for labour and materials escalators ... provide ... in relation to labour escalators, a copy of the current Enterprise Bargaining Agreement or equivalent agreement;

A copy of Aurora's current Enterprise Agreement is attached to this RIN Response as: CO10016887 v1Aurora Energy Agreement 2008.

Paragraph 14.2(c)(i) of the RIN requires Aurora to, for labour and materials escalators ... identify ... the portion of the forecast capex proposal and the forecast opex proposal which is due to a change in the labour and/or material escalator;

Paragraph 14.2(c)(ii) of the RIN requires Aurora to, for labour and materials escalators ... identify ... whether the escalator is in real or nominal terms;

The portion of the forecast capital expenditure proposal and the forecast operating expenditure proposal which is due to a change in the labour and/or material escalator is contained within the following tables. This is in real terms.

	2012-13	2013-14	2014-15	2015-16	2016-17
Capital Expenditure Escalation Amount	$813,213	$1,869,803	$1,233,492	$1,257,495	$127,193
Capex Real Escalation Amount (Standard Control)					

	2012-13	2013-14	2014-15	2015-16	2016-17
Operating Expenditure Escalation Amount	$257,915	$361,355	$399,038	$355,242	$272,688
Opex Real Escalation Amount (Standard Control)					

Paragraph 14.2(d)(i) of the RIN requires Aurora to, for labour and materials escalators ... explain ... the methodology underlying the calculation of each escalator, including sources, data conversions, the operation of any models provided under paragraph 14.2(b)(ii), and the use of any assumptions, such as lags or productivity gains;

Aurora is unable to provide this information as the escalators were provided to Aurora by SKM in the form of a completed report, which is appended to Aurora's Regulatory Proposal as attachment AE071 – SKM Report – Aurora Energy Annual Material Escalators.

Paragraph 14.2(d)(ii) of the RIN requires Aurora to, for labour and materials escalators ... explain ... the weightings in Regulatory Template 2.3 and Regulatory Template 3.5 given to each escalator for each opex and capex category and how these weightings have been developed, including any assumptions;

The escalators are applied at a project level in accordance to the percentages of system asset classes to which the projects belong. They are further split at a project level into the proportion of the estimate that is Labour, Materials, Contractors, and Other (LMCO). The totals of these splits are summed at a system asset class level, and provide a weighting to be applied to the project estimate.

These total splits vary from year to year based on the mix of projects within each of the system asset classes, which consequently has a small effect on the value of the escalation at a project level.

The new escalation amounts are summed and apportioned to the RIN categories.

Paragraph 14.2(d)(iii) of the RIN requires Aurora to, for labour and materials escalators ... explain ... whether the same expenditure escalators have been used in developing both the Forecast Capex Proposal and forecast opex proposal;

Paragraph 14.2(d)(iv) of the RIN requires Aurora to, for labour and materials escalators ... explain ... if the response to paragraph 14.2(d)(iii) is no, why it is appropriate for different expenditure escalators to apply;

The expenditure escalators used between capital expenditure and operating expenditure work are different. The escalators provided by SKM are categorised by system asset class, and as such do not apply to operating expenditure. Aurora has used a simplified escalation model for all operating expenditure work, assuming no escalation for labour, contract and other components, and applying a material escalator to material costs only.

Aurora has used this methodology to apply different escalators to all of the projects contained in the Program of Work, in an effort to provide the closest possible forecast escalation using the tools available.

Paragraph 14.2(d)(v) of the RIN requires Aurora to, for labour and materials escalators ... explain ... whether the expenditure estimation process for these escalators involves the application of contingency factors, what risks they account for and how they have been calculated; ...

Contingency factors were not considered in the development of the capital and operating forecasts.

Paragraph 14.2(d)(vi) of the RIN requires Aurora to, for labour and materials escalators ... explain ... how the weightings in Regulatory Template 2.3 and Regulatory Template 3.5 given to each escalator for each operating expenditure and capex category are expected to change over the *Forthcoming Regulatory Control Period*; and if not, why not.

The weightings by system asset class, the apportionment of estimates to asset classes, and the split of the estimate into Labour, Materials, Contractors, and Other are not changed over the *Forthcoming Regulatory Control Period*.

13.3. 14.3 Enterprise Agreement

Paragraph 14.3 of the RIN requires Aurora to, if an agreement provided in response to paragraph 14.2(b)(iii) is due to expire during the *Forthcoming Regulatory Control Period*, explain the progress and outcomes of any negotiations to date to review and replace the current agreement.

The agreement provided in response to paragraph 14.2(b)(iii) is not due to expire during the *Forthcoming Regulatory Control Period*. Aurora is currently negotiating a new agreement.

14. Matters listed at Paragraph 15

14.1. 15.1 Identify all transitional matters

Paragraph 15.1 of the RIN requires Aurora to, identify all Transitional Matters which will arise in transitioning from economic regulation administered under OTTER to the AER.

Aurora has detailed the transitional issues that will arise in transitioning from economic regulation administered under OTTER to the AER in chapter 5 of Aurora's Regulatory Proposal.

14.2. 15.2 For each transitional matter identified

Paragraph 15.2 of the RIN requires Aurora to, for each Transitional Matter identified in the response to paragraph 15.1, explain:

(a) how it will impact Aurora;

(b) its financial impact; and

(c) its impact on service performance, if any.

Aurora has detailed the transitional issues that will arise in transitioning from economic regulation administered under OTTER to the AER in chapter 5 of Aurora's Regulatory Proposal.

The application of the each transitional matter will have only a financial impact on Aurora or its customers and will not impact on service performance. The methodology and worked examples of Aurora's proposed unders and overs revenue recovery is appended as attachment AE073 – Other Revenue Adjustments Methodology. Treatment of the regulatory asset base is discussed in chapter 19 of Aurora's Regulatory Proposal.

15. Matters listed at Paragraph 16

15.1. 16.1 RIN requirements

RIN paragraph 16.1 requires Aurora to, provide a list of all of the individual services that Aurora intends to provide and levy tariffs for in the *Forthcoming Regulatory Control Period* that fit within the broader definitions of distribution services that the AER proposed to classify as *alternative control services* in the Framework and Approach Paper, and those distribution services that Aurora proposes as *alternative control services* in the *Forthcoming Regulatory Control Period* where Aurora's proposed classification differs.

Refer to chapter 33 of Aurora's Regulatory Proposal for a list of all the individual services that Aurora intends to provide and levy tariffs for the *Forthcoming Regulatory Control Period* in relation to metering, public lighting and fee-based services.

Quoted (non-standard) services are those services provided by Aurora where the nature and scope of the service is specific to individual customers' needs, and varies from customer to customer. As a consequence a list of services cannot be provided without first knowing the customer's specific requirements. Aurora has however provided its detailed methodology and examples of quoted (non-standard) services as attachments to its Regulatory Proposal.

15.2. 16.2 Classification of *Alternative control services*

RIN paragraph 16.2 requires Aurora to, provide for each alternative control service listed under paragraph 16.1, specify whether the AER in the Framework and Approach Paper and Aurora in its regulatory proposal classifies the alternative control service as a Metering, Public Lighting, Fee Based Alternative Control Service or Quoted Alternative Control Service.

Refer to chapter 33 of Aurora's Regulatory Proposal.

15.3. 16.3 Variation from Framework and Approach

RIN paragraph16.3 requires Aurora to provide a definition for each alternative control service listed under paragraph 16.1 where Aurora proposes a definition different to that in the Framework and Approach Paper.

As identified in chapter 6 of Aurora's Regulatory Proposal, the AER's final Framework and Approach paper classified the following categories of Direct Control Services as *alternative control services* with the form of control for all services being a price cap:

- metering services;
- public lighting services;

- fee-based services; and
- quoted (non-standard) services.

Aurora has adopted the classification of these services as outlined in the AER's Framework and Approach.

15.4. 16.4 Tariffs

RIN paragraph 16.4 requires Aurora to, provide for each alternative control service listed under paragraph 16.1, specify the tariffs that applied to that alternative control service in each year of the Previous and *Current Regulatory Control Period*s and proposed tariffs for each year of the *Forthcoming Regulatory Control Period*.

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

Indicative prices for *alternative control services* for the *Forthcoming Regulatory Control Period* are contained within chapter 33 of Aurora's Regulatory Proposal.

15.5. 16.5 Revenues

RIN paragraph 16.5 requires Aurora to provide for each alternative control service listed under paragraph 16.1, specify the total revenue earned by Aurora in each year of the Previous and *Current Regulatory Control Period*s.

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

15.6. 16.6 Number of services

RIN paragraph 16.6 requires Aurora to provide for each Quoted Alternative Control Service and Fee Based Alternative Control Service listed under paragraph 16.1, the number of services provided by Aurora in each year of the Previous and *Current Regulatory Control Period*s.

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

16.7 Customer numbers

RIN paragraph 16.7 requires Aurora to provide for each Metering and Public Lighting Service listed under paragraph 16.1, the number of customers in each regulatory year of the Previous and *Current Regulatory Control Periods*.

Previous Regulatory Control Period

The number of metering customers for the *Previous Regulatory Control Period* is set out in the following table:

Number of Customers

	2004	2005	2006	2007
Number of Customers	253,522	256,543	259,590	262,911

The number of public lighting installations for the *Previous Regulatory Control Period* is set out in the following table:

Number of installations for Public Lighting Services

	2004	2005	2006	2007
Number of installations	46,189	46,878	47,269	48,787

Current Regulatory Control Period

The number of metering customers for the *Current Regulatory Control Period* is set out in the following table:

Number of Customers

	2007-08	2008-09	2009-10	2010-11	2011-12
Number of Customers	273,860	277,870	278,383	282,833	28,882

The number of public lighting installations for the *Current Regulatory Control Period* is set out in the following table:

Number of installations for Public Lighting Services

	2007-08	2008-09	2009-10	2010-11	2011-12
Number of installations	48,859	47,680	48,219	48,744	49,298

15.7. 16.8 Outsourcing

RIN paragraph 16.8 requires Aurora, to list every instance in which Aurora has outsourced the provision of all or part of an alternative control service listed under paragraph 16.1 in the Previous or *Current Regulatory Control Period*s.

Aurora has not outsourced the provision of all or part of an *alternative control service* in the previous or *Current Regulatory Control Period*s.

15.8. 16.9 Outsourcing

Paragraph 16.9 of the RIN requires Aurora to, identify and describe all other entities which:

(a) the entity that won the tender;

(b) the process for choosing the entity that won the tender;

(c) whether the process specified in paragraph (b) was a competitive tender process with multiple applicants;

(d) whether the entity that won the tender is a Related Party of Aurora distribution;

(e) the reasons why the entity won the tender;

(f) the total charge for the alternative control service if available, otherwise the cost incurred by Aurora for each alternative control service or component of an alternative control service as listed in paragraph 16.8 up until 1 May 2011.

Aurora has not outsourced the provision of all or part of an *alternative control service* in the *Previous* or *Current Regulatory Control Period*s.

15.9. 16.10 Outsourcing

Paragraph 16.10 of the RIN requires Aurora to, specify for every instance listed under paragraph 16.8 the *alternative control services* the entity won that won the tender is or was required to provide under its contract with Aurora.

Aurora has not outsourced the provision of all or part of an *alternative control service* in the previous or *Current Regulatory Control Period*s.

15.10. 16.11 Outsourcing

Paragraph 16.11 of the RIN requires Aurora to specify the terms, conditions and deliverable of each contract listed under paragraph 16.8.

Aurora has not outsourced the provision of all or part of an *alternative control service* in the previous or *Current Regulatory Control Period*s.

15.11. 16.12 Outsourcing

Paragraph 16.12 of the RIN requires Aurora to, specify for every instance listed under paragraph 16.8, if the contracted terms, conditions and deliverable include a specified program of discreet individual services:

(a) each of the discreet individual services provided; and

(b) for each service specified under paragraph (a), the number of individual services provided.

Aurora has not outsourced the provision of all or part of an *alternative control service* in the previous or *Current Regulatory Control Period*s.

15.12. 16.13 Related Party

Paragraph 16.13 of the RIN requires Aurora to, specify for every instance listed under paragraph 16.8, if the contract was provided by a Related Party:

(a) if that included a profit margin; and

(b) the quantum of any profit margin.

Aurora has not outsourced the provision of all or part of an *alternative control service* in the previous or *Current Regulatory Control Period*s.

15.13. 16.14 Profit Margins Previous and *Current Regulatory Control Periods*

Paragraph 16.14 of the RIN requires Aurora, specify for each alternative control service:

(a) whether a profit margin is included in the price of the service in each year of the Current and Previous Regulatory Control Periods;

(b) explain the reasons for including any profit margin;

(c) explain the method used to calculate any profit margin;

(d) provide the calculations for any profit margin and the quantum of any profit margin; and

(e) specify whether any consultant's reports were used in determining the appropriate profit margin and if so, provide copies of those reports.

Aurora has not included a profit margin in the price of any *alternative control service* during the previous and *Current Regulatory Control Period*s.

15.14. 16.15 Profit Margins *Forthcoming Regulatory Control Period*

Paragraph 16.15 of the RIN requires Aurora to, specify for each service listed under paragraph 16.1:

(a) whether Aurora intends to include a profit margin in the proposed price of the service in each year of the *Forthcoming Regulatory Control Period*;

(b) explain the justification for the inclusion of any profit margin;

(c) explain the method used to calculate any profit margin;

(d) provide the calculations for any profit margin and the quantum of any profit margin; and

(e) specify whether any consultant's reports were used in determining the appropriate profit margin and if so, provide copies of those reports.

Aurora does not intend to include a profit margin in the proposed price of any alternative control service for the *Forthcoming Regulatory Control Period*.

15.15. 16.16 Discrete Costs

Paragraph 16.16 of the RIN requires Aurora to list the following discrete costs incurred in the provision of *alternative control services* listed under paragraph 16.1 in each year of the Previous and *Current Regulatory Control Period*s and used in the forecasts for each year of the *Forthcoming Regulatory Control Period*:

(a) list each labour rate incurred in the provision of *alternative control services* listed under 16.1;

Aurora's financial systems maintain two sets of direct labour rates for each labour class and they differ depending on superannuation benefits (defined benefits scheme and non-defined benefits scheme). The majority of Aurora employees are under the non-defined benefits superannuation scheme, thereby Aurora contributes the obliged 9%. However for those employees under the defined benefits scheme, Aurora contributes 13.2% for superannuation resulting in higher direct labour rates. Aurora's financial systems maintain a record of which employees belong to the two differing superannuation schemes, labour rates are applied to works according to this record.

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

i. specify the class of labour that each labour rate listed in paragraph 16.16(a) applies to;

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

ii. for each labour rate listed in paragraph 16.16(a), list all the On-Costs included in the labour rate and the quantum of On-Cost included;

The salary on-costs as listed in the table below are incorporated into the labour rates used for the purposes of developing unit rates for *alternative control services*.

Long Service Leave	5.44%
Public Holidays	5.09%
Sick Leave	3.14%
Annual Leave	8.98%
Annual Leave Loading (% of annual leave)	13.69%
Payroll Tax	7.50%
Super (non-contributory)	9.00%
Workers Compensation	1.25%
Super (contributory)	13.20%

iii. specify the method used to allocate the On-Cost to the labour rates; and

Aurora's financial systems are used to calculate and allocate the on-cost to the labour rates.

1) The base labour rate is multiplied by the percentages used to account for:
   - long service leave;
   - public holidays;
   - sick leave; and
   - annual leave.
2) The calculated annual leave component is multiplied by the leave loading percentage (13.69%);
3) Base labour rate + on-costs calculated in steps 1 and 2 multiplied by the applicable superannuation percentage;
4) Base labour rate + on-costs calculated in steps 1, 2 and 3 multiplied by the payroll tax percentage (7.50%);
5) Base labour rate + on-costs calculated in steps 1 and 2 multiplied by the workers compensation percentage (1.25%); and

6) Base labour rate + on-costs as calculated in the above steps results in the on-costed labour rate.

iv. specify the calculation of the quantum of On-Cost included in the labour rates.

The following provides the quantum of the on-costs included in the labour rates.

Quantum of the on-costs included in the labour rates

On cost type	%	Hours p.a.	Days p.a.	Methodology
Long Service Leave	5.44%	48.75	6.5	13 weeks per 10 years = 65 work days per 10 yrs = 6.5 days pa - provisioned from day 1
Public Holidays	5.09%	84.98	11.33	11 days 2009/10, 11 days 2010/11, 12 days 2011/12 due to ANZAC day being on a weekend in 2010 and 2011
Sick Leave	3.14%	52.50	7	Needs to be increased from 5 days as maternity leave is now paid out of sick leave provisions
Annual Leave	8.98%	150.00	20	20 days per annum
Annual Leave Loading	13.69%			Non-executives have Leave Loading, executives do not (as per RBF)

Percentage of on-costs

These are % of Labour + Labour On Costs		
Payroll Tax	7.50%	To recover for salary sacrifice & contractors
Super (non-contributory)	9.00%	
Workers Compensation	1.25%	
Super (contributory)	13.20%	To be calculated based on actuarial estimates

(b) list each material category (e.g. meters, poles, brackets) required for the provision of *alternative control services* listed in response to paragraph 16.1:

i. provide a description of each material category listed in response to paragraph 16.16(b);

Refer Aurora's Public Lighting Annuity Model (attachment AE080 to Aurora's Regulatory Proposal) and Aurora's Metering Annuity Model (attachment AE081 to Aurora's Regulatory Proposal).

ii. provide the average unit cost for each material category listed in response to paragraph 16.16(b) for each year of the Previous, Current and *Forthcoming Regulatory Control Period*s;

Refer Aurora's Public Lighting Annuity Model (attachment AE080 to Aurora's Regulatory Proposal) and Aurora's Metering Annuity Model (attachment AE081 to Aurora's Regulatory Proposal).

iii. list all the On-Costs included in the unit cost of each material category listed in 16.16(b)(ii) and the quantum of the On-Cost included;

Refer to RIN template table 4.1.5.

iv. specify the method used to allocate the On-Cost included in the unit cost of materials; and

The cost of operating the warehouse is recovered through an on-cost applied to materials procured /issued through the inventory system. The on-cost rate is calculated each year by dividing the budgeted net overheads for Materials Management by budgeted internal material expense. The on-cost percentage is added to materials and is calculated so the net overheads in the materials management department are totally recovered.

v. specify the calculation of the quantum of the On-Cost included in the unit cost of materials.

The on-cost included in the unit cost of material for the *Forthcoming Regulatory Control Period* is calculated each year by dividing the budgeted net overheads for Materials Management by budgeted internal material expense, the forecast oncost rate is:

	2012-13 (%)	2013-14 (%)	2014-15 (%)	2015-16 (%)	2016-17 (%)
On-cost material	6.63	6.70	6.70	6.68	6.68

(c) List all other Discrete Costs incurred in the provision of *alternative control services* listed in the response to paragraph 16.1:

i. specify if the cost listed in paragraph 16.16(c) is directly attributed to an alternative control service listed under paragraph 16.1 or allocated across a number of *alternative control services*

ii. if the cost listed in paragraph 16.16(c) is allocated across a number of *alternative control services*, specify the services to which the cost is allocated and the method of allocating the cost to those services;

iii. specify the actual cost incurred and forecast cost incurred in each year of the Previous, Current and *Forthcoming Regulatory Control Period*s for each cost category listed in 16.16(c); and

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

iv. if a unit cost or rate is applied for a cost category in paragraph 16.16(c), specify that unit cost or rate and how it is calculated for each year of the Previous, Current and *Forthcoming Regulatory Control Period*.

Refer to Aurora's response to RIN template 4.1.

16. Matters listed at Paragraph 17

16.1. 17.1 Time dependent charges

Paragraph 17.1 of the RIN requires Aurora to, Specify if a different charge is proposed for a Fee Based or Quoted Alternative Control Service listed in response to paragraph 16.1 being provided during business hours to after hours.

Aurora has listed the afterhour's charges for Fee Based Services within chapter 33 of Aurora's Regulatory Proposal, Table 130.

16.2. 17.2 Basis for time dependent charging

Paragraph 17.2 of the RIN requires Aurora to, provide for each Fee Based or Quoted Alternative Control Service where a different charge is proposed for business hours and after hours listed in response to paragraph 17.1:

(a) explain the reasoning for the different charge with reference to the cost incurred by Aurora in providing the service;

The difference in cost for a service provided after normal business hours when compared with the same service provided during normal business hours is purely based on the provisions described in the Aurora Award.

(b) explain the method used to calculate the different charge; and

Refer to AE077 – Fee Based Services Model Procedure Manual and AE082 Excluded Services Model, which are appended as attachments to Aurora's Regulatory Proposal.

(c) provide the calculations for the different charges.

Refer to AE077 – Fee Based Services Model Procedure Manual and AE082 Exluded Services Model, which are appended as attachments to Aurora's Regulatory Proposal.

16.3. 17.3 Fee Based Alternative Control Service – Provision of Services

Paragraph 17.3 of the RIN requires Aurora to, identify for each Fee Based Alternative Control Service listed in the response to paragraph 16.1:

(a) identify each task involved in the provision of the service in table 4.1.6 of the Regulatory Template 4.1;

The nature of the Fee Based Services is that each service is considered a task, and is the most granular level at which Aurora operates.

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

(b) for each task identified in the response to paragraph (a), identify in table 4.1.6 of Regulatory Template 4.1:

i. the class of labour required to undertake the task with reference to the classes of labour listed in paragraph 16.16(a)(i);

ii. the number of workers required to undertake the task;

iii. the average time required to complete the task; and

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

(c) if materials are required to provide the service, specify each material category listed in paragraph 16.16(b) that is required for the service and the quantity of each material category required in table 4.1.4 of the Regulatory Template 4.1.

The majority of fee-based services provided by Aurora are labour only services and therefore do not include a material component cost.

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

16.4. 17.4 Quoted Alternative Control Service

Paragraph 17.4 of the RIN requires Aurora to, for each Quoted Alternative Control Service listed in paragraph 16.1:

(a) explain what components of the service are variable, and the extent to which they are variable;

There is one Quoted Alternative Control Service Program of Work, dealing with the moving of Aurora distribution infrastructure at the request of a customer. All components of this service vary greatly according to the size and nature of the work requested.

(b) if materials are required to provide the service, specify each material category listed in paragraph 16.16(b) that is required for the service and the quantity of each material category required;

All materials used in the construction of a distribution network may be used in this work category. It is not possible to specify the quantity of each material used because the quantity varies with the size and nature of the work requested.

(c) provide an estimate of the median time to complete each Quoted Alternative Control Service over the *Current Regulatory Control Period*; and

Based upon a sample of 260 jobs completed since June 2009, the median time for completion is 79 hours. Please note that Aurora's data set is incomplete before June 2009, but the sample size should be sufficient to provide an accurate estimate.

(d) provide an estimate of the mean time to complete each Quoted Alternative Control Service over the *Current Regulatory Control Period*.

Based upon a sample of 260 jobs completed since June 2009, the mean time for completion is 193 hours, with a standard deviation of 358 hours. Please note that Aurora's data set is incomplete before June 2009, but the sample size should be sufficient to provide an accurate estimate.

16.5. 17.5 Explain any responses not answered

Paragraph 17.5 of the RIN requires Aurora to, explain why it is not possible to provide a response to any part of paragraphs 17.1, 17.2, 17.3 or 17.4.

Not applicable: Aurora has provided responses to paragraphs 17.1; 17.2; 17.3; and 17.4.

17. Matters listed at Paragraph 18

17.1. 18.1 Metering asset data

Paragraph 18.1 of the RIN requires Aurora to, provide an Excel spreadsheet containing the data that Aurora maintains in order to fulfil the requirements of clause 8.2.2 of the TEC with respect to standard Metering Service assets. This spreadsheet must include data that Aurora has collected sine the commencement of this statutory requirement. For each individual meter this spreadsheet must include, unless unavailable:

(a) meter id;

(b) class;

(c) status;

(d) use;

(e) manufacture date;

(f) model;

(g) make;

(h) manufacturer;

(i) location;

(j) owner;

(k) meter configuration;

(l) register configuration;

(m) effective date;

(n) test date;

(o) test results;

(p) installation cost; and

(q) purchase cost.

Aurora has provided the requested data in an excel spreadsheet as attachment NW v1 Meter Data Information RIN 18-1 to the RIN. This attachment contain information relating to 18.1(a); (b); (c); (d); (f); (g); (h); (i); (j); (k); and (m).

- In relation to 18.1(i), Aurora had provided the NMI which maps back to a location.

Aurora is not able to provide information for 18.1(e); (l); (n); (o); (p); and (q).

- In relation to 18.1(l), the meter configuration infers the register configuration, although not explicitly in the attached spreadsheet; and

- In relation 18.1(n) and (o), Aurora tests by random sample of its metering fleet, details of which are in AE036 – Management Plan 2011 – Metering Assets, which is appended as an attachment to Aurora's Regulatory Proposal.

17.2. 18.2 Public lighting asset data

Paragraph 18.2 of the RIN requires Aurora to, provide an excel spreadsheet containing the data that Aurora maintains in order to fulfil the requirements of clause 8.2.2 of the TEC with respect to standard public lighting assets. This spreadsheet must include data that Aurora has collected sine the commencement of this statutory requirement. If available, for each public lighting asset this spreadsheet must include:

(a) type;

(b) manufacture date;

(c) valuation;

(d) installation cost; and

(e) purchase cost.

Aurora is unable to provide the data requested in paragraph 18.2 of the RIN.

Public lighting services are unregulated in the *Current Regulatory Control Period* and previously have never been regulated. Aurora has historically derived its charge for public lighting services through an annuity approach, and has not required the data detailed in RIN paragraph 18.2 to be maintained.

Refer to AE072 – Public Lighting Annuity Model – Architecture Paper and AE080 – Public Lighting Annuity Model which are appended as attachments to Aurora's Regulatory Proposal, where detailed installation and purchase costs of existing public lighting equipment can be found.

17.3. 18.3 Metering and public lighting work categories

Paragraph 18.3 of the RIN requires Aurora to, list all the work categories allocated to Public Lighting and Metering *alternative control services*.

Work categories allocated to metering *alternative control services*:

(i) Replace Metering Equipment;

(ii) Meter Equipment Removal and Disposal;

(iii) Meter Reading & Special Meter Reading; and

(iv) Metering Equipment Repairs.

Work categories allocated to public lighting *alternative control services*:

(i) Install New Road Lighting Overhead;

(ii) Replace Condemned Wide Based Poles;

(iii) Replace Road Lighting Pole/Columns;

(iv) Replace Major Road Lighting;

(v) Replace Minor Road Lighting;

(vi) Replace Relays – Road Lighting control systems;

(vii) Asset Inspections Associated with Intelligent Networks;

(viii) Bulk Lamp Replacement (4 year cycle);

(ix) Road Light Underground Cable Inspection & Monitoring;

(x) Road Light Replace Underground Cable;

(xi) Road Light Underground System Asset Repair;

(xii) Road Lighting Inspection & Monitoring;

(xiii) Road Lighting Repair & Maintenance;

(xiv) Audit of Private Contract Lighting; and

(xv) Rectification of Private Contract Lighting.

17.4. 18.4 Cost allocation methodology

Paragraph 18.4 of the RIN requires Aurora to, specify for each of the work categories listed under 18.3:

(a) whether this category was previously allocated to Public Lighting or Metering Services for the purposes of developing tariffs for these services;

During the *Current Regulatory Control Period* electrical services are either "declared" (that is, regulated) or not (and, therefore, not regulated). In particular, Metering Services (Replace Metering Equipment, Meter Equipment Removal and Disposal, Meter Reading & Special Meter Reading, and Metering Equipment Repairs) are declared electrical services, and all forms of Public Lighting Services are not declared electrical services.

Were the classification system proposed by the AER to be used in the *Forthcoming Regulatory Control Period* used by OTTER in the *Current Regulatory Control Period* in relation to Metering Services and Public Lighting Services, Metering Services would be classified as Direct Control, Alternative Control, Metering Services, and Public Lighting Services would be unclassified.

If it is assumed that Public Lighting Services were declared electrical services during the *Current Regulatory Control Period*, then under the AER classification they would have been classified as Direct Control, Alternative Control, Public Lighting Services.

Please note, however, that under the annuity approach to tariff setting for Metering Services and Public Lighting Services used in the *Current Regulatory Control Period*, unlike the annuity approach proposed to be used for Metering Services and Public Lighting Services in the *Forthcoming Regulatory Control Period*, there is no link between expenditure in Metering Services and Public Lighting Services and the tariff revenues recovered for the provision of those services.

Therefore, for each of the work categories listed under 18.3, these categories were not previously allocated to Public Lighting or Metering Services for the purposes of developing tariffs for these services.

(b) whether the cost is a directly allocated to Public Lighting of Metering Services or whether the cost is allocated across services using a shared cost allocation approach. If the cost is allocated across services using a shared cost allocation approach specify:

(i) the method used to allocate the cost;

(ii) the proportion of the total cost allocated to Public Lighting and Metering Services; and

Public Lighting and Metering Services costs are directly allocated in accordance with AE067 - Cost Allocation Methodology (CAM), which is appended to Aurora's Regulatory Proposal and has been approved by the AER.

(c) the definition of the work category, and the manner in which costs are allocated to the work category.

Definitions of work categories allocated to Public Lighting *alternative control services*:

- Install New Road Lighting Overhead: install new public lighting infrastructure;
- Replace Condemned Wide Based Poles: wide based poles combined the functions of a turret and public lighting support pole in underground subdivisions. These are now considered by Aurora to be an OHS hazard because there is insufficient space within the wide base to permit safe electrical work. The wide based poles will be replaced with a turret and a dedicated slim-line pole for public lighting infrastructure support;
- Replace Road Lighting Pole/Columns: replacement of unserviceable dedicated public lighting columns owned by Aurora;
- Replace Major Road Lighting: replacement of failed public lighting luminaires and lamps serving major roads;
- Replace Minor Road Lighting: replacement of failed public lighting luminaires and lamps serving minor roads;

- Replace Relays – Road Lighting control systems: as part of the National Broadband Network (NBN) roll out in Tasmania, NBNCo is removing the switch wire in order to increase the height available on Aurora's poles to run optical fibre. Aurora will recycle components of relays removed as part of this project and retrofit to existing relays as they fail;

- Asset Inspections Associated with Intelligent Networks: to establish the parameters and business requirements for how the assessment of new public lighting technology should be conducted;

- Bulk Lamp Replacement (4 year cycle): cyclic replacement, inspection and maintenance of the electrical components of public lighting infrastructure;

- Road Light Underground Cable Inspection & Monitoring: inspection and monitoring of underground supplies for pubic lighting;

- Road Light Replace Underground Cable: replacement of unserviceable underground cables used to supply public lighting;

- Road Light Underground System Asset Repair: replacement of unserviceable underground infrastructure (other than cables) used to supply public lighting;

- Road Lighting Inspection & Monitoring: periodic night patrols for the inspection and monitoring of public lighting infrastructure operation;

- Road Lighting Repair & Maintenance: repair of failed public lighting infrastructure;

- Audit of Private Contract Lighting: a safety audit of public lighting infrastructure provided under contract by Aurora; and

- Rectification of Private Contract Lighting: rectification of non-compliant public lighting infrastructure provided under contract by Aurora.

Definitions of work categories allocated to metering *alternative control services*:

- Replace Metering Equipment: meter replacement program to: replace meter families that have failed compliance testing, or are no longer economical to test or maintain, or to replace meters to provide solutions for business issues;

- Meter Equipment Removal and Disposal: disposal of replaced meters;

- Meter Reading: routine meter reading for billing of a retailer;

- Special Meter Reading: routine meter reading for billing and special meter reads conducted at the request of a retailer;

- Metering Equipment Repairs: Fault response and repairs for metering equipment that has failed in service;

- Install Metering Equipment (New Installations): provision and installation of new meters following request from a retailer to connect, alter or add metering at a customer installation;
- Install PAYG Meters: provision and installation of new PAYG meters following request from Aurora Retail to connect, alter or add metering at a customer installation;
- Maintain and Repair PAYG Meters;
- Meter Equipment Removal and Disposal: removal and disposal of redundant metering equipment following request from a retailer for supply termination or removal of tariff;
- Metering Equipment Auditing & Testing: auditing and testing programs to determine and ensure compliance of metering equipment with appropriate standards; and
- Retailer Requested Work: work requested by a Retailer.

Costs are directly allocated to all work categories.

17.5. 18.5 External party service provision

Paragraph 18.5 of the RIN requires Aurora to, specify for every instance in which the provision of Public Lighting or Metering Services was contracted to an external party:

(a) the manner in which the tender was advertised;

(b) the contractors which were informed of the tender;

(c) the number of tenders received;

(d) the entity that won the tender;

(e) the reasons for selecting the winning tender; and

(f) the contracted services to be provided by the winning tenderer.

Aurora does not contract out the provision of *alternative control services* to an external party.

17.6. 18.6 External party service provision

Paragraph 18.6 of the RIN requires Aurora to, specify for every instance where Aurora is unable to provide information required in question 18.5 why it is unable to provide the requested information.

Aurora does not contract out the provision of *alternative control services* to an external party.

17.7. 18.7 Contract charges

Paragraph 18.7 of the RIN requires Aurora to, specify for each service that was tendered to an external party as listed under 18.5:

(a) the total charge for the provision of those services, or it not available the cost incurred for those services up until 1 May 2011;

(b) the services provided by the contractors; and

(c) if the terms of the contract included the provision of a program of individual services, list:

(i) the individual services provided;

(ii) the total units of services provided; and

(iii) the cost per unit of services provided.

Aurora does not contract out the provision of *alternative control services* to an external party.

17.8. 18.8 Proposed tariffs

Paragraph 18.8 of the RIN requires Aurora to, provide all previous, current and proposed tariffs for Metering and Public Lighting *alternative control services* in the Previous, Current and *Forthcoming Regulatory Control Period*s.

For the previous and *Current Regulatory Control Periods,* refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

Refer to chapter 33 of Aurora's Regulatory Proposal for the *Forthcoming Regulatory Control Period* and the following tables*:*

- chapter 33, Table 126 – Indicative prices for Metering Services;
- chapter 33, Table 127 – Indicative prices for Public Lighting Services; and
- chapter 33, Table 128 – Indicative prices for Contract Lighting Services.

17.9. 18.9 Tariff maximum charge

Paragraph 18.9 of the RIN requires Aurora to, specify the proposed maximum charge for each individual tariff specified in 18.8.

Refer to chapter 33 of Aurora's Regulatory Proposal for the *Forthcoming Regulatory Control Period* and the following tables:

- chapter 33, Table 126 – Indicative prices for Metering Services;
- chapter 33, Table 127 – Indicative prices for Public Lighting Services; and
- chapter 33, Table 128 – Indicative prices for Contract Lighting Services.

18.10 Input costs

Paragraph 18.10 of the RIN requires Aurora to, provide for each tariff class identified in 18.8:

(a) list the input costs used to calculate the proposed tariff;

The following inputs form the basis of the calculation used to derive the indicative prices for public lighting and metering services:

- material replacement costs – for each public lighting service type the bracket, lamp and luminaires costs multiplied by the forecast volumes form the basis of the annuity calculation. For each metering service the meter replacement cost multiplied by the forecast volumes form the basis of the annuity calculation;
- operating expenditure forecasts – Aurora's work program is used to forecast operating expenditure volumes associated with public lighting and metering assets;
- overhead costs allocation – the operating expenditure components of Corporate and Shared Services; Network Management; and Distribution Business Shared Resource costs are apportioned on a percentage spend of direct costs, in accordance with Aurora's CAM; and
- capital overhead cost component – the capital overhead cost component is apportioned in accordance with the methodology in Aurora's approved CAM.

(b) if the input costs include materials, specify the material category and the average material cost for each individual material category for each financial year in the Current and Previous Regulatory Control Periods. Also provide a forecast of the material costs for the *Forthcoming Regulatory Control Period*;

Previous Regulatory Control Period

Aurora does not have material input costs for Metering or Public Lighting Services for the *Previous Regulatory Control Period*.

Current Regulatory Control Period

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

Forthcoming Regulatory Control Period

For material input costs for Metering Services, refer to AE081 – Metering Annuity Model which is appended as an attachment to Aurora's Regulatory Proposal.

For material input costs for Public Lighting Services, please refer to AE080 – Public Lighting Annuity Model.

(c) if the input costs include labour, specify the labour rate(s) applied for that service, for each year of the Current and Previous Regulatory Control Period;

(d) provide a forecast of the labour rate for the *Forthcoming Regulatory Control Period* and if the labour rate is escalated in the *Forthcoming Regulatory Control Period*, specify the escalation rate and the method by which that escalation rate is derived; and

For the *Forthcoming Regulatory Control Period*, refer to chapter 17 of Aurora's Regulatory Proposal for labour escalators.

For the input costs, please refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

(e) if the costs include allocated overhead costs, provide detail of the allocated overhead costs for each year of the Previous, Current and *Forthcoming Regulatory Control Period*s, including the:

(i) cost categories of the overhead costs;

(ii) quantum of the overhead cost;

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

(iii) the allocation approach used to allocated the overhead cost; and

Public Lighting Services

Overhead costs are apportioned using forecast volumes of public and contract lighting as the basis for allocation.

Metering Services

The amount of overhead costs allocated to tariff class in the following section is allocated using forecast volumes of meters.

(iv) total proportion of the cost allocated to each tariff class.

Refer to NW-#30188740-v1-RIN_Alternative_Control_Services_Data_(16-17-18), which is appended as an attachment to Aurora's RIN Response.

18. Matters listed at Paragraph 19

18.1. 19.1 Provide calculations of the proposed STPIS targets for SAIDI, SAIFI and customer service.

Paragraph 19.1 of the RIN requires Aurora to, provide calculations of the proposed STPIS targets for SAIDI, SAIFI, and customer service for the *Forthcoming Regulatory Control Period* weighted by both customer number and embedded transformer capacity. These calculations must be prepared in accordance with the specifications in sections 19.1, 19.2, 19.3 and 19.4. Outages that span a number of supply reliability areas are to be treated as separate interruptions in each individual supply area affected. Data for outages that span multiple supply reliability areas must be separated into data that is attributable to each individual supply reliability area. This interruption data must be provided in accordance with paragraph 19.2 below.

18.2. 19.2 Details of all interruptions

Paragraph 19.2 of the RIN requires Aurora to, details of all interruptions that occurred in the 2006-2007 to 2010-2011 financial years must be provided. For each individual outage this detail must include:

(a) the date of the outage;

(b) the duration of the outage;

(c) the number of customers affected by the outage;

(d) the embedded transformer capacity of the supply reliability area affected at the time of the outage;

(e) the supply reliability category in which the outage occurred; and

(f) whether the outage is an Excluded Outage under clause 3.3(a) of the STPIS or an excluded outage which is caused by a customer installation fault; and

(g) if the outage is an excluded outage under 3.3(a) of the STPIS;

(i) the cause of the outage; and

(ii) the subclause under 3.3(a) of the STPIS under which the outage is classified as an excluded outage.

Refer to RIN attachments:

- NW-#30187450-v1-STPIS_Categroy_Target_Modelling_by_Customer; and
- NW-#30187456-v1-All_outage_data_MED_calculations_and_STPIS_cust_targets_-_RIN_19_2_and_RIN_19_3.

Please note that:

Outages that span a number of supply reliability areas are to be treated as separate interruptions in each individual supply area affected.

Data for outages that span multiple supply reliability areas must be separated into data that is attributable to each individual supply reliability area.

18.3. 19.3 Provide derivation of the following parameters

Paragraph 19.3 of the RIN requires Aurora to, provide the derivation of the following parameters:

(a) daily SAIDI, SAIFI and customer service performance derived [from] the individual outage data under 19.2 weighted by both customer number and embedded transformer capacity;

Daily SAIDI

The data used to calculate daily SAIFI includes outages classified as Unplanned or 3rd Party. It excludes Transmission and Planned outages as well as outages on Major Event Days or outages due to total fire ban days.

Calculated using kVA

The SAIFI for a classification is calculated for each day using the following formula:

Daily SAIFI = (Classification kVA interrupted) ÷ (Classification installed kVA),

where,

the "classification kVA interrupted" is the quantity of energy interrupted as a result of outages that day; and

the "classification installed kVA" is the sum of the installed capacities of all transformers in the classification.

Calculated using Customer Numbers

The SAIFI is calculated for each day using the following formula:

Daily SAIFI = (Classification customers affected) ÷ (Classification customers),

where,

the "classification customers affected" is the number of customers experiencing outages that day; and

the "classification customers" is the sum of the customers in the classification.

Please note that customer numbers are only available from 1 January 2008.

Daily SAIFI

The data used to calculate daily SAIFI includes outages classified as Unplanned or 3rd Party. It excludes Transmission and Planned outages as well as outages on Major Event Days or outages due to total fire ban days.

Calculated using kVA

SAIFI is calculated for each day using the following formula:

$$SAIFIk = Daily\ kVA\ Interrupted / System\ kVA$$

Calculated using Customer Numbers

SAIFI is calculated for each day using the following formula:

$$SAIFIc = Daily\ Customers\ Affected / Total\ Customers$$

Customer numbers are only available from 1 January 2008.

(b) the MED day threshold derived [from] the daily SAIDI data weighted by both customer number and embedded transformer capacity;

The MED Threshold is calculated using the following process:

- find the natural logarithm for each of the daily SAIDI figures.
- find a (Alpha), the average of the log-transformed daily SAIDI values.
- find β (Beta), the standard deviation of the log-transformed daily SAIDI values.
- Calculate the MED Threshold (T_{med}) using the following equation:
  - $T_{med} = e^{(\alpha + 2.5\beta)}$

Based on kVA SAIDI

The MED calculation uses the daily SAIDI values based on connected kVA. This calculation uses data from 1/07/2006 – 30/04/2011.

Based on Customer SAIDI

The MED calculation uses the daily SAIDI values based on connected customers. This calculation uses data from 1/01/2008 – 30/04/2011.

(c) the SAIDI, SAIFI targets for the supply reliability areas weighted by both customer number and embedded transformer capacity; and

The SAIFI and SAIDI targets for the *Forthcoming Regulatory Control Period* have been derived using the following method:

- find the average performance of each reliability category using historical data and using this as the baseline target:
  - adjust the targets to account for expected improvement in reliability from programs scheduled for 2010/2011 and 2011/2012.
- to determine the amount of reliability program benefit:
  - for each community find the average amount of SAIFI and SAIDI which is due to outages deemed controllable (asset related and vegetation inside clearance) based on historical data.
  - use these controllable SAIDI and SAIFI figures together with the total SAIDI and SAIFI figures to find a %_controllable figure for each community.
  - to calculate the improved performance of communities with TRIPs scheduled,

New Performance = Old Performance –
Old Performance × ((%_Controllable × ½)/100)).

With Performance referring to either SAIFI or SAIDI. The %_controllable is halved because the planned reliability programs does not address the entire community.

  - Reliability program improvements for each community are included the year after the TRIP is due to be completed. The targets from 2012/13 onwards remain the same.

(d) customer service parameters.

Refer to section 25.3.6. of Aurora's Regulatory Proposal.

18.4. 19.4 Any proposed adjustments to the targets

Paragraph 19.4 of the RIN requires Aurora to; if Aurora proposes adjustments to the targets away from those based upon raw historical data:

(a) provide:

(i) the quantum of the adjustment, and the effect of the adjustment on the targets for each of the supply reliability areas; and

(ii) empirical data used as justification for the adjustment; and

(b) explain why the adjustment is not considered under capital expenditure requirements to maintain the security of supply of the *distribution network*.

Aurora does not propose adjustments to the STPIS targets away from those based upon raw historical data.