RIN Response

Part C

Operating and maintenance expenditure

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1. Operating and maintenance expenditure

In this document Aurora will set out its responses to questions raised by the AER within section 5, Operating and Maintenance Expenditure, of the Regulatory Information Notice (RIN) issued to Aurora by the AER on 21 April 2011.

Section 5 of the RIN requires Aurora to provide responses in relation to a number of matters concerning Aurora's total forecast operating and maintenance expenditure proposal.

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.

2. Matters listed at paragraph 5.1

2.1. RIN requirements

RIN paragraph 5.1 requires that for each of the matters listed at paragraph 5.1 that Aurora:

(a) provide:

(i) a description of major drivers for the increase/decrease in expenditure;

(ii) how the forecast was prepared, including:

(1) whether and how Aurora considers it is required to

(A) meet or manage expected demand for *standard control services* over the *Forthcoming Regulatory Control Period*;

(B) comply with all applicable *regulatory obligations or requirements* associated with the provision of *standard control services*;

(C) maintain the quality, reliability, and security of supply for *standard control services*;

(D) maintain the reliability, safety and security of the distribution system through the supply of *standard control services*;

(2) whether and how Aurora considers that it reflects:

(A) the efficient costs of achieving the *operating expenditure objectives*;

(B) the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives*; and

(C) a realistic expectation of the demand forecast and cost inputs required to achieve the *capital expenditure objectives*;

(3) whether and how Aurora considers it takes into consideration:

(A) benchmark operating expenditure that would be incurred by an efficient *Distribution Network Service Provider* over the *Forthcoming Regulatory Control Period*;

(B) the actual and expected operating expenditure of the *Distribution Network Service Provider* during any preceding regulatory control periods;

(C) the relative prices of operating and capital inputs;

(D) the substitution possibilities between operating and capital expenditure;

(E) the consistency of the total labour costs included with the incentives provided by the STPIS;

(F) efficient non-network alternatives;

(4) if a Base Year approach was used:

(A) what the Base Year is; and

(B) why the Base Year represents efficient costs;

(5) any non-recurrent or one-off costs;

(6) models or methodology used;

(A) why is this appropriate;

(B) does this differ from previous opex forecasting models or methods utilised by Aurora, if so, provide:

(C) the previous models or methodology; and

(D) explanation and reasoning for the departure from the previous model or methodology;

(7) each key assumption used and its quantum; and provide:

(A) the method and information used to develop the assumption;

(B) how the assumption has been applied and taken into account; and

(C) its effect or impact in comparison to its effect or impact on Actual Opex;

(8) any asset maintenance plans;

(9) how the relevant network planning standards have been incorporated;

(b) identify:

(i) all relevant Policies and Strategies, Procedures and consultants reports provided; and

(ii) each changed *regulatory obligation or requirement* impacting on opex forecasts;

(c) explain:

(i) how each Policy and Strategy and Procedure was taken into account and complied with;

(ii) if any changes were made to any Policies and Strategies or Procedures in the *Current Regulatory Control Period* and the effect such changes had; and

(iii) any departures from any conclusions and recommendations contained in the consultants reports.

RIN paragraph 5.1 requires that Aurora provide responses in relation to:

(a) the forecast opex proposal;

(b) each Opex Category; and

(c) each Material Project which constitutes each Opex Category.

The RIN defines Base Year as a *regulatory year* in the *Current Regulatory Control Period* that Aurora considers is an appropriate representation of efficient annual operating and maintenance expenditure (e. g. 2010-11).

The RIN defines *Current Regulatory Control Period* as the *regulatory control period* which commenced on 1 January 2008 and ends on 30 June 2012.

The RIN defines *Forthcoming Regulatory Control Period* as the *regulatory control period* which commenced on 1 July 2012 and ends on 30 June 2017.

The RIN defines Material Project as a Project that relates to one or more Standard Control Capex Categories and which over the life of the works exceeds:

(a) $2 million (real 2011 dollars) in the case of a project which relates to either of the standard control capex categories non-network-IT & communications capex, non-network-property capex, non-network-plant & equipment capex, non-network-motor vehicles capex, non-network-other capex, SCADA & network control capex; or

(b) $5 million (real 2011 dollars) in the case of a project not covered by paragraph (a)

The RIN defines Opex Category to mean one of the following:

(a) connection asset repair;

(b) corporate and shared services;

(c) electrical safety and installation inspection;

(d) emergency and unscheduled power system;

(e) NEM and contestability related costs;

(f) Network asset maintenance;

(g) network asset maintenance – connection assets;

(h) network asset maintenance – decommissioned assets;

(i) network asset maintenance – ground mounted substations;

(j) network asset maintenance – overhead network and structures;

(k) network asset maintenance – underground network;

(l) network asset maintenance – zone substations;

(m) network division management;

(n) network division management – customer service;

(o) network division management – electrical safety levy;

(p) network division management – GSL payments;

(q) network division management – national electricity market levy;

(r) network division management – network management;

(s) network division management – regulatory;

(t) system operations;

(u) vegetation management.

The RIN defines *Previous Regulatory Control Period* as the period which commenced on 1 January 2004 and ends on 31 December 2007.

The RIN defines Policies and Strategies as short-term and long-term policies, strategies, guidelines, principles, statements of intent, plans, schemes, internal minutes, committee papers and approaches which include, depending on the context, which relate to:

(a) asset management;

(b) asset security;

(c) augmentation and planning;

(d) business cases;

(e) capital expenditure (e. g. capex approval and replacement);

(f) condition monitoring and replacement;

(g) corporate governance;

(h) demand management;

(i) disaster recovery;

(j) energy supply and customer growth forecasting;

(k) information technology;

(l) internal reviews;

(m) investment decision making and evaluation;

(n) land and easement acquisition;

(o) prioritization and options analysis;

(p) procurement;

(q) project management;

(r) regulatory compliance;

(s) risk management and assessment; and

(t) self insurance.

The RIN defines Procedures as including procedures or processes which relate to the matters referred to in the definition of Policies and Strategies.

The RIN defines Project as series of related works with a common purpose, expected start and finishing dates, and relates to one or more Standard Control Opex Category or Standard Control Capex Category which commences during, or commenced during the *Previous Regulatory Control Period* or the *Current Regulatory Control Period* and continues into, the *Forthcoming Regulatory Control Period*.

The NEL defines a *regulatory obligation or requirement* as:

(a) in relation to the provision of an electricity network service by a regulated network service provider:

  (i) a distribution system safety duty or transmission system safety duty; or

  (ii) a distribution reliability standard or transmission reliability standard; or

  (iii) a distribution service standard or transmission service standard; or

(b) an obligation or requirement under:

(i) this Law or Rules; or

(ii) an Act of a participating jurisdiction, or any instrument made or issued under or for the purposes of that Act, that levies or imposes a tax or other levy that is payable by a regulated network service provider; or

(iii) an Act of a participating jurisdiction, or any instrument made or issued under or for the purposes of that Act, that regulates the use of land in a participating jurisdiction by a regulated network service provider; or

(iv) an Act of a participating jurisdiction or any instrument made or issued under or for the purposes of that Act that relates to the protection of the environment; or

(v) an Act of a participating jurisdiction, or any instrument made or issued under or for the purposes of that Act (other than national electricity legislation or an Act of a participating jurisdiction or an Act or instrument referred to in subparagraphs (ii) to (iv)), that materially affects the provision, by a regulated network service provider, of electricity network services that are the subject of a distribution determination or transmission determination.

2.1.1. Opex Categories

The AER has classified total operating expenditure within the RIN templates into two primary categories being:

- operating costs; and
- maintenance costs.

Aurora has also classified certain components of its operating expenditure into a primary category of demand management expenditure. This expenditure relates purely to demand management initiatives, in excess of those proposed under the DMIS, which Aurora is proposing to undertake during the *Forthcoming Regulatory Control Period*.

2.1.1.1. Operating costs

The AER has further classified operating costs within the RIN templates into three secondary categories being:

- network division management;
- non-network division management; and
- other operating costs.

The AER has further classified these secondary operating costs categories into tertiary categories as detailed in Table 1.

Table 1: Operating costs tertiary RIN categories

Secondary RIN category	Tertiary RIN category
Network division management	Network management
	GSL payments
	Customer Service
	Regulatory
	Electrical safety levy
	National electricity market levy
Non-network divisional management	System operations
	Corporate and shared services
	NEM and contestability related costs
Other operating costs	Other operating costs

2.1.1.2. Maintenance costs

The AER has further classified maintenance costs within the RIN templates into two secondary categories being:

- routine maintenance; and
- non-routine maintenance.

The AER has further classified these secondary maintenance costs categories into tertiary categories as detailed in Table 2.

Table 2: Maintenance costs tertiary RIN categories

Secondary RIN category	Tertiary RIN category
Network asset maintenance	Overhead network and structures
	Underground network
	Ground mounted substations
	Zone substations
	Decommissioned assets
	Connection assets
	Other
Non-network asset maintenance	Emergency and unscheduled power system
	Vegetation management
	Connection asset repair
	Electrical safety and installation inspection

2.1.2. Efficient costs

RIN paragraph 5.2(a)(ii)(2)(A) requires that for each of the matters listed at paragraph 5.1 that Aurora provide how the forecast was prepared, including whether and how Aurora considers that it reflects the efficient costs of achieving the *operating expenditure objectives*.

Aurora interprets this requirement to mean that Aurora should explain whether forecast operating expenditure in each Opex Category is based upon:

- appropriate volumes;
- appropriate rates; and

why Aurora considers that the:

- volumes are appropriate; and
- rates are appropriate.

2.1.3. Aurora interpretations

2.1.3.1. Prudent operator

RIN paragraph 5.2(a)(ii)(2)(B) requires that for each of the matters listed at paragraph 5.1 that Aurora provide how the forecast was prepared, including whether and how Aurora considers that it reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives*.

Aurora interprets this requirement to mean that Aurora should explain:

- whether the forecast operating expenditure in each Opex Category is of the same magnitude that a prudent operator in the same circumstances as Aurora would forecast to achieve the same outcomes; and
- why Aurora considers this is true.

2.1.3.2. Realistic expectation of the demand forecast and cost inputs

RIN paragraph 5.2(a)(ii)(2)(C) requires that for each of the matters listed at paragraph 5.1 that Aurora provide how the forecast was prepared, including whether and how Aurora considers that it reflects a realistic expectation of the demand forecast and cost inputs required to achieve the *capital expenditure objectives*.

Aurora interprets this requirement to mean that Aurora should explain:

- whether Aurora considers that the forecast operating expenditure in each Opex Category is appropriate (neither too large nor too small) when the magnitude and trend of demand forecasts and the magnitude and trend of the costs are considered; and
- why Aurora considers this is true.

2.1.3.3. Benchmark expenditure

RIN paragraph 5.2(a)(ii)(3)(A) requires that for each of the matters listed at paragraph 5.1 that Aurora provide how the forecast was prepared, including whether and how Aurora considers it takes into consideration the benchmark operating expenditure that would be incurred by an efficient *Distribution Network Service Provider* over the *Forthcoming Regulatory Control Period*.

Aurora interprets this requirement to mean that Aurora should explain:

- whether, in preparing the forecast operating expenditure in each Opex Category, Aurora took into consideration benchmark operating expenditure that would be incurred by an efficient *Distribution Network Service Provider* over the *Forthcoming Regulatory Control Period*; and
- how this was done.

2.1.3.4. Material Projects

RIN paragraph 5.1(c) requires that Aurora provide responses in relation to each Material Project which constitutes each Opex Category.

The RIN defines Material Project as a Project that relates to one or more Standard Control Capex Categories and which over the life of the works exceeds:

(a) $2 million (real 2011 dollars) in the case of a project which relates to either of the standard control capex categories non-network-IT & communications capex, non-network-property capex, non-network-plant & equipment capex, non-network-motor vehicles capex, non-network-other capex, SCADA & network control capex; or

(b) $5 million (real 2011 dollars) in the case of a project not covered by paragraph (a).

Aurora has interpreted Material Project within RIN paragraph 5.1(c) to have a meaning that is consistent with that provided in the RIN Definitions and Interpretation with the replacement of standard control capex with standard control opex.

Taking this interpretation into consideration, Aurora has not identified any Material Projects within its forecast Opex Categories and has therefore not provided any response to RIN paragraph 5.1(c) in this RIN Response.

2.2. Major drivers for expenditure

This section of Aurora's RIN Response will deal with the major drivers for the increase/decrease in operating expenditure for each Opex Category.

2.2.1. Connection asset repair

Connection asset repair falls within the Opex Categories of routine maintenance and non-routine maintenance and drivers for this expenditure are also discussed in sections 12.4.4 and 12.4.5 of Aurora's Regulatory Proposal.

Connection asset repair forecast expenditure totals approximately $2.9 million over the *Regulatory Control Period* and on average $0.6 million each year.

Routine maintenance forecast expenditure totals approximately $2.5 million over the *Regulatory Control Period*. The expenditure profile decreases over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates.

Non-routine maintenance forecast expenditure totals approximately $0.5 million over the *Regulatory Control Period*. The expenditure profile decreases over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates.

There are no significant changes in operational expenditure for the program of work proposed in the *Forthcoming Regulatory Control Period*. All proposed volumes of work are based on either compliance for testing of metering transformers, or historical maintenance practices and fault responses.

2.2.2. Corporate and shared services

Corporate and shared services operating expenditure falls within the Opex Category of non-network division management and drivers for this expenditure are also discussed in section 12.4.2 of Aurora's Regulatory Proposal.

Corporate and shared service forecast expenditure totals approximately $47.9 million over the *Regulatory Control Period,* an average of $9.6 million each year. This forecast is driven by the outcomes of Aurora's indirect cost allocation methodology (ICAM) which allocates Aurora's corporate and shared services expenditure to the divisions and subsidiaries of Aurora.

A decrease in expenditure from the *Current Regulatory Control Period* to the *Forthcoming Regulatory Control Period* has been driven by the adoption of a new ICAM for the *Current Regulatory Control Period*, resulting in an appropriate allocation of corporate and shared service costs across Aurora.

Further decreases throughout the *Forthcoming Regulatory Control Period* relate to the application of identified and applied productivity and efficiency factors.

A more detailed overview of services provided by each area in corporate and shared services is available in the document "Indirect Cost Allocation Methodology - Operating Expenditure".

2.2.3. Electrical safety and installation inspection

Electrical safety and installation inspection operating expenditure falls within the Opex Category of non-routine maintenance and drivers for this expenditure are discussed in section 12.4.5 of Aurora's Regulatory Proposal.

Electrical safety and installation forecast expenditure totals approximately $1.5 million over the *Regulatory Control Period,* an average of $0.3 million each year. The forecasts are driven by distribution network inspection activities undertaken by the electrical inspection staff engaged by WST in the operation and administration of the electrical safety inspection service in Tasmania.

The volumes of work in this Opex Category have been consistent for a number of years and Aurora does not consider there to be any major increases or decreases in the *Forthcoming Regulatory Control Period* and the proposed expenditure is to remain consistent with historical spend.

2.2.4. Emergency and unscheduled power system

Emergency and unscheduled power system operating expenditure falls within the Opex Category of non-routine maintenance. Drivers for this expenditure are discussed in section 12.4.5 of Aurora's Regulatory Proposal.

The emergency and unscheduled power system forecast covers Aurora's operational activities associated with the processes and work in attending and rectifying system faults and emergencies. This work is reactive in nature and is generally driven by externalities such as adverse weather and storms, and vegetation and animal

interactions. There are also instances where equipment failures within the distribution network necessitate an immediate response to restore supply.

Emergency and unscheduled power system forecast expenditure totals approximately $65.7 million over the *Regulatory Control Period*, an average of approximately $13.1 million each year. The expenditure profile decreases throughout the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rate.

A decrease in expenditure from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by Aurora's distribution business strategy which is premised on improving price and service outcomes to customers. To achieve this strategic objective, the distribution business underwent a major organisational review with a resultant reduction in staffing levels across the business.

2.2.5. NEM and contestability related costs

NEM and contestability related operating expenditure falls within the Opex Category of non-network division management. Drivers for this expenditure are discussed in section 12.4.2 of Aurora's Regulatory Proposal.

NEM and contestability related costs where expenditure comprises activities undertaken within the distribution business to ensure Aurora's distribution NEM operational capabilities and retail contestability requirements are met.

NEM and contestability related expenditure totals approximately $7.3 million over the *Regulatory Control Period*, an average of $1.5 million each year. The expenditure profile decreases throughout the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates.

The drivers of NEM and contestability related costs are related to Aurora's operations in the NEM and the functions required to enable retail contestability activities.

A decrease in expenditure from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by the completion of tranche 4 of retail contestability and the anticipated completion of NEM related projects during the *Current Regulatory Control Period*.

2.2.6. Network asset maintenance

Network asset maintenance operating expenditure falls within the Opex Categories of routine maintenance and non-routine maintenance. Drivers for this expenditure are discussed in sections 12.4.4 and 12.4.5 of Aurora's Regulatory Proposal.

2.2.6.1. Routine maintenance

Routine maintenance forecast expenditure total approximately $40.7 million over the *Regulatory Control Period*, an average of $8.2 million each year. This expenditure is forecast across five overall subcategories, being:

- ground mounted substations;
- overhead network and structures;
- underground network;

- zone substations; and
- routine maintenance other.

2.2.6.2. Non-routine maintenance

Non-routine maintenance forecast expenditure total approximately $26.0 million over the *Regulatory Control Period*, an average of $5.2 million each year. This expenditure is forecast across six overall subcategories, being:

- decommissioned assets;
- ground mounted substations;
- overhead network and structures;
- underground network;
- zone substations; and
- routine maintenance other.

2.2.6.3. Major drivers

The major drivers for network asset maintenance are:

- customer service requirements;
- reliability requirements;
- legislative and safety obligations;
- capacity requirements;
- risk mitigation; and
- life cycle cost requirements.

Aurora's asset management plans detail how the following principles are followed in achieving the proposed asset maintenance programs:

- providing a reliable operation that meets the needs of the customer;
- ensuring existing assets are safe and compliant with all applicable legislation;
- achieving the least cost trade-off between different modes of maintenance (repair, refurbishment or replacement);
- achieving the optimal reactive-preventative maintenance ratio for the asset base;
- condition monitoring and predictive analysis forms the foundation of asset maintenance; and
- the optimal mode of managing assets varies between asset classes.

It is noted that time-based cycles of routine servicing are undertaken where condition-based monitoring is not practical or possible. The application of these techniques is based on manufacturers' recommendations, industry practice and Aurora's own experience.

2.2.7. Network asset maintenance – connection assets

Aurora has not forecast any operating expenditure for the network asset maintenance – connection assets Opex Category in the *Forthcoming Regulatory Control Period* and has no actual expenditure in the *Current Regulatory Control Period*.

All operating expenditure relating to Aurora's connection assets has been included within the connection asset repair Opex Category.

2.2.8. Network asset maintenance – decommissioned assets

Network asset maintenance – decommissioned assets operating expenditure falls within the Opex Category of non-routine maintenance. Drivers for this expenditure are also discussed in section 12.4.5 of Aurora's Regulatory Proposal.

Aurora's assets are, on occasion, decommissioned and disconnected from the distribution network. Decommissioning reasons vary, recently however, the change in land use from farming to tree plantation has driven a number of these requirements. Leaving these assets in situ would incur ongoing inspection, treatment and vegetation clearing costs, Aurora therefore removes the assets from the distribution network.

Network asset maintenance – decommissioned assets are a component of non-routine maintenance expenditure and comprise two categories of expenditure:

- decommission assets; and
- removal of redundant assets.

Network asset maintenance – decommissioned assets forecast expenditure totals approximately $2.8 million over the *Regulatory Control Period*, an average of $0.6 million each year. This expenditure profile decreases throughout the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates.

The largest component of the work category expenditure relates to decommission assets with an associated expenditure of $2.1 million and an average of $0.4 million each year. The remaining expenditure encompasses removal of redundant assets with an average expenditure of $0.1 million per year.

Aurora does not consider there to be any major increases or decreases in the *Forthcoming Regulatory Control Period*. There are no major changes to this program and the proposed expenditure is to remain consistent with historical spend.

2.2.9. Network asset maintenance – ground mounted substations

Network asset maintenance – ground mounted substations operating expenditure falls within the Opex Categories of routine maintenance and non-routine maintenance. Drivers for this expenditure are discussed in sections 12.4.4 and 12.4.5 of Aurora's Regulatory Proposal.

Network asset maintenance – ground mounted substations forecast expenditure totals approximately $6.9 million over the *Regulatory Control Period*, an average of $1.4 million each year.

Routine maintenance forecast expenditure totals approximately $4.9 million over the *Regulatory Control Period*. The expenditure profile decreases over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates. The work programs are driven primarily by high voltage regulator inspection and maintenance programs, and ground mounted substation condition monitoring programs, inspection programs and audits.

Non-routine maintenance forecast expenditure totals approximately $2.0 million over the *Regulatory Control Period*. The expenditure profile decreases over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates. The work programs are driven primarily by high voltage regulator asset repairs, ground mounted substation asset repairs and graffiti removal.

An increase in network asset maintenance – ground mounted substations operating expenditure from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by compliance requirements for:

- fire door inspections;
- confined space working conditions; and
- earth site testing.

An improvement in information systems has provided an opportunity to reduce the inspection frequency for CBD substations and a consequential reduction in associated expenditure. Replacement of older battery systems in substations will reduce the level of maintenance required which is expected to offset the additional expenditure required for earth testing.

Aurora's asset management practices on these assets have been stable for a number of years and are considered to be providing a well balanced trade-off between maintenance and capital expenditure. The level of repair outside programmed maintenance has been stable over the past five years indicating that the existing frequency of planned maintenance cycles is reasonable. Similarly, programmed maintenance costs each year are reasonably stable, with the exception of a slight increase in planned maintenance compared to corrective maintenance activities. Overall, the level of reactive failures experienced on the network is considered reasonable against industry practices.

The network asset maintenance – ground mounted substations Opex Category has a number of work programs which are described in the following sections of this RIN Response.

Asset inspections

Aurora has had an inspection program in place for several years that ensures assets are monitored for general condition and security. The opportunity is also taken to capture loading data during this process to support the capacity management planning processes. The frequency of inspection considers the varying risk profiles across the assets and is detailed in Table 3.

Table 3: Inspection frequency for ground mounted substations

Classification	Frequency
CBD substations	Once per year (winter)
All other substations greater than 100% load	Once per year (winter)
All other substations less than 100% load	Once every two years (winter)

The timing of these inspections has been chosen to coincide with Tasmania's peak load as this will demonstrate how the assets are performing under maximum loading conditions.

Fire suppression compliance inspection

To comply with AS 1851 Appendix G, Aurora is required to conduct monthly inspections of the fire panel and smoke alarms at all sites with a fire suppression system.

Fire and exit doors inspection

The Building Code of Australia which covers larger distribution substations also refers to AS 1851 Appendix G for periodic inspections of fire doors and exit lights every three months.

Targeted inspection and monitoring

Specific risks within this asset class have been identified and require targeted risk mitigation strategies.

Following a sample audit of sites to review Aurora's information quality on earthing system condition, it was identified that there was a need to improve the data quality held to ensure compliance to AS 2067 and ENA EG 0. Accordingly, Aurora proposes to increase the level of earth site condition measurement from five to 10 sites per year commencing in the 2012-13 financial year. During the period 2010-11 and 2011-12, Aurora will provide a sum for the inspection and subsequent upgrade of these sites (when required). Aurora will review this information to determine if the proposed inspection levels are adequate for subsequent years.

Special audits

This program is to audit assets when an emerging issue is identified throughout the year. This also includes SF_6 reporting requirements.

Asset repairs

Specifically identified defects identified during asset inspections and routine maintenance or through other ad-hoc site visits or customer complaints are prioritised and rectified through the general asset defects management process.

Graffiti

It is Aurora's policy to remove all offensive graffiti within 24 hours of notification of the presence of the offensive graffiti. Extensive graffiti and graffiti covering substation signage are removed within the normal asset repair time frames.

Routine maintenance

Aurora's practice is to complete invasive routine maintenance on all ground mounted HV switchgear and distribution transformers on a four year cycle.

This activity ensures that all functional housekeeping activities are performed on the assets to keep them operating satisfactorily until the next maintenance cycle. The activity includes removal of vegetation build-up within the cabinets, thermal and partial discharge inspections and other general maintenance activities. Protection systems are also checked.

The program is also used to identify assets where the condition has deteriorated to a level where renewal has become necessary, and to monitor risks associated with specific programs identified within the asset category.

Vegetation

Vegetation protruding from outside of the enclosure into the substation equipment can pose a significant risk to the installation. Incidents of this type have resulted in major equipment failure producing significant outage times. This risk is mitigated as part of routine maintenance activities.

Old battery systems

Older battery systems require six monthly inspections based on current deterioration rates observed by field staff. These batteries are progressively being replaced with modern equivalents that will reduce the level of site visits and associated costs.

Confined spaces

To comply with relevant legislation around confined space management, Aurora checks the accuracy of the confined space register and confined space labelling once every four years in conjunction with the switchgear maintenance.

Remote control

Aurora has a program in place to remote control switchgear in specific locations. This program is managed within the System Performance Team.

Where a site has been remote controlled, the batteries that are part of the remote control system are replaced every four years at the same time as the switchgear maintenance.

System spares

The systems spares funding is required for the management of reclaimed spares-equipment that is removed from the system for reasons other than age and condition and are able to be re-used within the system.

2.2.10. Network asset maintenance – overhead network and structures

Network asset maintenance – overhead network and structures operating expenditure falls within the Opex Categories of routine maintenance and non-routine maintenance. Drivers for this expenditure are discussed in sections 12.4.4 and 12.4.5 of Aurora's Regulatory Proposal.

Network asset maintenance – overhead network and structures forecast expenditure totals approximately $39.0 million over the *Regulatory Control Period,* an average of $8.0 million each year.

Routine maintenance forecast expenditure totals approximately $24.5 million over the *Regulatory Control Period*. The expenditure profile decreases over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates. The work programs are driven primarily by the three and a half year overhead inspection treatment program and by transformer load monitoring.

Non-routine maintenance forecast expenditure totals approximately $14.5 million over the *Regulatory Control Period*. The expenditure profile decreases over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates. The work programs are driven primarily by overhead system defect repairs, trunk feeder maintenance programs and low conductor clearance rectifications.

An increase in network asset maintenance – overhead network and structures operating expenditure from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by a significant increase in the rate of asset repairs on defects within the overhead system and increased costs associated with pole inspections and pole staking.

Aurora's asset management practices on these assets have been stable for a number of years and generally considered to be providing a well balanced trade-off between maintenance and capital expenditure. The level of repair outside programmed maintenance is stable over the past five years indicating the existing frequency of planned maintenance cycles is reasonable. Similarly, programmed maintenance costs each year are reasonably stable, with the exception of a slight increase in planned maintenance compared to corrective maintenance activities. Overall, the level of reactive failures experienced on the network is considered reasonable against industry practices.

Aurora's inspection and monitoring program consist of four components:

1. inspection and testing of structures;
2. sample inspection of steel towers;
3. non-destructive evaluation; and
4. graffiti removal.

There are no major changes to this program and the proposed expenditure is to remain consistent with historical spend.

Inspection and Testing of Structures

Inspection of structures is undertaken on a three and a half year cycle in accordance with Network Policy NN R AM 05 Inspection and Maintenance of Distribution Overhead Lines.

The inspection cycle for other Australian utilities is currently a four to four and a half year cycle. The main reason for this difference is the class of wood used for power poles. The majority of poles installed on mainland Australia are of Class 1 and 2, which means that they are extremely dense and less prone to decay. Tasmanian timbers on the other hand are sourced locally and are of Class 3 and 4.

Confidential

Confidential

Sample inspection and treatment of steel towers

Aurora has a small population of extra high voltage steel lattice towers in its system. The majority of towers were installed in the late 1950s and are approaching the end of their nominal asset life. Aurora undertakes sample inspections to monitor their condition for preventative maintenance works and undertakes minor remedial action to defer replacement expenditure.

Non-destructive evaluation

Current testing methods to detect the progression of the decay in wood poles are destructive (refer Network Procedure NP R AM 27.1 Pole Inspection and Maintenance (Part 1 – Wood Poles). Three holes are drilled near and below ground line to detect the level of decay. The below ground test holes require the removal of material around the pole, including concrete and paved surfaces.

Aurora is currently investigating non-destructive methods of testing as part of an industry wide initiative from the Energy Networks Association (ENA) Power Poles and Cross Arms Committee. However, benefits associated with non-destructive technologies will need to be assessed against their cost to ensure that Aurora is investing in the most cost effective activity.

Graffiti removal

Aurora has a policy of removing any graffiti that is offensive to the community namely if it is derogatory to a particular race or section of the community or depicts offensive words or drawings. However, several community organisations and councils have a zero tolerance to graffiti and lobby for the removal of all graffiti from Aurora assets.

To address this issue, Aurora has negotiated with the Hobart City Council to contribute $5,000 per year to the council to remove graffiti from Aurora structures and assets in the HCC environs.

Aurora also supplies material (such as paints) and supervision to the Police Young Offenders Program and various community associations to assist in the removal of graffiti.

Routine Maintenance

Aurora's routine maintenance program consists of two components:

1. straightening poles; and
2. repairing steel and concrete poles.

There are no major changes to this program and the proposed expenditure is to remain consistent with historical spend.

Leaning poles

The aim of this program is to address the issue of leaning poles within Aurora's distribution network. A pole is considered leaning, and is a reportable defect, when it is leaning more than six degrees from vertical (or approximately four pole head widths out of vertical).

When a pole is leaning between six degrees and ten degrees from vertical, there is a higher risk of conductor clashing, but the pole itself is structurally sound. A lean of greater than ten degrees indicates that the foundations of the pole are potentially compromised and the pole may be in danger of falling.

Leaning wood poles are mainly due to problems associated with ground and foundation strengths, backfill medium, compactness at foot and heel of the pole and inadequate counterforce infrastructure (stays, etc).

Repair steel and concrete poles

The aim of this program is to repair the below ground section of direct buried steel and concrete poles. Steel and concrete poles (Stobie poles) are a composite pole constructed of two steel channel sections held apart by strategically positioned bolts with a concrete infill. They are strong in the major axis and very weak in the minor axis.

These poles were installed predominately from the 1950s through to the 1970s. They are very expensive to manufacture and are susceptible to corrosion at or just below ground line as the steelwork is generally only protected by enamel paint. However they can be repaired in situ by welding a steel plate across the affected area.

Repairing the below ground section of direct buried steel and concrete poles is cost effective as it will extend their lives by 15 to 20 years.

Steel and concrete are poles very good in fire prone areas, but have a high bird interaction impact due to their conductivity. They also perform poorly in coastal environments where the salt laden air attacks the steel section above ground.

There are no major changes to this program and the proposed expenditure is to remain consistent with historical spend.

2.2.11. Network asset maintenance – underground network

Network asset maintenance – underground network operating expenditure falls within the Opex Categories of routine maintenance and non-routine maintenance. Drivers for this expenditure are also discussed in sections 12.4.4 and 12.4.5 of Aurora's Regulatory Proposal.

Network asset maintenance – underground network forecast expenditure totals approximately $2.8 million over the *Regulatory Control Period,* an average of $0.5 million each year.

Routine maintenance forecast expenditure totals approximately $0.7 million over the *Regulatory Control Period*. The expenditure profile decreases throughout the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates. The work programs are driven primarily by oil-filled cable inspection and monitoring.

Non-routine maintenance forecast expenditure totals approximately $2.1 million over the *Regulatory Control Period*. The expenditure profile decreases throughout the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates. The work programs are driven primarily by underground system asset repairs.

A slight increase in expenditure from the *Current Regulatory Control Period* to the *Forthcoming Regulatory Control Period* has been driven by repair activities associated with deteriorating performance of CONSAC cables, other ageing cables and an increase in incidents related to third party damage.

Aurora is satisfied that its expenditure on inspection and monitoring is prudent to manage the risk around oil and submarine cables as per current industry practices and recommendations from cable experts.

Consideration has been given to investigate some of the new technologies now on the market in an attempt to fill the void of condition data for cable assets, but it is acknowledged that this is not an easy exercise. Aurora shall investigate further with external expert and specialised HV cable testing agencies to conduct (on trial basis first) condition-monitoring testing of the critical cables.

A considerable increase in reactive repairs or replacement is expected from the CONSAC cables until they are removed from the network. The level of consumer disruption is currently at a tolerable level, but if this increases during the period of the plan, an accelerated program of replacement may be required.

A need to improve the decision making data for earthing installation upgrades has however been identified as an area that requires additional focus in the period of the plan.

It is proposed to continue the current asset management practices and expenditures without any significant changes in any practice or frequency. The sustained initial increase in repair activities is budgeted as a direct consequence of the deteriorating performance of CONSAC cables and other ageing cables. Also third party damage incidents are on rise due to increased gas reticulations activities in the state.

Marginal increase in asset inspection and monitoring programs is attributed to new condition monitoring programs and earth testing programs.

All work programs in this asset class are developed in accordance with the Network Management Strategy, which describes the long term direction for the management of Aurora's network assets.

The programs are also developed within Aurora's risk management framework. The framework and supporting policy documents are based on risk management standards and are approved by Aurora's Board Audit and Risk Committee. Risk management drives virtually all network activities and programs including:

- reliability assessment;
- network augmentation;
- asset replacement;
- asset operation, and
- asset maintenance.

Risks are assessed according to the Australian Risk Management standard (AS/NZS ISO 31000) and are assessed with reference to the Aurora risk management framework and the potential impacts on:

- safety;
- environment;
- reliability;
- system security;
- financial performance;
- legal/compliance; and
- corporate reputation.

Aurora has a current initiative to introduce a risk-based approach to optimise work programs to help determine allocations of resources across the various work programs and support activities.

The focus of this approach will be to ensure that work programs address the highest ranked risks first. The outcomes of this initiative will be:

- a consistent approach for assessing risk across work programs, allowing for a comparison of risk across these programs;
- assessment criteria that are aligned with the business objectives; and
- capital budgets developed to deliver business objectives in a sustainable manner across work programs.

In addition to the Network Management Strategy and the Risk Management Framework, when developing programs the following options are considered for each asset.

- reactive maintenance;
- preventative maintenance;
- refurbishment;
- reactive asset replacement;
- planned asset replacement; and
- non-network solutions.

From these options, an appropriate program is developed for each asset based on the option that provides the most whole of life benefit and fits in to one of the following categories.

- asset inspection and monitoring;
- asset repair;
- non-demand replacement;
- routine maintenance; and
- safety, health and environment.

Asset inspection and monitoring

There is a fundamental requirement for Aurora to periodically inspect its assets to appropriately and effectively target preventative maintenance programs and to ensure the physical state and condition of the asset does not represent a hazard to the public. Programs are developed based on trends, field reports or time periods based on advice from manufacturers, as well as using the WASP outage data to identify which assets are having the largest impact on SAIDI and SAIFI, and creating appropriate inspection programs to determine the extent of the issue.

Asset repair

Asset repair programs are developed in one of two ways. The first way is by utilising the information gathered in asset inspection and monitoring programs to create a program repairing faulty assets as required. The second way is to use the Aurora defect pool, which is populated by Aurora's field staff. Once defects have been identified, they are given a priority based on developed criteria and an asset repair program is developed.

Routine maintenance

Routine maintenance programs are developed using Network Management Strategy and Risk Management Framework, where preventative maintenance is considered the best option to achieving Aurora's goals.

Asset inspection and monitoring programs

The oil filled cable testing and monitoring program has a main driver of environmental oil leakage risk, with a secondary driver of reliability. Volumes are based on number of assets in the system.

The inspection and general testing of underground cables and furniture has the main drivers of condition, public safety or fault location, with a secondary driver to prevent the failure of the assets. Volumes are based on historical expenditures.

HV cable condition monitoring partial discharge and dielectric loss angle testing are new programs. The main driver is to identify the condition of critical and ageing HV cables in the distribution network and develop a prudent HV cable replacement policy. Volumes (6km per year) have been estimated to initially cover the different type of critical cables.

The visual inspection of submarine cable signage and cable terminations program driver is to manage the risk of inadvertent digging and anchoring. Volumes are based on all signage inspected once each year.

New inspections associated with intelligent network is a new program with a driver of reduced operating expenditure.

Corrective maintenance programs

Corrective maintenance programs are reactive expenditure on faulty or failed assets to rectify the faults. Volumes are based on historical expenditures.

2.2.12. Network asset maintenance – zone substations

Network asset maintenance – zone substation operating expenditure falls within the Opex Categories of routine maintenance and non-routine maintenance. Drivers for this expenditure are discussed in sections 12.4.4 and 12.4.5 of Aurora's Regulatory Proposal.

Network asset maintenance – zone substation forecast expenditure totals approximately $7.8 million over the *Regulatory Control Period*, an average of $1.5 million each year.

Routine maintenance forecast expenditure totals approximately $7.3 million over the *Regulatory Control Period*. The expenditure profile reduces slightly over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates. The work programs are driven primarily by routine maintenance on zone substations.

Non-routine maintenance forecast expenditure totals approximately $0.4 million over the *Regulatory Control Period*. The expenditure profile reduces slightly over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates. The work programs are driven primarily by zone substation asset repairs.

An increase in expenditure from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by the additional expenditure associated with an increase in routine maintenance due to the addition of two zone substations during the *Current Regulatory Control Period*.

2.2.13. Network division management

Network division management operating expenditure drivers are discussed in section 12.4.1 of Aurora's Regulatory Proposal.

The Network division is responsible for planning, operating and monitoring Aurora's distribution network, including the planning and delivery of its program of work. To achieve this objective network division management costs include all costs associated with running the division including labour and overhead costs. The primary work groups that are considered network division management are:

- Fault and Operations;
- Customer services;
- Regulatory;
- Commercial Services;
- Asset Management;
- IT system;
- Executive; and
- Data Integrity;

Network division management also includes directly allocated costs such as GSL payments, the electrical safety levy, and the national electricity market levy.

Network division management forecast expenditure totals approximately $78.0 million over the *Regulatory Control Period*, an average of $15.6 million each year.

These network division management costs form part of the Aurora's shared costs and are allocated across programs of work based on a percentage spend and are in line with Aurora's capitalisation policy.

Network divisional management is an aggregate of the following Opex Categories:

- network management;

- GSL payments;
- customer service;
- regulatory;
- electrical safety levy; and
- national electricity market levy.

The expenditure profile for all the Opex Categories within network division management generally decreases throughout the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates.

A decrease in expenditure for the majority of the Opex Categories within network division management from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by the Aurora's distribution business strategy which is premised on improving price and service outcomes to customers. To achieve this strategic objective, the distribution business underwent a major organisational review with a resultant reduction in staffing levels across the business.

Each of the network division management Opex Categories is discussed in the following sections of this RIN Response.

2.2.13.1. Network division management – customer service

Customer service expenditure comprises costs associated with the functions undertaken by the Network Customer Group. This group facilitates customer dispute processes, implements and improves customer service strategies, and provides administration of Aurora's distribution customer charter.

Network division management – customer service forecast expenditure totals approximately $7.1 million over the *Regulatory Control Period*, an average of approximately $1.4 million each year. Aurora's three percent annual efficiency factor applies to this Opex Category.

A decrease in network division management – customer service operating expenditure from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by the Aurora's distribution business strategy.

2.2.13.2. Network division management – electrical safety levy

The electrical safety levy is an annual charge payable by Aurora, in accordance with section 121B of the ESI Act, to fund the operation and administration of the electrical safety inspection service in Tasmania.

The amount of the levy is determined by Workplace Standards Tasmania (WST) on an annual basis and has been incorporated as an adjustment to Aurora's aggregate annual revenue requirement (AARR) within OTTER's 2007 Determination.

Network division management – electrical safety levy forecast expenditure totals approximately $13.2 million over the *Regulatory Control Period,* an average of $2.6 million each year.

Aurora does not consider there to be any significant changes to the operations of the electrical safety levy and has forecast no change in this expenditure.

2.2.13.3. Network division management – GSL payments

GSL payments are payment made by Aurora to customers who experience outages that meet the prescribed thresholds in accordance with OTTER's GSL Scheme guidelines[1].

Network division management – GSL payments forecast expenditure totals approximately $6.4 million over the *Regulatory Control Period*, an average of $1.3 million each year. Aurora's three percent annual efficiency factor applies to this Opex Category.

2.2.13.4. Network division management – national electricity market levy

The national electricity market (NEM) levy is an annual charge payable by Aurora, in accordance with section 121 of the ESI Act, for the State's share of the funding the AEMC.

The amount of the levy is advised by the Minister for Energy on an annual basis and has been incorporated as an adjustment to Aurora's AARR within OTTER's 2007 Determination.

Network division management – national electricity market levy forecast expenditure totals approximately $1.5 million over the *Regulatory Control Period*, an average of $0.3 million each year.

Aurora does not consider there to be any significant changes to the operations of the NEM levy and has forecast no change in this expenditure.

2.2.13.5. Network division management – network management

The Network division is responsible for planning, operating and monitoring Aurora's distribution network, including the planning and delivery of its program of work. To achieve this objective network division management costs include all costs associated with running the division including labour and overhead costs. The primary work groups that are considered network division management are:

- Fault and Operations;
- Customer;
- Regulatory;
- Commercial Services;
- Asset Management;
- IT system;
- Executive; and
- Data Integrity.

These network management costs form part of the Network shared costs pool and are allocated across programs of work based on a percentage spend and in line with Aurora's capitalisation policy.

[1] Guideline, Guaranteed Service Level (GSL) Scheme, December 2007

Network division management – network management forecast expenditure totals approximately $46.0 million over the *Regulatory Control Period* and on average $9.2 million each year. Aurora's three percent annual efficiency factor applies to this Opex Category.

A decrease in network division management – network management operating expenditure from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by the Aurora's distribution business strategy.

2.2.13.6. Network division management – regulatory

Network division regulatory expenditure relates to costs associated with fulfilling regulatory obligations within the distribution business. This includes costs associated with regulatory proposals, administrative regulatory requirements, legislative and compliance obligations.

Regulatory forecast expenditure totals approximately $3.7 million over the *Regulatory Control Period*, an average of $0.7 million each year. Aurora's three percent annual efficiency factor applies to this Opex Category.

A decrease in expenditure from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by the Aurora's distribution business strategy.

2.2.14. System operations

System operations operating expenditure falls within the Opex Category of non-network division management. Drivers for this expenditure are discussed in section 12.4.2 of Aurora's Regulatory Proposal.

System operations forecast expenditure totals approximately $1.6 million over the *Regulatory Control Period*, an average of $0.3 million each year. The expenditure profile decreases over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates.

System operations forecast expenditure remains consistent from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period.* System operations expenditure includes system reconfigurations and system status checks.

System reconfigurations

System reconfigurations are driven by activities associated with the network system management for load, voltage, system stability and constraints.

System status checks

System status checks are driven by activities associated with the checking/recording of the operational status and equipment verification by field personnel and includes but is not limited to checking of system loadings and voltages, substation labelling and system configuration.

2.2.15. Vegetation management

Vegetation management operating expenditure falls within the Opex Categories of routine maintenance and non-routine maintenance. Drivers for this expenditure are discussed in sections 12.4.4 and 12.4.5 of Aurora's Regulatory Proposal.

Vegetation management forecast expenditure totals approximately $41.1 million over the *Regulatory Control Period*, an average of $8.2 million each year.

Vegetation management operating expenditure is primarily driven by activities associated with Aurora's compliance obligations within its distribution licence[2] and Chapter 8A of the TEC.

Aurora's vegetation management program is designed to:

1. comply with Chapter 8A of the TEC, as well as the ESI Act and the ESI&A Act as appropriate;
2. control vegetation interaction with the network to minimise the probability of starting bush fires; to increase public safety; and to improve network reliability;
3. satisfy customers and stakeholders; and
4. ensure cost effectiveness.

Aurora's vegetation management plan[3] covers two activities associated with vegetation management:

1. cyclic vegetation clearing; and
2. internal services for system switching and Live Line work specifically for vegetation management.

The vegetation management plan delivers the objectives of Aurora's vegetation management strategy through the application of the following key components:

- full compliance with regulatory requirements, in particular Chapter 8A of the TEC, ensuring the minimum standards and practices are delivered;
- ensure appropriate risk mitigation measures for public safety, bushfire, and reliability are in the program;
- ensure that the program is aimed at achieving an efficient maintenance cycle (as opposed to a trimming cycle)[4];
- deliver a vegetation management program that delivers longer term cost reductions[5]; and
- continually review performance of the program, contractor efficiency, customer satisfaction and the business risks[6] associated with vegetation management.

All vegetation clearing works are carried out by vegetation clearing contracts that are let through a competitive tender process.

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[2] Electricity Supply Industry Distribution Licence issued to Aurora Energy Pty Ltd 21 December 2008.
[3] Distribution licence, Section 9 and Schedule 2.
[4] Trimming Cycle refers to the practice of removing the minimum vegetation to comply with TEC 8A, whilst Maintenance Cycle removes additional vegetation reducing the cycle (and cost) over time despite its initial higher cost.
[5] Includes input into system design, asset component selection and vegetation planting.
[6] Business risks include Bushfire Mitigation.

Routine maintenance forecast expenditure totals approximately $36.5 million over the *Regulatory Control Period* and is generally driven by cyclic maintenance activities associated with TEC compliance. The expenditure profile decreases over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates.

Non-routine maintenance forecast expenditure totals approximately $4.6 million over the *Regulatory Control Period* and is generally driven by maintenance activities associated with the clearing of access tracks. The expenditure profile decreases over the *Regulatory Control Period*, principally as a result of a three percent annual efficiency factor being applied to Aurora's unit rates.

A decrease in vegetation management operating expenditure from the *Current Regulatory Control Period to the Forthcoming Regulatory Control Period* has been driven by the Aurora's distribution business strategy which is premised on improving price and service outcomes to customers. To achieve this strategic objective, the distribution business underwent a major organisational review with a resultant reduction in staffing levels across the business.

For the vegetation management program that efficiencies will be achieved through a:

- restructure of internal vegetation management team;
- restructure of the external vegetation management contract models;
- review of 'Cut Type' undertaken within each span; and
- review of current risk profiles associated with vegetation management.

2.3. Preparation of forecasts

This section of Aurora's RIN Response will discuss how Aurora has prepared its forecasts for operating expenditure for each Opex Category.

2.3.1. Connection asset repair

All connection asset repair work programs are developed in accordance with the Network Management Strategy, which describes the objectives of Aurora and the distribution business.

The programs are also developed within Aurora's risk management framework and policies, which are based on risk management standards and are approved by BARC.

Aurora has legal and ethical responsibilities, which must be adhered to as outlined in the Aurora Compliance Policy. Connection asset repair work programs may be based on regulatory or other legal requirements (for example customer driven work) or may be safety and risk driven.

Work programs developed for connection assets can be separated into the following high level categories:

- asset inspection;
- asset repair; and
- metering ancillary equipment.

Asset inspection

There is a fundamental requirement for Aurora to periodically inspect its assets to appropriately and effectively target preventative maintenance programs and to ensure the physical state and condition of the asset does not represent a hazard to the public.

Asset repair

Connection asset repair work is either compliance driven, or is linked to the defective assets that are identified through the asset inspection programs.

Metering ancillary equipment

Metering equipment must be inspected and maintained with regard to regulatory obligations under the Rules and TEC.

Operational activities can be divided into inspection and maintenance programs and are discussed within the connection assets management plan. This management plan is appended as an attachment to Aurora's Regulatory Proposal.

2.3.1.1. Meet or manage expected demand

Connection asset repair work programs are designed to maintain the distribution network at current levels of demand by addressing issues to replace or repair metering ancillary assets under fault, which have failed in service.

2.3.1.2. Regulatory obligations

The TEC requires that Aurora observes good electricity supply industry practice by minimising the risk associated with the failure or reduced performance of assets. This requirement is part of the basis that forms inspection and replacement programs. There are also regulatory requirements around the removal of redundant assets, which are covered in the connection asset repair work program.

Aurora management and work practices for connection asset repairs are designed to comply with the TEC and other relevant legislative requirements, which are covered in Aurora's asset management plans. For compliance reasons, connection asset repair inspection programs must now be undertaken under a strict regime.

2.3.1.3. Quality, reliability and security of supply

Connection asset repair work programs are designed to maintain the distribution network's current levels of power quality, reliability and security by addressing issues associated with deteriorating asset condition, generally through the replacement of existing assets that are in poor condition.

Connection asset repair work programs are designed to address specific issues associated with existing assets that may impact on safety, environment, reliability and system security.

2.3.1.4. Reliability, safety and security of the distribution system

These programs are designed to maintain the distribution network's current levels of reliability, safety and security by addressing issues associated with deteriorating asset condition, generally through the replacement of existing assets that are in poor condition.

2.3.1.5. Efficient costs

Aurora considers that expenditure in the connection asset repair Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate. Aurora considers that the forecast volumes of work are appropriate because these programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.5 of this RIN Response.

2.3.1.6. Prudent operator

Aurora considers that expenditure in the connection asset repair Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* on the basis that the works programs for this Opex Category have been determined using volumes that are consistent with historical trends and the unit rates are deemed efficient.

For the program of work proposed in the upcoming regulatory period, all proposed volumes of work are based on either compliance for testing of metering transformers, or historical maintenance practices and fault responses. The forecasting methodology that Aurora applied for the *Current Regulatory Control Period* has remained consistent for the *Forthcoming Regulatory Control Period*.

This is further discussed in section 2.3.6.6 of this RIN Response.

2.3.1.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for connection asset repair Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives* as the work programs have been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.1.8. Benchmark operating expenditure

Connection asset repair work programs are managed in a away to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.8 of this RIN Response.

2.3.1.9. Expenditure during preceding Regulatory Control Periods

There are no significant changes to changes in operational expenditure for the connection asset repair work program proposed in the *Forthcoming Regulatory Control Period*. All proposed volumes of work are based on either compliance for testing of metering transformers, or historical maintenance practices and fault responses. A slight step increase between the *Current Regulatory Control Period* and the *Forthcoming Regulatory Control Period* is mainly due to the increased metering transformer inspection program required to ensure compliance by the end of the *Current Regulatory Control Period* and the additional funds for removing redundant services.

Connection asset repair work programs are based on Aurora's historical service related outage information. For meter ancillary equipment inspection; compliance with the requirements of schedule 7.3 of the Rules and clause 9.18.2 of the TEC require that all metering CTs and VTs must be tested every 10 years. As a result, Aurora has a program in place to test 10 percent of installed stock, or 410 metering transformers annually.

2.3.1.10. Relative prices of inputs

Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates.

This is further discussed in section 2.3.6.10 of this RIN Response.

2.3.1.11. Substitution between operating and capital expenditure

Substitution possibilities for this expenditure are discussed in sections 11.4, 12.4.4 and 12.4.5, and chapter 13 of Aurora's Regulatory Proposal.

The inspection programs for metering transformers and overhead services will identify assets as either non-compliant or substandard and will therefore require replacement. A relationship exists between these inspection and replacement programs, as assets identified for targeted replacement during inspection programs will drive the capital work required for replacement of such assets. By increasing the scope of inspection programs it is expected that asset replacements will increase. In turn, any asset replacement will defer the inspection requirements of that asset either due to improved condition or because it resets the period required for inspection as required for compliance.

Generally, either a run to failure or run to non-compliance strategy exists for connection assets. Therefore capital work is not deferred through maintenance activities because assets will be replaced rather than maintained.

2.3.1.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.1.13. Non-network alternatives

Non-network alternatives are discussed in chapter 14 of Aurora's Regulatory Proposal and in response to paragraph 11 of the RIN.

Aurora constructs its asset management plans considering the whole of life costs associated with managing assets. This includes considering replacement with non-network solutions to avoid maintenance costs where applicable.

2.3.1.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.1.15. Non-recurrent costs

There are no significant changes in operational expenditure for the connection asset repair work program proposed for the *Forthcoming Regulatory Control Period*. All proposed volumes of work are based on either compliance for testing of metering transformers, or historical maintenance practices and fault responses. A slight step increase between the *Current Regulatory Control Period* and the *Forthcoming Regulatory Control Period* is mainly due to the increased metering transformer inspection program required to ensure compliance by the end of the *Current Regulatory Control Period* and the additional funds for removing redundant services. These are not considered to be one-off or non-recurrent costs.

2.3.1.16. Models or methodology

The methodology used by Aurora to develop the forecast projects for each work category is set out in Aurora's connection assets management plan.

2.3.1.17. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.1.18. Previous models or methodology

Connection asset repair forecasts are based on historical failure rates. For meter ancillary equipment inspection; compliance with the requirements of schedule 7.3 of the Rules and clause 9.18.2 of the TEC form the basis of the forecasts.

2.3.1.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.1.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.1.21. Network planning standards

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.2. Corporate and shared services

Each year, as part of its strategic planning process, Aurora documents its business strategy for the future in a five-year Strategic Plan. This strategic planning process commenced formally in 2005 as Aurora prepared to enter the national electricity market. The Strategic Plan is developed as part of a comprehensive process undertaken by the Board and management team over a number of months, the first step is a Board Planning Day in August each year.

The Strategic Plan, reflects the outcomes of these discussions, and is submitted to the Board for its approval in December each year. The primary audience for this document is the Board and Aurora's Executive Team, with the Strategic Plan used to inform and guide the development of Aurora's Corporate Plan. The Strategic Plan is not widely distributed within the business, nor is it provided to the shareholders or other stakeholders outside the business.

The shareholders usually write to the Board in December each year communicating their priorities and broad expectations for Aurora for the following financial year, and to raise specific issues to be considered in the development of the Corporate Plan for the following financial year.

Once approved by the Board, the Strategic Plan sets the direction for Aurora's future Corporate Plan. Aurora's Corporate Plan is required to be submitted to its shareholders by 31 March each year. The strategies, initiatives and measures outlined in the Strategic Plan are expanded upon in the Corporate Plan and associated Financial Plan.

Aurora's five year Financial Plan is a primary element of the Corporate Plan and includes business segment forecasts as well as the identification of key risks and management strategies. A high level Planning Assumption document is prepared to assist in the development of the Corporate Plan.

The Corporate Plan submitted to Shareholders is distributed to a wider audience within the business than the Strategic Plan.

The Corporate Plan provides the basis for Divisional Operating Plans that subsequently set out the means by which Aurora's overall strategy will be implemented at the Divisional level.

A standard form is not used in preparing the Divisional Operating Plans, with each area of the business able to determine the most appropriate mechanism to meet its particular needs. The focus in preparing Divisional Plans is ensuring that:

- Divisional activities are structured to support and contribute to the achievement of the Aurora's strategic focus and objectives;
- all staff have an awareness of Aurora's strategic focus and objectives and an understanding of how their role supports the achievement of these; and
- performance measures are developed to monitor and report progress in implementing initiatives and the effectiveness of initiatives in supporting Aurora's objectives.

The outcomes of this process have been utilised as the basis of determining the quantum of corporate and shared services costs that will be distributed to the individual divisions within Aurora in accordance with the Aurora ICAM.

2.3.2.1. Meet or manage expected demand

The distribution business has responsibility for meeting the above requirements. Corporate and shared services provide governance and support services to various divisions and subsidiaries within the Aurora Group, one of those divisions being the distribution business. Corporate and shared services assist the distribution business to meet the above requirements rather than having direct ownership.

Whilst corporate and shared services operating expenditure does not contribute directly in meeting or managing the expected demand for *standard control services* it provides an essential support services that ensure the other Opex Categories meet or manage this expected demand.

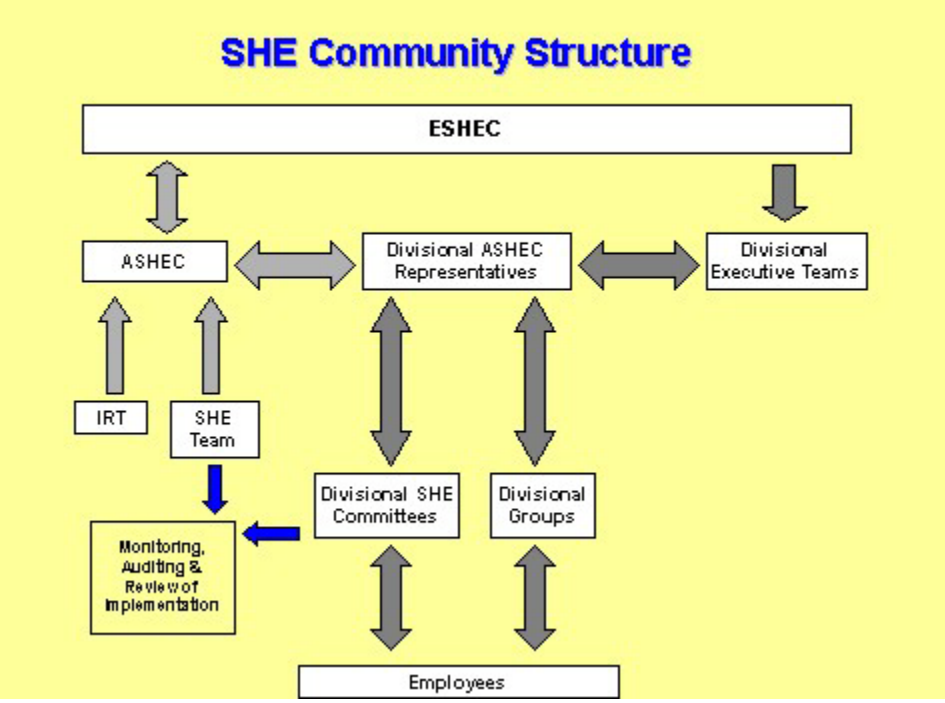
2.3.2.2. Regulatory obligations

Corporate and Shared Services are responsible for the management of, and compliance with, numerous generic and specific regulatory obligations that Aurora must comply with. The Compliance Policy and Non Compliance Management Policy are the business wide governance documents that outline the requirements and expectations of the business.

Aurora's Compliance policy requires "Accountable Persons" to complete a compliance questionnaire that supports both the Company Secretary's statement of group compliance each year and the CEO/CFO representations made to the board demonstrating a sound system of risk management and internal control. The compliance questionnaire outlines the specific responsibilities for each Accountable Person.

Compliance requirements are assessed by the business as part of the process of developing strategies and plans which are funded and supported through the development of financial work program forecasts included into the planning and budgeting process. The financial impacts of meeting each of the compliance obligations vary considerably depending upon the nature, degree of change and severity of the outcomes of not complying.

The key regulatory obligations, in as far as impacting on the forecast expenditure for work programs for the *Forthcoming Regulatory Control Period* is safety, health and environment (SHE). The Aurora SHE Community Structure is represented as follows:



AuroraSafe is Aurora's safety management system that provides the standards for safe work, to ensure Aurora satisfies its moral and legal obligations to its employees, contractors and the community.

AuroraHealth provides activities and guidance to support injury or illness, and to promote the health and general well-being of Aurora employees and their families.

AuroraGreen provides the procedural documentation to ensure Aurora meets its legal obligation for the protection of the environment.

People and Culture have responsibility for managing "Business wide" SHE costs and comprise:

- labour costs for corporate SHE representatives who support:
    - divisional safety representatives and workforce team leaders in delivery of the risk based approach to managing SHE; and
    - the delivery of safety programs and initiatives that are instrumental in meeting Aurora's safety key performance indicators; and
- external costs attributable to Aurora, as whole-of-business. Costs attributable to each division are budgeted for and paid for by that division.

2.3.2.3. Quality, reliability and security of supply

Whilst corporate and shared services operating expenditure does not contribute directly in maintaining the reliability and security of the distribution system through the supply of *standard control services* it provides an essential support services that ensures the other Opex Categories maintain the quality, reliability and security of supply.

2.3.2.4. Reliability, safety and security of the distribution system

Whilst corporate and shared services operating expenditure does not contribute directly in maintaining the reliability, safety and security of the distribution system through the supply of *standard control services* it provides the essential support services that ensures the other Opex Categories maintain the reliability, safety and security of the distribution system.

2.3.2.5. Efficient costs

Aurora considers that expenditure in the corporate and shared services category reflects the efficient costs of achieving the *operating expenditure objectives*. Aurora's distribution business expenditure for the *Forthcoming Regulatory Control Period* will be driven by the objective of ensuring that there is no increase to customer prices as a result of its efforts. This means that Aurora is committed to securing value for money in its investments and the associated overhead costs, and operating efficiently.

In developing its shared costs expenditure forecasts Aurora has ensured that the forecasts of shared cost expenditure for the *Forthcoming Regulatory Control Period* comprise expenditure that represent the most efficient means of meeting its expenditure objectives. Overall, expenditure forecasts have been prepared with regard to three concepts of efficiency, being:

- technical or productive efficiency which is achieved whereby the shared costs allocated to Aurora's work program support the delivery of the work program at the least cost;
- allocative efficiency where resources used to support the delivery of the work program provide the greatest benefit relative to costs; and
- dynamic efficiency which is achieved where Aurora implements changes to its overheads in response to changes in demand from the business.

2.3.2.6. Prudent operator

On the basis of its understanding of the operations of other DNSPs, Aurora considers that the shared costs required to deliver its work program over the *Forthcoming Regulatory Control Period* represent prudent expenditure. This is because this expenditure provides critical support functions to the delivery of works and reflects standard industry practice. The rationale behind the establishment of key support functions provided by each shared cost pool is set out below.

Aurora engaged Deloitte to review the suitability of the methodology applied in its ICAM, which is used to allocate corporate and shared services costs to Aurora's distribution business. Overall Deloitte concluded that the methodology was sound and the costs were reasonable. The areas for improvement recommended through the review have been largely included in the current version of the ICAM.

As Deloitte provided an overall favourable assessment of the ICAM, and the majority of any recommendations were implemented, Aurora contends that allocation of corporate and shared services is undertaken on an equitable basis. Therefore the expenditure allocated to the distribution business has been carried out in the most prudent manner.

The prudency of the Deloitte ICAM review is also discussed in section 16.5.2 of Aurora's Regulatory Proposal.

2.3.2.7. Realistic expectation of the demand forecast and cost inputs

Whilst corporate and shared services operating expenditure may not directly reflect the realistic expectation of the demand forecast and cost inputs required to achieve the *capital expenditure objectives* it provides an essential support services that ensure the other Opex Categories reflect this realistic expectation.

2.3.2.8. Benchmark operating expenditure

Aurora's distribution business structure is little different from other distribution network service providers within Australia in that there is a central support service management structure, that underpins the engineering decision makers, that plan and oversee the work programs, completed by a field services workforce.

Aurora's corporate and shared services costs are developed using a bottom-up approach. This involves the identification of the costs that are required to undertake operating functions and support program delivery that are consistent with the Aurora Business Strategy.

In addition, Aurora appointed Deloitte to undertake a benchmarking review of Aurora's corporate and shared services. In its report, Deloitte concluded that Aurora is prudent and compares well in the benchmarking assessment.

2.3.2.9. Expenditure during preceding Regulatory Control Periods

The methodology for preparing corporate and shared services expenditure forecasts is primarily based on a bottom-up approach. This means that managers forecast their costs based on undertaking normal functions and identified projects. Actual and expected operating costs for preceding periods are only used as a basis for comparison and not relied upon for determining forecast expenditure. These total costs are then allocated to the divisions of Aurora in accordance with the approved ICAM.

2.3.2.10. Relative prices of inputs

Aurora's corporate and shared services costs were developed using a bottom-up approach. This means that managers forecast their costs based on undertaking normal functions and identified projects and applying the appropriate rates.

2.3.2.11. Substitution between operating and capital expenditure

In creating business cases for corporate and shared services capital expenditure, operating alternatives are explored to determine the optimal and most prudent approach to achieve desired results.

2.3.2.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.2.13. Non-network alternatives

Corporate and shared services expenditure is a support services to the distribution business and does not therefore have a non-network alternative.

2.3.2.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.2.15. Non-recurrent costs

In determining the corporate and shared services budget, one-off and non-recurrent costs are included as well as recurring costs.

2.3.2.16. Models or methodology

Aurora's ICAM model is created using the Corporate Plan figures. The methodology used is explained in CO384312 2008 PD ICAM discussion paper, which is appended as an attachment to the RIN Response.

2.3.2.17. Differences from previous models or methodology

Aurora's ICAM for the *Forthcoming Regulatory Control Period* has been amended from that utilised for the *Current Regulatory Control Period* to improve the reliability, consistency and robustness of the allocation drivers as recommended by the independent review undertaken by Deloitte.

2.3.2.18. Previous models or methodology

Aurora's current ICAM is appended as an attachment to this RIN Response.

2.3.2.19. Reasons for change of models or methodology

Aurora's ICAM for the *Forthcoming Regulatory Control Period* has been amended from that utilised for the *Current Regulatory Control Period* to improve the reliability, consistency and robustness of the allocation drivers as recommended by the independent review undertaken by Deloitte.

2.3.2.20. Asset maintenance plans

Not applicable for this RIN category.

2.3.2.21. Network planning standards

Not applicable for this RIN category.

2.3.3. Electrical safety and installation inspection

The forecast for electrical safety and installation inspection has been based on historical expenditure.

2.3.3.1. Meet or manage expected demand

As electrical safety and installation inspection work programs are driven by distribution network inspection activities undertaken by the electrical inspection staff engaged by WST in the operation and administration of the electrical safety inspection service in Tasmania, Aurora has not considered the direct contribution in meeting or managing the expected demand for *standard control services* when preparing the forecast for this RIN category.

2.3.3.2. Regulatory obligations

Electrical safety and installation inspection work programs are undertaken by electrical inspectors in accordance with the provisions of the EIS&A Act.

2.3.3.3. Quality, reliability and security of supply

Aurora does not consider quality, reliability and security of supply when preparing the forecast for this RIN category.

2.3.3.4. Reliability, safety and security of the distribution system

Aurora does not consider reliability, safety and security of the distribution system when preparing the forecast for this RIN category.

2.3.3.5. Efficient costs

Aurora considers that expenditure in the electrical safety and installation inspection Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the service is provided by electrical inspection staff engaged by WST under contract.

2.3.3.6. Prudent operator

A prudent operator in the same circumstances as Aurora would be required to make provision for this expenditure as these inspections would occur in compliance with the provisions of the EIS&A Act.

2.3.3.7. Realistic expectation of the demand forecast and cost inputs

Not applicable for this RIN category.

2.3.3.8. Benchmark operating expenditure

Not applicable for this RIN category.

2.3.3.9. Expenditure during preceding Regulatory Control Periods

Expenditure forecasts for electrical safety and installation inspection have been based on expenditure trends from the *Current Regulatory Control Period*.

2.3.3.10. Relative prices of inputs

Aurora does not consider the relative prices of operating and capital inputs when forecasting electrical safety and installation inspection Opex Category.

2.3.3.11. Substitution between operating and capital expenditure

Not applicable to this RIN category

2.3.3.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.3.13. Non-network alternatives

Aurora does not consider non-network alternatives when preparing the forecast for this RIN category.

2.3.3.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.3.15. Non-recurrent costs

There are no non-recurrent costs included in the forecasts for electrical safety and installation inspection operating expenditure.

2.3.3.16. Models or methodology

As discussed previously, the volumes and projects for all work categories are located in Aurora's work program. This work program is contained within Aurora's program of work model and has been utilised for the majority of forecast expenditure for the *Forthcoming Regulatory Control Period*.

2.3.3.17. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.3.18. Previous models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.3.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.3.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.3.21. Network planning standards

There are no jurisdictional planning standards in existence within Tasmania and Aurora has therefore adopted its own standards for network operations and development.

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal

2.3.4. Emergency and unscheduled power system

There has been an increase in the severity and impact of storms over the last four years. The increase in severity of storm events experienced reinforces the rise in costs that have been seen on the distribution network as a result of greater damage to distribution infrastructure.

As Aurora is unable to forecast when an emergency and unscheduled power system response and repair is required and in what volumes, historical data is used to construct the emergency and unscheduled power system program.

2.3.4.1. Meet or manage expected demand

Emergency and unscheduled power system work programs are designed to enable the efficient and effective management of power system faults or emergency situations that involve the power system. Emergency works is conducted to maintain a safe and secure system, and to minimise, both the number of customers affected by a supply outage, as well as the duration of any supply interruption.

2.3.4.2. Regulatory obligations

Emergency and unscheduled power system work programs comply with all applicable regulatory obligations and requirements including the Power System Safety Rules (PSSR) that cover the Tasmania electricity supply industry (Aurora, Transend, Hydro and AETV). The *Occupational Licensing Act* (OLA) also imposes certain operational licensing requirements on Aurora's staff. Aurora frequently conducts internal audits on PSSR and OLA compliance.

Aurora management and work practices for emergency and unscheduled power system functions are designed to comply with the TEC and other relevant legislative requirements, which are covered in the asset management plans. These asset management plans are included as an attachment to Aurora's Regulatory Proposal.

2.3.4.3. Quality, reliability and security of supply

Emergency and unscheduled power system work programs are designed to maintain the distribution network at current levels of demand, reliability and power quality by addressing issues associated with emergency and system fault situations.

2.3.4.4. Reliability, safety and security of the distribution system

Emergency and unscheduled power system work programs are designed to maintain the distribution network at current levels of demand, reliability and power quality by addressing issues associated with emergency and system fault situations, through consideration and application of safe acceptable work practices for restoration of power supply.

Aurora ensures that the emergency and unscheduled power system work program is aimed at achieving an efficient operation of the network and a prudent response to outages. By operating the system with reliability as the main focus, Aurora also adopts "good electricity industry practice" within its emergency and unscheduled power system work programs.

2.3.4.5. Efficient costs

Aurora considers that expenditure in the emergency and unscheduled power system Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate.

Section 18.4 of Aurora's Regulatory Proposal provides details on how Aurora considers its unit rates represent the efficient costs of achieving the expenditure objectives.

Aurora considers that the forecast volumes of work are appropriate because they have been based on historical trends.

Emergency and unscheduled power system work programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

Aurora sources all material and contractors through a rigorous tendering and contracts process. Aurora utilises an external contractor to deliver a portion of its programs, which has been benchmarked against Aurora's internal labour costs.

Aurora is also actively involved in industry working groups and committees, where Aurora has identified that the management strategies and work practices from other jurisdictions are consistent with those adopted by Aurora.

Aurora is also able to demonstrate it is efficient through a benchmarking review of its top 10 unit rates undertaken by PB.

2.3.4.6. Prudent operator

Aurora considers that expenditure in the emergency and unscheduled power system Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* on the basis that the works programs for this Opex Category have been determined using volumes that are consistent with historical trends and the unit rates are deemed efficient.

During the course of the pricing investigation for the *Current Regulatory Control Period* OTTER engaged Wilson Cook to:

> *"... recommend expenditure allowances for Aurora Energy for prudent and efficient levels of forecast capital and operating expenditure for the period 1 July 2006 to 30 June 2012."*[7]

Wilson Cook, in reviewing Aurora's forecast operating expenditure, found that:

> *"... Aurora's forecast operating expenditure for the period 1 July 2006 to 30 June 2012 may be considered prudent and efficient as adjusted in section 4.3 of this report."*[8]

Additionally, in the same report, Wilson Cook found Aurora's expenditure on operational assets for the period 1 July 2005 to 30 June 2006, and on non-operational assets for the period 1 July 2002 to 30 June 2006 to be prudent and efficient.

The forecasting methodology that Aurora applied for the *Current Regulatory Control Period* has remained consistent for the *Forthcoming Regulatory Control Period*. Aurora notes that it has not significantly changed its operating expenditure forecasting process for the *Forthcoming Regulatory Control Period* and, in consequence, considers the finding of prudency to be transferable.

2.3.4.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for the emergency and unscheduled power system Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives*.

Emergency and unscheduled power system work programs have generally been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan.

[7] 2007 Final Report, page 79
[8] Covering letter, 2007 Wilson Cook Report

2.3.4.8. Benchmark operating expenditure

Emergency and unscheduled power system work programs are managed in a way to ensure Aurora is operating a safe and reliable system using cost efficient approaches.

Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates. Unit rates are key inputs in developing Aurora's operational and capital expenditure programs and are discussed in section 18.4 of Aurora's Regulatory Proposal and detail how Aurora considers its unit rates represent:

- the efficient costs of achieving the expenditure objectives; and
- the costs that a prudent operator in Aurora's circumstances would require too achieve the capital and *operating expenditure objectives*.

2.3.4.9. Expenditure during preceding Regulatory Control Periods

In determining the forecast expenditure in the emergency and unscheduled power system Opex Category, actual and expected operating from preceding regulatory control periods has been considered. Aurora considers that the forecast volumes of work based on historical trends are appropriate given the unscheduled nature of emergency and unscheduled power system work.

2.3.4.10. Relative prices of inputs

As discussed previously, Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates. Aurora's unit rates have been determined by aggregating the following:

- estimated labour time required to undertake the task multiplied by the hourly rate of the skill set utilised;
- materials;
- contractor costs;
- service provider overheads; and
- plant and equipment.

2.3.4.11. Substitution between operating and capital expenditure

Substitution possibilities for network asset maintenance expenditure are also discussed in sections 11.4, and 12.4.5, and chapter 13 of Aurora's Regulatory Proposal.

Aurora also capitalises a proportion of this work program where new assets (ie pole replacements) are constructed in line with AASB-116 and Aurora's capitalisation policy. Consideration of the quantum of capitalisation for new assets has been factored into the forecast for emergency and unscheduled power system expenditure based on historical trends.

2.3.4.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.4.13. Non-network alternatives

Aurora does not consider non-network alternatives when preparing forecasts for emergency and unscheduled power system work programs as all of these programs as these are unscheduled and reactive programs.

2.3.4.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.4.15. Non-recurrent costs

There are no non-recurrent costs included in the forecasts for emergency and unscheduled power system operating expenditure.

2.3.4.16. Models or methodology

The forecast was prepared using the Units Rates Model (contained in the Regulatory Models Suite supplied to the AER as part of Aurora's Regulatory Proposal) and built from the 'bottom up' once unit rates for activities were established these were multiplied by forecast volumes (based on historical volumes trend).

Due to the reactive nature of emergency maintenance it is impossible for Aurora to accurately forecast expenditure where the weather has a significant impact on actual levels of expenditure (for example 2009/10 in Aurora's case). Aurora believes its approach to forecasting future levels of emergency and unscheduled power system operating expenditure to be the best approach give the number of variables.

2.3.4.17. Differences from previous models or methodology

The methodology used for deriving the forecasts for emergency maintenance is the same methodology used for previous and *Current Regulatory Control Periods*.

2.3.4.18. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.4.19. Previous models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.4.20. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.4.21. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.4.22. Network planning standards

There are no jurisdictional planning standards in existence within Tasmania and Aurora has therefore adopted its own standards for network operations and development.

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal

2.3.5. NEM and contestability related costs

NEM and contestability related costs expenditure forecasts are prepared in BAF and have been based on volumes and projects for the individual categories that underpin the expenditure.

2.3.5.1. Meet or manage expected demand

Aurora considers that the forecasts for NEM and contestability related costs expenditure are consistent with Aurora's requirements to meet the regulatory obligations associated with NEM operations and the customer services that will be required to meet the transactional costs associated with the States planned levels of retail competition. Aurora therefore considers that the expenditure forecasts for NEM and contestability related costs are those required to meet or manage the demand for the provision of *standard control services*.

2.3.5.2. Regulatory obligations

NEM and contestability related costs expenditure forecast take into consideration the operating costs associated with meeting regulatory obligations and requirements, for example regulatory and legislative compliance arising from the *Electricity Supply Industry (Contestable Customer) Regulations 2005*. These costs include labour, fees, consultants and other related team costs.

2.3.5.3. Quality, reliability and security of supply

Aurora does not consider quality, reliability and security of supply when preparing the forecast for this RIN category.

2.3.5.4. Reliability, safety and security of the distribution system

Aurora does not consider reliability, safety and security of the distribution system when preparing the forecast for this RIN category.

2.3.5.5. Efficient costs

Aurora considers that expenditure in the NEM and contestability related costs Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate.

The network division management – NEM and contestability related costs work program has been developed in line with the distribution business overarching strategic objective of "*No price increases to customers as a result of our efforts*". Therefore forecast customer service costs have been prepared in the most prudent and efficient manner to achieve this objective and balancing the needs of both its customers and shareholders. Aurora considers that network division management – NEM and contestability related costs forecast expenditure represent the efficient costs that a distribution network service provider would incur to carry out those services deemed critical and vital to ensure the support and delivery of Aurora's work programs.

2.3.5.6. Prudent operator

Aurora considers that expenditure in the NEM and contestability related costs Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* as these costs have been determined using a bottom-up approach. This involves team leaders identifying labour and other team costs that are required to undertake operating functions and support program delivery that are consistent with the distribution business strategy (including a three percent efficiency).

NEM and contestability related costs work programs are managed in a way to ensure Aurora complies with all regulatory requirements and maintains its NEM and retail contestability obligations to minimise the risks associated with non-compliance.

2.3.5.7. Realistic expectation of the demand forecast and cost inputs

Not applicable for this RIN category.

2.3.5.8. Benchmark operating expenditure

NEM and contestability related costs work programs are developed using a bottom-up approach. This involves determining work volumes and projects for the individual categories that underpin the expenditure.

2.3.5.9. Expenditure during preceding Regulatory Control Periods

Aurora has taken into consideration actual expenditure incurred during the *Current Regulatory Control Period* when forecasting NEM and contestability related costs. Aurora considers that historical costs represent the on-going functions and tasks related for NEM and contestability related activities.

2.3.5.10. Relative prices of inputs

Aurora did not consider the relative prices of operating and capital inputs when forecasting this Opex Category as this expenditure is operational in nature and should not require capital investment in the *Forthcoming Regulatory Control Period*.

2.3.5.11. Substitution between operating and capital expenditure

NEM and retail contestability costs expenditure forecasts relate solely to operational activities and there are no substitution possibilities for this expenditure.

2.3.5.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.5.13. Non-network alternatives

Not applicable for this RIN category.

2.3.5.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.5.15. Non-recurrent costs

NEM and contestability related costs forecasts do not include any non-recurrent costs.

2.3.5.16. Models or methodology

NEM and retail contestability forecasts were prepared using the BAF tool for inputting all labour and other costs. BAF is an Excel based tool which is used by Aurora to develop annual budgets and forecasts. An extract from BAF was imported into the network and distribution business management costs model for RIN categorisation purposes.

2.3.5.17. Differences from previous models or methodology

The previous and *Current Regulatory Control Period* forecasts were prepared in Excel using a similar methodology to that utilised in the combined BAF/Excel methodology utilised for the *Forthcoming Regulatory Control Period* forecasts.

2.3.5.18. Previous models or methodology

This model in no longer in existence and as such is not available.

2.3.5.19. Reasons for change of models or methodology

The move to utilise BAF as the basis for forecasting provides a more robust and controlled environment to prepare network division management forecasts.

2.3.5.20. Asset maintenance plans

Not applicable for this RIN category.

2.3.5.21. Network planning standards

Not applicable for this RIN category.

2.3.6. Network asset maintenance

2.3.6.1. Meet or manage expected demand

Network asset maintenance is an aggregate of the following subcategories:

- decommissioned assets;

- ground mounted substations;
- overhead network and structures;
- underground network;
- zone substations; and
- routine maintenance other.

Each of these subcategories will have its own methodology to forecast expenditure and these are described within that section of this RIN Response.

The methodology used to forecast network asset maintenance expenditure is based on the volumes and projects for the work categories that underpin this expenditure and that are located in Aurora's work program. The individual categories within the work program can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

The methodology for deriving the forecasts is the process that Aurora's engineers and management followed, and the policies and procedures that they had regard to, in developing the work program. These methodologies and discussions relating to the forecasts are set out in this section of this RIN Response.

2.3.6.2. Regulatory obligations

Network asset maintenance work programs are managed in a way to ensure Aurora complies with all regulatory requirements and maintains its electrical infrastructure in a way that minimises the risks associated with failure or reduced performance of assets.

Clause 8.2.1 of the TEC requires that a *Distribution Network Service Provider* must in relation to the maintenance of its electrical infrastructure:

(a) adopt quality management and assurance procedures which:

  (1) comply with the laws and other performance obligations which apply to the provision of distribution services, including those contained in this Code; and
  (2) minimise the risks associated with the failure or reduced performance of assets; and

(b) adopt good electricity industry practice.

Where good electricity industry practice is defined to be:

> The exercise of that degree of skill, diligence, prudence and foresight that reasonably would be expected from a significant proportion of operators of facilities forming part of the power system for the generation, transmission or supply of electricity under conditions comparable to those applicable to the relevant facility consistent with applicable laws, regulations, licences, codes, reliability, safety and environmental protection. The determination of comparable conditions is to take into account factors such as the relative size, duty, age and technological status of the relevant facility and the applicable laws, regulations, licences and codes.

Aurora observes good electricity supply industry practice by minimising the risk associated with the failure or reduced performance of assets. This requirement is part of the basis that forms inspection and replacement programs.

Clause 3 of Aurora's electricity distribution licence requires that:

3.1 The *Licensee* must comply with the *Act*, the *Code* and *guidelines*.

3.2 The *Licensee* must comply with the *National Electricity Rules*. In the event that the *National Electricity Rules* are inconsistent with the *Code*, then the *National Electricity Rules* prevail to the extent of such inconsistency.

3.3 For the avoidance of doubt, the *statutory licence conditions* are deemed to form part of this licence and the *Licensee* must comply with the *statutory licence conditions*.

3.4 Where statutory licence conditions is defined to be the licence conditions referred to in the *Act* and applicable to Aurora's licence.

Clause 9 of Aurora's electricity distribution licence requires that:

9.1 The *Licensee* must develop and submit to the *Regulator*, in accordance with the *Code*, *management plans*.

9.2 The *Licensee* must develop and submit to the *Regulator*, in accordance with the *Code*, a *compliance plan*.

Clause 10 of Aurora's electricity distribution licence requires that:

10.1 The *Licensee* must develop and maintain an emergency management plan in accordance with any *guideline* issued by the *Jurisdictional System Security Co-ordinator*.

10.2 Any such emergency management plan must be implemented by no later than the date specified by the *Jurisdictional System Security Co-ordinator*, or when no such date is specified, within a reasonable period of time.

Schedule 2 of Aurora's electricity distribution licence requires that:

The aspects of the *Licensee's* operations that shall be the subject of *management plans* are:

1 asset management of the *authorised distribution network*, including reliability and performance of the *authorised distribution network*;

2 vegetation management; and

3 emergency management as provided for in clause 10.

There are also a number of Acts and Regulations that Aurora must consider in the development of its forecasts for the network asset maintenance Opex Category. These include the following:

- *Electricity Supply Industry Act 1995*;
- *Electricity Supply Industry (Tariff Customers) Regulations 2008*;
- *Electricity Wayleaves and Easements Act 2000*;
- *Workplace Health and Safety Act 1995*;
- *Workplace Health and Safety Regulations 1998*;
- *Occupational Licensing Act 2005*; and

- *Environmental Management and Pollution Control Act 1994*.

Regulations and Acts are discussed in more detail within the network asset maintenance subcategory sections of this RIN Response.

2.3.6.3. Quality, reliability and security of supply

Network asset maintenance work programs are designed to maintain the distribution network at current levels of power quality, reliability and security by addressing issues associated with deteriorating asset condition, generally through the repair of existing assets that are in poor condition.

2.3.6.4. Reliability, safety and security of the distribution system

Network asset maintenance work programs are designed to address specific issues associated with existing assets that may impact on safety, environment, reliability and system security.

2.3.6.5. Efficient costs

Aurora considers that expenditure in the network asset maintenance Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate.

Aurora considers that the forecast volumes of work are appropriate because Aurora has not seen any deviation in the historic number of asset failure or defects rates and that the forecast volumes remain consistent with historical trends.

Section 18.4 of Aurora's Regulatory Proposal provides details on how Aurora considers its unit rates represent the efficient costs of achieving the expenditure objectives.

Network asset maintenance work programs are managed in a way that ensures Aurora is operating a safe and reliable system using cost efficient approaches.

Aurora sources all material and contractors through a rigorous tendering and contracts process. Aurora utilises an external contractor to deliver a portion of its programs, which has been benchmarked against Aurora's internal labour costs.

Aurora is also actively involved in industry working groups and committees, where Aurora has identified that the management strategies and work practices from other jurisdictions are consistent with those adopted by Aurora.

Aurora is also able to demonstrate it is efficient through a benchmarking review of its top 10 unit rates undertaken by PB.

Aurora also considers that these factors are applicable to each of the subcategories within the network asset maintenance Opex Category described within this RIN Response.

2.3.6.6. Prudent operator

Aurora considers that expenditure in the network asset maintenance Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives*.

During the course of the pricing investigation for the *Current Regulatory Control Period* OTTER engaged Wilson Cook to:

> *"... recommend expenditure allowances for Aurora Energy for prudent and efficient levels of forecast capital and operating expenditure for the period 1 July 2006 to 30 June 2012."*[9]

Wilson Cook, in reviewing Aurora's forecast operating expenditure, found that:

> *"... Aurora's forecast operating expenditure for the period 1 July 2006 to 30 June 2012 may be considered prudent and efficient as adjusted in section 4.3 of this report."*[10]

Additionally, in the same report, Wilson Cook found Aurora's expenditure on operational assets for the period 1 July 2005 to 30 June 2006, and on non-operational assets for the period 1 July 2002 to 30 June 2006 to be prudent and efficient.

The forecasting methodology that Aurora applied for the *Current Regulatory Control Period* has remained consistent for the *Forthcoming Regulatory Control Period*. Aurora notes that it has not significantly changed its operating expenditure forecasting process for the *Forthcoming Regulatory Control Period* and, in consequence, considers the finding of prudency to be transferable.

2.3.6.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for the network asset maintenance Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives*.

Aurora's work programs have generally been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan.

Each of the subcategories within the network asset maintenance Opex Category will have its own expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives* and these are described within that section of this RIN Response.

2.3.6.8. Benchmark operating expenditure

Network asset maintenance work programs are managed in a way to ensure Aurora is operating a safe and reliable system using cost efficient approaches.

Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates. Unit rates are key inputs in developing Aurora's operational and capital expenditure programs and are discussed in section 18.4 of Aurora's Regulatory Proposal and detail how Aurora considers its unit rates represent:

- the efficient costs of achieving the expenditure objectives; and
- the costs that a prudent operator in Aurora's circumstances would require to achieve the capital and *operating expenditure objectives*.

[9] 2007 Final Report, page 79
[10] Covering letter, 2007 Wilson Cook Report

2.3.6.9. Expenditure during preceding Regulatory Control Periods

Network asset maintenance work programs are generally forecast based on either:

- maintenance rules applied to the relevant populations; or
- historical spend.

Internal reviews of network asset maintenance work programs are generally undertaken to ensure consistency with previous and/or prevailing expenditure patterns.

Each of the subcategories within the network asset maintenance Opex Category will have its own considerations of the actual and expected expenditure during the preceding Regulatory Control Periods and these are described within section 2.3 of this RIN Response.

2.3.6.10. Relative prices of inputs

As discussed above, Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates. Aurora's unit rates have been determined by aggregating the following:

- estimated labour time required to undertake the task multiplied by the hourly rate of the skill set utilised;
- materials;
- contractor costs;
- service provider overheads; and
- plant and equipment.

2.3.6.11. Substitution between operating and capital expenditure

Substitution possibilities for network asset maintenance expenditure are also discussed in sections 11.4, 12.4.4 and 12.4.5, and chapter 13 of Aurora's Regulatory Proposal.

Aurora's asset management practices have been stable for a number of years and generally considered to be providing a well balanced trade-off between maintenance and capital expenditure.

Aurora constructs its asset management plans considering the whole of life costs associated with managing assets. This includes considering replacement with assets with lower maintenance requirements when maintenance costs begin increasing as the condition of an asset declines.

Each of the subcategories within the network asset maintenance Opex Category will have its own considerations of the substitution possibilities between operating and capital expenditure and these are described within section 2.3 of this RIN Response.

2.3.6.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.6.13. Non-network alternatives

Non-network alternatives are also discussed in chapter 14 of Aurora's Regulatory Proposal.

References to the decisions made within Aurora's engineering management on whether a need for augmentation can be met via operating expenditure or alternative capital augmentation projects, for example through non-network alternatives, are dealt with in the management plans associated with the relevant expenditure category.

Each of the subcategories within the network asset maintenance Opex Category will have its own considerations of non-network alternatives and these are described within that section of this RIN Response.

2.3.6.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.6.15. Non-recurrent costs

Each of the subcategories within the network asset maintenance Opex Category will have its own considerations of non-recurrent costs and these are described within section 2.3 of this RIN Response.

2.3.6.16. Models or methodology

As discussed previously, the volumes and projects for all work categories that underpin network asset maintenance expenditure are located in Aurora's work program. This work program is contained within Aurora's program of work model and has been utilised for the majority of forecast expenditure for the *Forthcoming Regulatory Control Period*.

Each of the subcategories within the network asset maintenance Opex Category will have its own methodologies for preparing forecasts and these are described within section 2.3 of this RIN Response.

2.3.6.17. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.6.18. Previous models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.6.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.6.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.6.21. Network planning standards

There are no jurisdictional planning standards in existence within Tasmania and Aurora has therefore adopted its own standards for network operations and development.

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal

2.3.7. Network asset maintenance – connection assets

Aurora has not forecast any operating expenditure for the network asset maintenance – connection assets Opex Category in the *Forthcoming Regulatory Control Period* and has no actual expenditure in the *Current Regulatory Control Period*.

All operating expenditure relating to Aurora's connection assets has been included within the connection asset repair Opex Category.

2.3.8. Network asset maintenance – decommissioned assets

2.3.8.1. Meet or manage expected demand

Network asset maintenance – decommissioned assets work programs are designed to maintain the distribution network at current levels of demand, reliability and power quality, while addressing the risks associated with assets that have been decommissioned and disconnected from the network. Assets are generally decommissioned or disconnected from the network due to no longer having a requirement for the asset which may in some cases be demand related.

2.3.8.2. Regulatory obligations

Aurora's management and work practices for network asset maintenance – decommissioned assets are designed to comply with the TEC and other relevant legislative requirements, which are covered in Aurora's asset management plans. These asset management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.8.3. Quality, reliability and security of supply

Network asset maintenance – decommissioned assets work programs are designed to maintain the distribution network at current levels of reliability and power quality, while addressing the risks associated with assets that have been decommissioned and disconnected from the network. For example, the removal of a spur line from the main feeder will prevent failures affecting the rest of the network.

2.3.8.4. Reliability, safety and security of the distribution system

Network asset maintenance – decommissioned assets work programs are designed to maintain the distribution network at current levels of reliability and power quality while addressing the risks associated with assets that have been decommissioned and disconnected from the network.

2.3.8.5. Efficient costs

Aurora considers that expenditure in the network asset maintenance – decommissioned assets Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate.

This is further discussed in section 2.3.6.5 of this RIN Response.

2.3.8.6. Prudent operator

Aurora considers that expenditure in the network asset maintenance – decommissioned assets Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* on the basis that the works programs for this Opex Category have been determined using volumes that are consistent with historical trends and the unit rates are deemed efficient.

This is further discussed in section 2.3.6.6 of this RIN Response.

2.3.8.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for network asset maintenance – decommissioned assets Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives* as the work programs have generally been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.8.8. Benchmark operating expenditure

Network asset maintenance – decommissioned assets work programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.8 of this RIN Response.

2.3.8.9. Expenditure during preceding Regulatory Control Periods

The forecast for network asset maintenance – decommissioned assets expenditure included in the overhead and structures thread was forecast based on historical spend. Internal reviews of work programs have been undertaken to ensure consistency with previous expenditure patterns.

The forecast for network asset maintenance – decommissioned assets expenditure included in the connection assets thread was based on historical spend with an adjustment to achieve compliance with the new B2B procedures under the Rules.

2.3.8.10. Relative prices of inputs

Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates.

This is further discussed in section 2.3.6.10 of this RIN Response.

2.3.8.11. Substitution between operating and capital expenditure

As this program is for the removal of assets that have been decommissioned and disconnected from the network, there are no substitution possibilities.

2.3.8.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.8.13. Non-network alternatives

As this program is for the removal of assets that have been decommissioned and disconnected from the network, there are no non-network alternatives.

2.3.8.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.8.15. Non-recurrent costs

As this program is the removal of assets that have been decommissioned and disconnected from the network, this is a one-off cost. There are no recurrent costs associated with this program.

2.3.8.16. Models or methodology

The forecast for these programs was prepared using a linear extrapolation of historical values.

2.3.8.17. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.8.18. Previous models or methodology

Previous forecasts for these programs were prepared using a linear extrapolation of historical values.

2.3.8.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.8.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.8.21. Network planning standards

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.9. Network asset maintenance – ground mounted substations

2.3.9.1. Meet or manage expected demand

Failure of ground mounted substations generally impact on a large number of customers and loads; therefore it is crucial to maintain in-service failures to a very low level. The forecast program for network asset maintenance – ground mounted substations is designed to maintain the distribution network at current levels of demand, reliability and power quality by ensuring assets are monitored and inspected for general condition and security.

The forecast for maintenance of network asset maintenance – ground mounted substations is based on a linear extrapolation of the number of assets for each type installed over a ten year period. This provides the number of new assets installed to meet demand which are maintained by this program.

2.3.9.2. Regulatory obligations

The TEC requires that Aurora must observe good electricity industry practice as adopted by the national electricity supply industry for the planning, design, construction, maintenance and operation of Aurora's distribution system to ensure that the relevant standards for safety and reliability of the system are consistent with community, business and customer needs.

Network asset maintenance – ground mounted substations work programs are designed to address specific issues associated with the existing assets that may impact on safety, environment, reliability and system security. Aurora management and work practices for underground network asset maintenance are designed to comply with the TEC and other relevant legislative requirements, which are covered in Aurora's asset management plans. These include compliance with:

- fire standards;
- sulphur hexafluoride (SF_6); and

- polychlorinated biphenyls (PCBs).

Each of these compliance responsibilities is detailed in the ground mounted substation asset management plan. This asset management plan is appended as an attachment to Aurora's Regulatory Proposal.

2.3.9.3. Quality, reliability and security of supply

Network asset maintenance – ground mounted substations work programs are designed to maintain the distribution network at current levels of demand, reliability and power quality by ensuring assets are monitored for general condition and security. The opportunity is also taken to capture loading data as part of these work programs to support various other areas of the distribution business.

2.3.9.4. Reliability, safety and security of the distribution system

Network asset maintenance – ground mounted substations work programs are designed to address specific issues associated with existing assets that may impact on safety, environment, reliability and system security. The results of the inspection and routine maintenance programs identify asset defects which are prioritised and rectified in accordance with the asset defects management process.

2.3.9.5. Efficient costs

Aurora considers that expenditure in the network asset maintenance – ground maintenance substations Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate.

Aurora considers that the forecast volumes of work are appropriate because these programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.5 of this RIN Response.

2.3.9.6. Prudent operator

Aurora considers that expenditure in the network asset maintenance – ground mounted substations Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* on the basis that the works programs for this Opex Category have been determined using volumes that are consistent with historical trends and the unit rates are deemed efficient.

This is further discussed in section 2.3.6.6 of this RIN Response.

2.3.9.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for network asset maintenance – ground mounted substations Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives* as the work programs have been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.9.8. Benchmark operating expenditure

Network asset maintenance – ground mounted substations work programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.8 of this RIN Response.

2.3.9.9. Expenditure during preceding Regulatory Control Periods

Network asset maintenance – ground mounted substations work programs are forecast based on either:

- maintenance rules applied to the relevant populations; or
- historical spend.

Internal reviews of work programs have been undertaken to ensure consistency with previous expenditure patterns.

2.3.9.10. Relative prices of inputs

Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates.

This is further discussed in section 2.3.6.10 of this RIN Response.

2.3.9.11. Substitution between operating and capital expenditure

Substitution possibilities for this expenditure are discussed in sections 11.4, 12.4.4 and 12.4.5, and chapter 13 of Aurora's Regulatory Proposal.

Aurora's asset management practices on ground mounted substations have been stable for a number of years and generally considered to be providing a well balanced trade-off between maintenance and capital expenditure.

Aurora constructs its asset management plans considering the whole of life costs associated with managing assets. This includes considering replacement with assets with lower maintenance requirements when maintenance costs begin increasing as the condition of an asset declines.

2.3.9.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.9.13. Non-network alternatives

Non-network alternatives are also discussed in chapter 14 of Aurora's Regulatory Proposal.

Aurora constructs its asset management plans considering the whole of life costs associated with managing assets. This includes considering replacement with non-network solutions to avoid maintenance costs where applicable. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.9.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.9.15. Non-recurrent costs

HV regulators were previously included in the ground mounted substation program budget however, HV regulators will be managed as a separate program within the *Forthcoming Regulatory Control Period*.

2.3.9.16. Models or methodology

Network asset maintenance – ground mounted substations work programs are forecast based on either:

- maintenance rules applied to the relevant populations; or
- historical spend.

The forecast for these programs was prepared using a linear extrapolation of historical values.

2.3.9.17. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.9.18. Previous models or methodology

Previous forecasts for these programs were prepared using a linear extrapolation of historical values.

2.3.9.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.9.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.9.21. Network planning standards

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.10. Network asset maintenance – overhead network and structures

2.3.10.1. Meet or manage expected demand

Aurora's overhead structures are the greatest contributor to asset failures throughout the network, the majority of failures relating to pole-top fires caused by pole mounted assets. The forecast programs for network asset maintenance – overhead network and structures are designed to maintain the distribution network at current levels of demand, reliability and power quality by addressing issues associated with deteriorating asset condition, generally through inspection and condition monitoring programs. Pole staking and treatment programs are designed to prolong the life of the assets and prevent failures resulting from defective poles.

2.3.10.2. Regulatory obligations

The TEC requires that Aurora must observe good electricity industry practice as adopted by the national electricity supply industry for the planning, design, construction, maintenance and operation of Aurora's distribution system to ensure that the relevant standards for safety and reliability of the system are consistent with community, business and customer needs.

Network asset maintenance – overhead network and structures work programs are designed to address specific issues associated with the existing assets that may impact on safety, environment, reliability and system security. Aurora management and work practices for overhead network asset maintenance are designed to comply with the TEC and other relevant legislative requirements, which are covered in Aurora's asset management plans. These include compliance with:

- the *Occupational Licensing Act 2005*;
- sulphur hexafluoride (SF_6); and
- polychlorinated biphenyls (PCB's).

Each of these compliance responsibilities is detailed in the overhead network and structures asset management plan. This asset management plan is appended as an attachment to Aurora's Regulatory Proposal.

2.3.10.3. Quality, reliability and security of supply

Aurora's overhead structures are the greatest contributor to asset failures throughout the network and therefore have the potential to impact on power quality, reliability and security.

For these reasons, the network asset maintenance – overhead network and structures work programs are designed to maintain the distribution network at current levels of quality, reliability and security of safety by addressing issues associated with deteriorating asset condition, generally through inspection and condition monitoring programs. Pole staking and treatment programs are designed to prolong the life of the assets and prevent failures through defective poles.

2.3.10.4. Reliability, safety and security of the distribution system

Aurora's overhead structures are the greatest contributor to asset failures throughout the network and therefore have the potential to impact on reliability, safety and security. For these reasons, network asset maintenance – overhead network and structures work programs are designed to maintain the distribution network at current levels of demand, reliability and power quality by addressing issues associated with deteriorating asset condition, generally through the replacement of existing assets that are in poor condition.

2.3.10.5. Efficient costs

Aurora considers that expenditure in the network asset maintenance – overhead network and structures Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate.

Aurora considers that the forecast volumes of work are appropriate because these programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.5 of this RIN Response.

2.3.10.6. Prudent operator

Aurora considers that expenditure in the network asset maintenance – overhead network and structures Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* on the basis that the works programs for this Opex Category have been determined using volumes that are consistent with historical trends and the unit rates are deemed efficient.

This is further discussed in section 2.3.6.6 of this RIN Response.

2.3.10.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for network asset maintenance – overhead network and structures Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives* as the work programs have been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.10.8. Benchmark operating expenditure

Network asset maintenance – overhead network and structures work programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.8 of this RIN Response.

2.3.10.9. Expenditure during preceding Regulatory Control Periods

Network asset maintenance – overhead network and structures work programs are forecast based on either:

- maintenance rules applied to the relevant populations; or
- historical spend.

Internal reviews of work programs have been undertaken to ensure consistency with previous expenditure patterns.

2.3.10.10. Relative prices of inputs

Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates.

This is further discussed in section 2.3.6.10 of this RIN Response.

2.3.10.11. Substitution between operating and capital expenditure

Substitution possibilities for this expenditure are also discussed in sections 11.4, 12.4.4 and 12.4.5, and chapter 13 of Aurora's Regulatory Proposal.

Network asset maintenance – overhead network and structures forecast has been prepared considering the trade-off between operating and capital expenditure for the overhead network and structures programs. Targeted preventative maintenance programs significantly reduce, although not completely mitigate, the need for corrective maintenance. Corrective actions involving both maintenance and replacement activities incur a considerably higher cost than preventative maintenance.

Aurora constructs its asset management plans considering the whole of life costs associated with managing assets. This includes considering replacement with assets with lower maintenance requirements when the costs begin increasing as the condition of an asset declines.

A key initiative Aurora employs to defer asset replacement is the practice of pole staking. This practice will extend the life of the asset by up to and in excess of 15 years.

2.3.10.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.10.13. Non-network alternatives

Non-network alternatives are discussed in chapter 14 of Aurora's Regulatory Proposal and in response to paragraph 11 of the RIN.

Aurora constructs its asset management plans considering the whole of life costs associated with managing assets. This includes considering replacement with non-network solutions to avoid maintenance costs where applicable. Mobile generation to minimise customer disruption on failure of overhead assets is considered as a viable alternative to investing in reinforcement and redundancy assets. The nature and scale of the connected load and customer type are important when considering this alternative.

2.3.10.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.10.15. Non-recurrent costs

There are no non-recurrent or one-off costs associated with network asset maintenance – overhead network and structures work programs.

2.3.10.16. Models or methodology

Network asset maintenance – overhead network and structures work programs are forecast based on either:

- maintenance rules applied to the relevant populations; or
- historical spend.

The forecast for these programs was prepared using a linear extrapolation of historical values.

2.3.10.17. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.10.18. Previous models or methodology

Previous forecasts for these programs were prepared using a linear extrapolation of historical values.

2.3.10.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.10.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.10.21. Network planning standards

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.11. Network asset maintenance – underground network

2.3.11.1. Meet or manage expected demand

These programs are designed to maintain the distribution network at current levels of demand, reliability and power quality by addressing issues associated with deteriorating asset condition, generally through the regular inspections, auditing and testing to identify the poor condition (or substandard) assets and to take preventive actions.

2.3.11.2. Regulatory obligations

The TEC requires that a *Distribution Network Service Provider* must observe good electricity industry practice as adopted by the national electricity supply industry for the planning, design, construction, maintenance and operation of each *Distribution Network Service Provider*'s distribution system to ensure that the relevant standards for safety and reliability of the system are consistent with community, business and customer needs.

Network asset maintenance – underground network work programs are designed to address specific issues associated with the existing assets that may impact on safety, environment, reliability and system security. Aurora management and work practices for underground network asset maintenance are designed to comply with the TEC and other relevant legislative requirements, which are covered in Aurora's asset management plans. These include compliance with:

- confined spaces and the *Workplace Health And Safety Regulations 1998*;
- sulphur hexafluoride (SF_6);
- polychlorinated biphenyls (PCBs);
- AS/NZS 3000:2007 – Wiring Rules;
- AS 2067 – Substations and high voltage installations exceeding 1 kV a.c.; and
- ENA guidelines.

Each of these compliance responsibilities is detailed in the underground network management plan. This asset management plan is appended as an attachment to Aurora's Regulatory Proposal.

2.3.11.3. Quality, reliability and security of supply

Network asset maintenance – underground network work programs are designed to maintain the distribution network at current levels of demand, reliability, power quality and security by addressing issues associated with deteriorating asset condition, generally through the regular inspections, auditing and testing to identify the poor condition (or substandard) assets and take preventive actions.

2.3.11.4. Reliability, safety and security of the distribution system

Network asset maintenance – underground network work programs are designed to maintain the distribution network at current levels of reliability, safety and security by addressing issues associated with deteriorating asset condition, generally through maintenance, repair or replacement of existing assets that are in poor condition (or substandard).

2.3.11.5. Efficient costs

Aurora considers that expenditure in the network asset maintenance – underground network Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate.

Aurora considers that the forecast volumes of work are appropriate because these programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.5 of this RIN Response.

2.3.11.6. Prudent operator

Aurora considers that expenditure in the underground network maintenance Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* on the basis that the works programs for this Opex Category have been determined using volumes that are consistent with historical trends and the unit rates are deemed efficient.

This is further discussed in section 2.3.6.6 of this RIN Response.

2.3.11.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for network asset maintenance – underground network Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives* as the work programs have been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.11.8. Benchmark operating expenditure

Network asset maintenance – underground network work programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.8 of this RIN Response.

2.3.11.9. Expenditure during preceding Regulatory Control Periods

Network asset maintenance – underground network work programs are forecast based on either:

- maintenance rules applied to the relevant populations; or

- historical spend.

Internal reviews of work programs have been undertaken to ensure consistency with previous expenditure patterns.

2.3.11.10. Relative prices of inputs

Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates.

This is further discussed in section 2.3.6.10 of this RIN Response.

2.3.11.11. Substitution between operating and capital expenditure

Substitution possibilities for this expenditure are also discussed in sections 11.4, 12.4.4 and 12.4.5, and chapter 13 of Aurora's Regulatory Proposal.

Aurora constructs its asset management plans considering the whole of life costs associated with managing assets. This includes considering replacement with assets with lower maintenance requirements when maintenance costs begin increasing as the condition of an asset declines.

2.3.11.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.11.13. Non-network alternatives

Non-network alternatives are also discussed in chapter 14 of Aurora's Regulatory Proposal.

Cables are a fundamental requirement of the network with no viable non network alternatives. The deployment of the broken neutral detector (cablePI) to customers is a significant non-network initiative to drive improvement in the condition monitoring of network assets.

2.3.11.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.11.15. Non-recurrent costs

There are no non-recurrent or one-off costs associated with network asset maintenance – underground network work programs.

2.3.11.16. Models or methodology

Network asset maintenance – overhead network and structures work programs are forecast based on either:

- maintenance rules applied to the relevant populations; or
- historical spend.

The forecast for these programs was prepared using a linear extrapolation of historical values.

2.3.11.17. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.11.18. Previous models or methodology

Previous forecasts for these programs were prepared using a linear extrapolation of historical values.

2.3.11.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.11.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.11.21. Network planning standards

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.12. Network asset maintenance – zone substations

2.3.12.1. Meet or manage expected demand

The forecast for zone substation maintenance programs is designed to maintain the distribution network at current levels of demand by addressing issues associated with deteriorating asset condition, generally through regular inspections, condition monitoring and preventative maintenance.

All routine maintenance is conducted in accordance with the manufacturer's recommendations to keep the equipment in safe working conditions.

The principle factors influencing zone substations maintenance programs are to maintain network performance, minimise cost of supply to customers and manage business operating risks. These principles have a strong influence on the strategies outlined in the zone substation management plan. Aurora has adopted these strategies when preparing its forecast programs which incorporate considerations around how Aurora will meet or manage demand.

2.3.12.2. Regulatory obligations

The TEC requires that a *Distribution Network Service Provider* must observe good electricity industry practice as adopted by the national electricity supply industry for the planning, design, construction, maintenance and operation of each *Distribution Network Service Provider*'s distribution system to ensure that the relevant standards for safety and reliability of the system are consistent with community, business and customer needs.

Aurora's management and work practices for zone substation maintenance programs are designed to comply with the TEC and other relevant regulatory and legislative requirements. These include compliance with:

- confined spaces and the *Workplace Health and Safety Regulations 1998*;
- sulphur hexafluoride (SF_6);
- polychlorinated biphenyls (PCBs);
- AS 2067 – Substations and high voltage installations exceeding 1 kV a.c.;
- AS 1940 – The storage and handling of flammable and combustible liquids;
- AS 1851 – maintenance of fire protection system and equipment;
- AS/NZS 2293.2:1995 – Emergency evacuation lighting for buildings – Inspection and maintenance;
- the national Code of Practice for the Management and Control of Asbestos in the Workplace; and
- ENA guidelines.

These opex programs are designed to address specific issues associated with the existing assets that may impact on safety, environment, reliability and system security. Aurora management and work practices for zone substations asset maintenance are designed to comply with the TEC and other relevant legislative requirements, which are covered in the asset management plans.

2.3.12.3. Quality, reliability and security of supply

Network asset maintenance – underground network work programs are designed to maintain the distribution network at current levels of demand, reliability, power quality and security by addressing issues associated with deteriorating asset condition, generally through the regular inspections, auditing and testing to identify the poor condition (or substandard) assets and take preventive actions.

2.3.12.4. Reliability, safety and security of the distribution system

Maintenance programs for Aurora's zone substations are designed to maintain the distribution network at current levels of power quality, reliability and security of supply through preventative corrective maintenance programs, inspections and condition monitoring. Routine maintenance is conducted in accordance to the manufacturer's recommendations to keep the equipment in safe working conditions.

Failures of equipment in zone substations can cause catastrophic damage to both zone substation equipment and nearby areas. The principle factors influencing zone substations maintenance programs are to maintain network performance, minimise cost of supply to customers and manage business operating risks. These principles have a strong influence on the strategies outlined in the zone substation management plan. Aurora has adopted these strategies when preparing its forecast programs which incorporate considerations around how Aurora will maintain the distribution network at current levels of power quality, reliability, safety and security of supply.

2.3.12.5. Efficient costs

Aurora considers that expenditure in the network asset maintenance – zone substations Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate. Aurora considers that the forecast volumes of work are appropriate because these programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

Aurora is satisfied that its current practices are performing adequately. In-service failures are rare and the assets are achieving and exceeding their expected service life.

Inspection levels and routine maintenance program shall continue at current levels in regards to significant impact on reliability in case of any failure and hence to ensure their reliable operation.

This is further discussed in section 2.3.6.5 of this RIN Response.

2.3.12.6. Prudent operator

Aurora considers that expenditure in the network asset maintenance – zone substations Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* on the basis that the works programs for this Opex Category have been determined using volumes that are consistent with historical trends and the unit rates are deemed efficient.

This is further discussed in section 2.3.6.6 of this RIN Response.

2.3.12.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for network asset maintenance – zone substations Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives* as the work programs have been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.12.8. Benchmark operating expenditure

Network asset maintenance – zone substations work programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.8 of this RIN Response.

2.3.12.9. Expenditure during preceding Regulatory Control Periods

Aurora considers that its current practices are appropriate and that current asset management practices should continue. Actual volumes have been used as a basis for the development of future forecasts with some increases associated with additional zone substations.

Internal reviews of work programs have been undertaken to ensure consistency with previous expenditure patterns.

2.3.12.10. Relative prices of inputs

Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates.

This is further discussed in section 2.3.6.10 of this RIN Response.

2.3.12.11. Substitution between operating and capital expenditure

Substitution possibilities for this expenditure are also discussed in sections 11.4, 12.4.4 and 12.4.5, and chapter 13 of Aurora's Regulatory Proposal.

Aurora constructs its asset management plans considering the whole of life costs associated with managing assets. This includes considering replacement with assets with lower maintenance requirements when maintenance costs begin increasing as the condition of an asset declines.

The network asset maintenance – zone substations work program is essential for indentifying assets that require replacement due to condition based reasons. An example being, routine oil testing that is undertaken to detect signs of ageing and deterioration of the transformer oil. The results of the oil test can be used to monitor the condition of the transformer and identify when capital expenditure is required.

There is a positive relationship between operating and capital expenditure programs in that the inspection programs gather continuous condition information of the assets to better target asset replacements and identify any asset trends. Maintenance and repair activities defer the requirement for capital expenditure and potentially increase the life of the asset.

2.3.12.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.12.13. Non-network alternatives

Non-network alternatives are also discussed in chapter 14 of Aurora's Regulatory Proposal.

Aurora constructs its asset management plans considering the whole of life costs associated with managing assets. This includes considering replacement with non-network solutions to avoid maintenance costs where applicable. Demand side initiatives such as smart meters and ripple control will be investigated as an alternative option to zone substation augmentations.

2.3.12.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.12.15. Non-recurrent costs

There are no non-recurrent or one-off costs associated with network asset maintenance – zone substations work programs.

2.3.12.16. Models or methodology

Network asset maintenance – zone substations work programs are forecast based on either:

- maintenance rules applied to the relevant populations; or
- historical spend.

The forecast for these programs was prepared using a linear extrapolation of historical values.

2.3.12.17. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.12.18. Previous models or methodology

Previous forecasts for these programs were prepared using a linear extrapolation of historical values.

2.3.12.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.12.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.12.21. Network planning standards

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.13. Network division management

The network division management forecast is prepared as part of the annual budget and business planning process, and is prepared in accordance with Aurora's strategic objectives and Aurora-wide global planning assumptions and instructions. These are issued to the individual business units at the beginning of each budgeting cycle and set out the high level timelines and rules, which ensures consistency across all business units.

The development of the network division management work program follows an extensive process, which is governed by a number of internal controls and sign offs to ensure the expenditure is appropriate and prudent and consistent with the strategic objectives of Aurora. Key sign offs and internal control steps in this process include:

- Team Leaders determine their annual budget and five year business plan submissions. Team overhead expenses and FTE data is entered into Aurora's budget system (BAF), which forms the data set for budgets. All assumption work papers and calculations are also maintained within this system;
- internal review of submitted costs are undertaken to ensure consistency with business financial constrains and to ensure the prudency of expenditure. This is carried out by the Manager Management Accounting; and
- final endorsement and sign-off by distribution business Commercial Manager.

The final network division management work program is incorporated into the final Network division budget and forms part of the final distribution business budget submission to:

- the distribution executive and Network GM for sign-off (February);
- the CEO for budget and business plan sign-off (February); and
- Aurora's Board for budget and business plan sign-off (March).

This process has formed the basis of the network division management forecasts for the *Forthcoming Regulatory Control Period*.

2.3.13.1. Meet or manage expected demand

The Network division is responsible for planning, operating and monitoring Aurora's distribution network, including the planning and delivery of its program of work. To achieve this objective network division management costs include all costs associated with running the division including labour and overhead costs. These support functions underpin the operations and maintenance activities undertaken by field staff on the distribution network.

Whilst network division management operating expenditure does not contribute directly in meeting or managing the expected demand for *standard control services* it provides the essential support services that ensure the other Opex Categories meet or manage this expected demand.

2.3.13.2. Regulatory obligations

The network division management forecast takes into consideration the operating costs associated with meeting regulatory obligations and requirements, for example performance reporting, regulatory accounts and legislative compliance. These costs include labour, fees, consultants and other related team costs. The network division management forecast has also been prepared to ensure expenditure is captured and reported in line with the reporting requirements set out in the ringfencing guidelines and RIN categories.

The network division management forecast also includes the expenditure associated with the dedicated regulatory team within the Network division.

2.3.13.3. Quality, reliability and security of supply

The distribution strategy provides the fundamental vision for decisions made within the distribution business. A key component of the strategy is ensuring that the customer is always put first in everything Aurora does with the aim of securing desired price, service and reliability outcomes. The restructuring of the network division was the first step in delivering this strategy. The restructure, undertaken on a functional basis, has enabled the business to increase its technical engineering and customer management skill set and will empower Aurora's staff to refocus on the customer and deliver a better and more efficient service.

The network division management forecast was prepared on the basis of delivering the distribution strategy and is inclusive of the new restructure. This stronger emphasis on engineering skills and customer management will enable Aurora to maintain the quality, reliability and security of supply.

2.3.13.4. Reliability, safety and security of the distribution system

Whilst network division management operating expenditure does not contribute directly in maintaining the reliability and security of the distribution system through the supply of *standard control services* it provides the essential support services that ensure the other Opex Categories maintain the reliability and security of the distribution system.

Critical to ensuring the safety of the distribution network to Aurora's customer, its employees and the public is the distribution business safety health and environment (SHE) team. The SHE team is responsible for safety, health and environment initiatives across the distribution business. The network division management forecast includes an allocation of costs for the distribution SHE team determined in accordance with Aurora's CAM.

2.3.13.5. Efficient costs

Aurora considers that expenditure in the network division management Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate.

The network division management work program has been developed in line with the distribution business overarching strategic objective of "*No price increases to customers as a result of our efforts*". Forecast network division management expenditure has therefore been prepared in the most prudent and efficient manner to achieve this objective and balancing the needs of both Aurora's customers and shareholders.

This is further discussed in section 2.3.6.5 of this RIN Response.

2.3.13.6. Prudent operator

Network division management expenditure represents those costs that a prudent operator would incur to carry out those services deemed critical and vital to ensure the support and delivery of the program of work.

Aurora considers that expenditure in the network division management Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* as these costs have been determined using a bottom-up approach and have an annual three percent efficiency factor built in.

This is further discussed in section 2.3.6.6 of this RIN Response.

2.3.13.7. Realistic expectation of the demand forecast and cost inputs

Whilst network division management operating expenditure may not directly reflect the realistic expectation of the demand forecast and cost inputs required to achieve the *capital expenditure objectives* it provides the essential support services that ensure the other Opex Categories reflect this realistic expectation.

2.3.13.8. Benchmark operating expenditure

Aurora's distribution business structure is little different from other distribution network service providers within Australia in that there is a central support service management structure, that underpins the engineering decision makers, that plan and oversee the work programs, completed by a field services workforce.

Aurora's network divisional management costs are developed using a bottom-up approach. This involves team leaders identifying labour and other team costs that are required to undertake operating functions and support program delivery that are consistent with the distribution business strategy (including a three percent efficiency).

2.3.13.9. Expenditure during preceding Regulatory Control Periods

The methodology for preparing network division management expenditure forecasts is primarily based on a bottom-up approach. This means that managers forecast their team costs based on undertaking normal functions and identified projects. Actual and expected operating costs for preceding periods are only used as a basis for comparison and not relied upon for determining forecast expenditure.

2.3.13.10. Relative prices of inputs

Aurora's network division management program was developed using a bottom-up approach. This means that managers forecast their team costs based on undertaking normal functions and identified projects and applying the appropriate unit rates.

2.3.13.11. Substitution between operating and capital expenditure

Substitution possibilities for this expenditure are also discussed in sections 11.4, and 12.4.1, and chapter 13 of Aurora's Regulatory Proposal.

Network division management expenditure includes labour costs for network employees. In determining the forecast operating and capital component of these costs, Aurora has allocated 50 percent of labour costs to operating and 50 percent to capital costs. This allocation has been based on previous allocations and the increase in engineering capability. Individual employees are allocated to operating and capital expenditure based on their work programs or projects, a true up of these allocations will be made at the end of each year and adjusted for in Aurora's regulatory accounts.

2.3.13.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.13.13. Non-network alternatives

Network division management expenditure is required for the provision of management and support services to the distribution business and does not therefore have a non-network alternative.

2.3.13.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.13.15. Non-recurrent costs

Network division management forecasts do not include any non-recurrent costs.

2.3.13.16. Models or methodology

Network division management forecasts were prepared using the BAF tool for inputting all labour and other costs. BAF is an Excel based tool which is used by Aurora to develop annual budgets and forecasts. An extract from BAF was imported into the network and distribution business management costs model for RIN categorisation purposes.

2.3.13.17. Differences from previous models or methodology

The previous and *Current Regulatory Control Period* forecasts were prepared in Excel using a similar methodology to that utilised in the combined BAF/Excel methodology utilised for the *Forthcoming Regulatory Control Period* forecasts.

2.3.13.18. Previous models or methodology

This model in no longer in existence and as such is not available.

2.3.13.19. Reasons for change of models or methodology

The move to utilise BAF as the basis for forecasting provides a more robust and controlled environment to prepare network division management forecasts.

2.3.13.20. Asset maintenance plans

Not applicable for this RIN category.

2.3.13.21. Network planning standards

Not applicable for this RIN category.

2.3.14. Network division management – customer service

Customer service forecasts are prepared as part of the annual budget and business planning process, and are prepared in accordance with the strategic objectives and Aurora wide global planning assumptions and instructions. These are issued to the business at the beginning of each budgeting cycle and set out the high level timelines and rules, which ensures consistency across all business units.

As network division management – customer service is a subcategory within network division management the forecasting process is the same as that outlined in section 2.3.13 of the RIN Response.

2.3.14.1. Meet or manage expected demand

Whilst network division management- customer service operating expenditure does not contribute directly in meeting or managing the expected demand for *standard control services* it provides one of the essential support services that ensure the other Opex Categories meet or manage this expected demand.

2.3.14.2. Regulatory obligations

Aurora has considered regulatory obligations and requirements when preparing the network division management – customer service operating expenditure forecast. These regulatory obligations and requirements include compliance with Aurora's customer charter, customer new supply processes, GSL payments and NEM obligations.

2.3.14.3. Quality, reliability and security of supply

The customer service forecast was prepared on the basis of delivering the distribution strategy and is inclusive of the new restructure. The stronger emphasis on engineering skills and customer management will enable Aurora to maintain the quality, reliability and security of supply.

The delivery of the distribution strategy is further discussed at section 2.3.13.3 of this RIN Response.

2.3.14.4. Reliability, safety and security of the distribution system

Network division management – customer service is a subcategory of network division management and the impact on the reliability, safety and security of the distribution system is discussed at section 2.3.13.4 of this RIN Response.

2.3.14.5. Efficient costs

Aurora considers that expenditure in the network division management – customer service Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate.

The network division management – customer service work program has been developed in line with the distribution business overarching strategic objective of "*No price increases to customers as a result of our efforts*". Therefore forecast customer service costs have been prepared in the most prudent and efficient manner to achieve this objective and balancing the needs of both its customers and shareholders. Aurora considers that network division management – customer service forecast expenditure represent the efficient costs that a distribution network service provider would incur to carry out those services deemed critical and vital to ensure the support and delivery of Aurora's work programs.

2.3.14.6. Prudent operator

Aurora considers that expenditure in the network division management – customer service category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives*.

Aurora considers that expenditure in the network division management – customer service Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* as these costs have been determined using a bottom-up approach and have an annual three percent efficiency factor built in.

This is further discussed in section 2.3.6.6 of this RIN Response.

2.3.14.7. Realistic expectation of the demand forecast and cost inputs

Network division management – customer service is subcategory of network division management and the impact on the realistic expectation of the demand forecast and cost inputs is discussed at section 2.3.13.7 of this RIN Response.

2.3.14.8. Benchmark operating expenditure

Network division management – customer service is a subcategory of network division management and considerations of the benchmark operating expenditure that would be incurred by an efficient *Distribution Network Service Provider* over the *Forthcoming Regulatory Control Period* are discussed at section 2.3.13.8 of this RIN Response.

2.3.14.9. Expenditure during preceding Regulatory Control Periods

The methodology for preparing network division management – customer service expenditure forecasts is primarily based on a bottom-up approach. This means that managers forecast their team costs based on undertaking normal functions and identified projects. Actual and expected operating costs for preceding periods are only used as a basis for comparison and not relied upon for determining forecast costs.

2.3.14.10. Relative prices of inputs

Network division management – customer service is a subcategory of network division management and considerations of the relative prices of operating and capital inputs are discussed at section 2.3.13.10 of this RIN Response.

2.3.14.11. Substitution between operating and capital expenditure

Network division management – customer service is a subcategory of network division management and considerations of the substitution possibilities between operating and capital expenditure are discussed at section 2.3.13.11 of this RIN Response.

2.3.14.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.14.13. Non-network alternatives

Network division management – customer service is a subcategory of network division management and non-network alternative considerations are discussed at section 2.3.13.13 of this RIN Response.

2.3.14.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.14.15. Non-recurrent costs

Network division management – customer service forecasts do not include any non-recurrent costs.

2.3.14.16. Models or methodology

Network division management forecasts were prepared using the BAF tool for inputting all labour and other costs. BAF is an Excel based tool which is used by Aurora to develop annual budgets and forecasts. An extract from BAF was imported into the network and distribution business management costs for RIN categorisation purposes.

2.3.14.17. Differences from previous models or methodology

The *Previous* and *Current Regulatory Control Period* forecasts were prepared in Excel using a similar methodology to that utilised in the combined BAF/Excel methodology utilised for the *Forthcoming Regulatory Control Period* forecasts.

2.3.14.18. Previous models or methodology

For the previous and *Current Regulatory Control Period* the models used are no longer in existence and as such are not available.

2.3.14.19. Reasons for change of models or methodology

The move to utilise BAF as the basis for forecasting provides a more robust and controlled environment to prepare network division management forecasts.

2.3.14.20. Asset maintenance plans

Not applicable for this RIN category.

2.3.14.21. Network planning standards

Not applicable for this RIN category.

2.3.15. Network division management – electrical safety levy

The network division management – electrical safety levy forecast has been based on estimated expenditure for 2011-12 and escalated thereafter.

2.3.15.1. Meet or manage expected demand

Network division management – electrical safety levy operating expenditure does not contribute directly in meeting or managing the expected demand for *standard control services* as it is a levy imposed upon Aurora by the State Government.

2.3.15.2. Regulatory obligations

Aurora is obligated to fund the electrical safety levy in accordance with the provisions of the ESI Act[11].

2.3.15.3. Quality, reliability and security of supply

Aurora does not consider quality, reliability and security of supply when preparing the forecast for this RIN category.

[11] ESI Act, section 121B

2.3.15.4. Reliability, safety and security of the distribution system

Aurora does not consider reliability, safety and security of the distribution system when preparing the forecast for this RIN category.

2.3.15.5. Efficient costs

As this is a levy imposed upon Aurora by the State Government, Aurora considers that these costs are efficient.

2.3.15.6. Prudent operator

A prudent operator in the same circumstances as Aurora would be required to fund the electrical safety levy as it would be obligated to pay this levy in accordance with the provisions of the ESI Act.

2.3.15.7. Realistic expectation of the demand forecast and cost inputs

Not applicable for this RIN category.

2.3.15.8. Benchmark operating expenditure

Not applicable for this RIN category.

2.3.15.9. Expenditure during preceding Regulatory Control Periods

The electrical safety levy forecast has been based on estimated expenditure for 2011-12 and escalated thereafter.

2.3.15.10. Relative prices of inputs

Not applicable for this RIN category.

2.3.15.11. Substitution between operating and capital expenditure

Not applicable for this RIN category.

2.3.15.12. Consistency of labour costs

Not applicable for this RIN category.

2.3.15.13. Non-network alternatives

Not applicable for this RIN category.

2.3.15.14. Base year

Aurora has considered 2009-10 as the base year to forecast its expenditure program for network division management – electrical safety levy in the *Forthcoming Regulatory Control Period*. 2009-10 was chosen as the base year as it provided a sound basis for preparing the forecasts and that it was the last year with available audited regulatory accounts.

2.3.15.15. Non-recurrent costs

There are no non-recurrent costs included.

2.3.15.16. Models or methodology

The ESI levy forecast has been based on estimated expenditure for 2011-12 and escalated thereafter. An adjustment between actual and estimate will be made as part of the annual revenue requirement.

2.3.15.17. Differences from previous models or methodology

Aurora has made no changes to the methodologies from those of the *Current Regulatory Control Period*.

2.3.15.18. Previous models or methodology

Previous forecasts for the electrical safety levy was prepared using a linear extrapolation of historical values.

2.3.15.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.15.20. Asset maintenance plans

Not applicable for this RIN category.

2.3.15.21. Network planning standards

Not applicable for this RIN category.

2.3.16. Network division management – GSL payments

The forecast was determined with reference to the 2011-12 regulatory allowance.

2.3.16.1. Meet or manage expected demand

Network division management – GSL payments operating expenditure does not contribute directly in meeting or managing the expected demand for *standard control services* and has not been considered by Aurora when preparing its forecasts.

2.3.16.2. Regulatory obligations

Network division management – GSL payments are payable in accordance the TEC[12] and GSL Scheme Guidelines[13] and are a regulatory obligation imposed upon Aurora.

2.3.16.3. Quality, reliability and security of supply

Aurora does not consider quality, reliability and security of supply when preparing the forecast for this RIN category.

2.3.16.4. Reliability, safety and security of the distribution system

Aurora does not consider reliability, safety and security of the distribution system when preparing the forecast for this RIN category.

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[12] TEC, clause 8.5.
[13] Guideline, Guaranteed Service Level (GSL) Scheme, December 2007

2.3.16.5. Efficient costs

As this is a requirement imposed upon Aurora by the GSL Scheme Guidelines, Aurora considers that these costs are efficient.

2.3.16.6. Prudent operator

A prudent operator in the same circumstances as Aurora would be required to make GSL payments as it would be obligated to make these payments in accordance with the provisions of the GSL Scheme Guidelines.

2.3.16.7. Realistic expectation of the demand forecast and cost inputs

Not applicable for this RIN category.

2.3.16.8. Benchmark operating expenditure

Not applicable for this RIN category.

2.3.16.9. Expenditure during preceding Regulatory Control Periods

The current regulatory allowance has been considered when preparing the forecast for network division management – GSL payments expenditure.

2.3.16.10. Relative prices of inputs

Aurora has not considered the relative prices of operating and capital inputs when forecasting the division management – GSL payments Opex Category.

2.3.16.11. Substitution between operating and capital expenditure

Not applicable to this RIN category.

2.3.16.12. Consistency of labour costs

Not applicable for this RIN category.

2.3.16.13. Non-network alternatives

Not applicable for this RIN category.

2.3.16.14. Base year

Aurora has considered 2009-10 as the base year to forecast its expenditure program for network division management – GSL payments in the *Forthcoming Regulatory Control Period*. 2009-10 was chosen as the base year as it provided a sound basis for preparing the forecasts and that it was the last year with available audited regulatory accounts.

2.3.16.15. Non-recurrent costs

There are no non-recurrent costs included.

2.3.16.16. Models or methodology

The network division management – GSL payments forecast has been based on estimated expenditure for 2011-12 and consistent with the distribution strategy had the three percent efficiency factor applied each year.

2.3.16.17. Differences from previous models or methodology

Aurora has made changes to the methodologies from those of the *Current Regulatory Control Period*.

Forecasts for GSL payments for the *Current Regulatory Control Period* were prepared taking into account the introduction of new reliability standards and known non-compliance with those standards. Whereas forecasts for GSL payments for the *Forthcoming Regulatory Control Period* have been prepared taking into account the payments that have been made during the *Current Regulatory Control Period*.

2.3.16.18. Previous models or methodology

Previous forecasts for the network division management – GSL payments were prepared to take account of new reliability standards and Aurora's plans to move to toward compliance with those standards over the term of the *Current Regulatory Control Period*.

2.3.16.19. Reasons for change of models or methodology

Aurora has changed its methodology for forecasting network division management – GSL payments as current expenditure is a better indication of the payments that are required under the GSL Scheme Guidelines.

2.3.16.20. Asset maintenance plans

Not applicable for this RIN category.

2.3.16.21. Network planning standards

Not applicable for this RIN category.

2.3.17. Network division management – national electricity market levy

The national electricity market levy forecast has been based on estimated expenditure for 2011-12 and escalated thereafter.

2.3.17.1. Meet or manage expected demand

Network division management – national electricity market levy operating expenditure does not contribute directly in meeting or managing the expected demand for *standard control services* as it is a levy imposed upon Aurora by the State Government.

2.3.17.2. Regulatory obligations

Aurora is obligated to fund the national electricity market levy in accordance with the provisions of the ESI Act[14].

2.3.17.3. Quality, reliability and security of supply

Aurora does not consider quality, reliability and security of supply when preparing the forecast for this RIN category.

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[14] ESI Act, section 121

2.3.17.4. Reliability, safety and security of the distribution system

Aurora does not consider reliability, safety and security of the distribution system when preparing the forecast for this RIN category.

2.3.17.5. Efficient costs

As this is a levy imposed upon Aurora by the State Government, Aurora considers that these costs are efficient.

2.3.17.6. Prudent operator

A prudent operator in the same circumstances as Aurora would be required to fund the electrical safety levy as it would be obligated to pay this levy in accordance with the provisions of the ESI Act.

2.3.17.7. Realistic expectation of the demand forecast and cost inputs

Not applicable for this RIN category.

2.3.17.8. Benchmark operating expenditure

Not applicable for this RIN category.

2.3.17.9. Expenditure during preceding Regulatory Control Periods

The national electricity market levy forecast has been based on estimated expenditure for 2011-12 and escalated thereafter.

2.3.17.10. Relative prices of inputs

Not applicable for this RIN category.

2.3.17.11. Substitution between operating and capital expenditure

Not applicable for this RIN category.

2.3.17.12. Consistency of labour costs

Not applicable for this RIN category.

2.3.17.13. Non-network alternatives

Not applicable for this RIN category.

2.3.17.14. Base year

Aurora has considered 2009-10 as the base year to forecast its expenditure program for network division management – national electricity market levy in the *Forthcoming Regulatory Control Period*. 2009-10 was chosen as the base year as it provided a sound basis for preparing the forecasts and that it was the last year with available audited regulatory accounts.

2.3.17.15. Non-recurrent costs

There are no non-recurrent costs included.

2.3.17.16. Models or methodology

The national electricity market levy forecast has been based on estimated expenditure for 2011-12 and escalated thereafter. An adjustment between actual and estimate will be made as part of the annual revenue requirement.

2.3.17.17. Differences from previous models or methodology

Aurora has made no changes to the methodologies from those of the *Current Regulatory Control Period*.

2.3.17.18. Previous models or methodology

Previous forecasts for the electrical safety levy were prepared using a linear extrapolation of historical values.

2.3.17.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.17.20. Asset maintenance plans

Not applicable for this RIN category.

2.3.17.21. Network planning standards

Not applicable for this RIN category.

2.3.18. Network division management – network management

Network division management – network management is the major component of expenditure included within the network management Opex Category and discussions included within section 2.3.13 of this RIN Response are also therefore applicable to network division management – network management.

2.3.19. Network division management – regulatory

Network division management – regulatory includes those components of expenditure included within the network management Opex Category that are particular to the operations of the Regulatory Team and discussions included within section 2.3.13 of this RIN Response are also therefore applicable to network division management – regulatory.

2.3.20. System operations

System Operations work programs are forecast on historical expenditure for system reconfigurations and system status checks. These programs are ad-hoc in nature and Aurora believes this is a reasonable basis for projecting expenditure requirements forward.

System operations planning team members hold regular informal discussions with the other electricity supply industry companies (Transend and Hydro) about their upcoming programs and these discussions provide an input basis for expenditure forecasts for system reconfigurations. Work at the request of Transend makes up approximately 60–70 percent of this programme expenditure.

Historical data is used as the basis for expenditure forecasts for system status checks, as Aurora is unable to forecast when system status checks will be required and at what volumes.

2.3.20.1. Meet or manage expected demand

System operations work programs are designed to maintain the distribution network at current levels of demand by ensuring that the distribution system is configured and maintained within rated parameters. This includes programs which enable the management of real time protection issues, reconfiguring protection settings and ratings, prevention of loss of supply and timely restoration when loss of supply occurs.

2.3.20.2. Regulatory obligations

System operations work programs comply with all applicable regulatory obligations and requirements including the Power System Safety Rules (PSSR) that cover the Tasmania electricity supply industry (Aurora, Transend, Hydro and AETV). Aurora frequently conducts internal audits on PSSR compliance.

Aurora management and work practices for system operation functions are designed to comply with the TEC and other relevant legislative requirements, which are covered in Aurora's asset management plans. These asset management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.20.3. Quality, reliability and security of supply

System operations work programs are designed to maintain the distribution network at current levels of power quality, reliability and security by ensuring that the system is configured and maintained within system rated parameters. This includes programs which enable the management of real time protection issues, reconfiguring protection settings and ratings, prevention of loss of supply and timely restoration for when loss of supply occurs.

2.3.20.4. Reliability, safety and security of the distribution system

System operations work programs are designed to maintain the distribution network at current levels of reliability, safety and security by ensuring that the system is configured and maintained within system rated parameters. This includes programs which enable the management of real time protection issues, reconfiguring protection settings and ratings, prevention of loss of supply and timely restoration for when loss of supply occurs.

2.3.20.5. Efficient costs

Aurora considers that expenditure in the system operations Opex Category reflects the efficient costs of achieving the *operating expenditure objectives* in that the volumes forecast and the rates forecast are appropriate. Aurora considers that the forecast volumes of work are appropriate because these programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.5 of this RIN Response.

2.3.20.6. Prudent operator

Aurora considers that expenditure in the system operations Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* on the basis that the works programs for this Opex Category have been determined using volumes that are consistent with historical trends and the unit rates are deemed efficient.

This is further discussed in section 2.3.6.6 of this RIN Response.

2.3.20.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for system operations Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives* as the work programs have been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.20.8. Benchmark operating expenditure

System operations work programs are managed in a way to ensure Aurora is running a safe and reliable system using cost efficient approaches.

This is further discussed in section 2.3.6.8 of this RIN Response.

2.3.20.9. Expenditure during preceding Regulatory Control Periods

In determining the forecast expenditure in the system operations Opex Category, actual and expected operating expenditure from preceding *Regulatory Control Periods* has been considered. Aurora considers that the forecast volumes of work based on historical trends are appropriate given the unscheduled nature of system operations work programs.

2.3.20.10. Relative prices of inputs

Aurora's work programs are developed using a bottom-up approach. This involves determining work volumes in accordance with the applicable asset management plan and applying the appropriate unit rates.

This is further discussed in section 2.3.6.10 of this RIN Response.

2.3.20.11. Substitution between operating and capital expenditure

Aurora does not consider the substitution possibilities for system operations Opex Category as these tasks are of a reactive nature.

2.3.20.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.20.13. Non-network alternatives

Aurora does not consider non-network alternatives when preparing forecasts for system operations work programs as these programs are unscheduled and reactive programs that have no capital alternative.

2.3.20.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.20.15. Non-recurrent costs

There are no non-recurrent or one-off costs associated with system operations work programs.

2.3.20.16. Models or methodology

The forecast for system operations work programs was prepared using a linear extrapolation of historical values.

2.3.20.17. Differences from previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.20.18. Previous models or methodology

Previous forecasts for these programs were prepared using a linear extrapolation of historical values.

2.3.20.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.20.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.20.21. Network planning standards

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.21. Vegetation management

The program development methodology used for vegetation management is explained in detail within the vegetation management plan. This management plan is appended as an attachment to Aurora's Regulatory Proposal.

In summary, the vegetation management work program was developed through the following process:

- determine regulations that must be complied with;
- apply a risk assessment methodology to ensure regulatory compliance and prudency is achieved in determining works to be actioned;
- extract any works that are covered by other works programs within Aurora (such as TRIPs) to ensure no double-counting occurs;
- apply a pricing methodology built from data available within the vegetation database (VEGEMITe) and apply the various 'cut types' on a span-by-span basis;
- add other associated program costs (such as switching and live line works); and
- apply efficiencies to ensure costs decrease throughout the *Regulatory Control Period* (Aurora's distribution business has set a strategic objective of not adding to an increase in customer prices as a result of its efforts).

2.3.21.1. Meet or manage expected demand

Whilst vegetation management operating expenditure does not contribute directly in meeting or managing the expected demand for *standard control services* it contributes to the provision of the shared network through contribution to:

- improved reliability;
- safety; and
- environmental sustainability.

2.3.21.2. Regulatory obligations

All relevant actions and compliance issues contained within the Acts and Codes have been incorporated into Aurora's vegetation management strategy, management plan, operational plan and contract technical specifications to ensure full compliance whilst implementing Aurora's vegetation management work program including compliance with the following:

- *Electricity Supply Industry Act 1995* (ESI Act);
- Electri*city Industry Safety and Administration Act 1997* (ESI&A Act);
- Tasmanian Electricity Code (TEC);
- *Workplace Health and Safety Act 1995*;
- *Weed Management Act 1999*;
- *Threatened Species Protection Act 1995*; and
- *Forest Practices Act 1985*.

2.3.21.3. Quality, reliability and security of supply

The vegetation management work program is designed to mitigate occurrence of vegetation coming into contact with powerlines. An outcome of the program is reduced outages resulting in improved reliability and security of supply.

2.3.21.4. Reliability, safety and security of the distribution system

The vegetation management work program is designed to mitigate occurrence of vegetation coming into contact with powerlines. An outcome of the program is reduced vegetation caused faults and the resultant minimisation of safety, reliability and fire start issues relating to fallen powerlines as well as maintaining the required clearances from powerlines minimising the risk of people contacting live powerlines.

Vegetation management work programs are designed to address specific issues associated with existing assets that may impact on safety, environment, reliability and system security.

2.3.21.5. Efficient costs

Aurora utilises an outsourced contract model for the provision of cutting services for its vegetation management work programs. This model sources all contractors through a rigorous tendering and contracts process.

The contract model used by Aurora has been in place for approximately five years. During this time Aurora has had the opportunity to implement continuous improvement initiatives that ensure contractor productivity and program outcomes are achieving optimum performance.

Interstate networking and informal benchmarking shows Aurora's vegetation management program to be on par with other distribution businesses throughout Australia.

The vegetation management work program ensures:

- all vegetation clearing works are carried out by vegetation clearing contractors that are let through a competitive tender process;
- efficiency is proven through productivity measurement and benchmarking of contractor works undertaken; and
- effectiveness through measurement of outcomes such as reliability impacts caused by vegetation, electrical safety incidents involving vegetation management, and fire starts resulting from vegetation coming into contact with powerlines.

2.3.21.6. Prudent operator

Aurora considers that expenditure in the vegetation management Opex Category reflects the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives* on the basis that the works programs for this Opex Category have been determined using volumes that are consistent with historical trends and the unit rates are deemed efficient.

This is further discussed in section 2.3.6.6 of this RIN Response.

The vegetation management program also delivers prudency through compliance to the TEC by application of a rigorous risk assessment of works undertaken by the application of the vegetation risk assessment matrix contained within the vegetation management plan.

2.3.21.7. Realistic expectation of the demand forecast and cost inputs

Aurora considers that the forecasts for vegetation management Opex Category are a realistic expectation of the demand forecast and cost inputs to achieve the *operating expenditure objectives* as the work programs have been determined in consideration of historic volumes and expenditure. In most cases there are no deviations from historic spend and where there is, this is explained in the associated asset management plan. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.21.8. Benchmark operating expenditure

Vegetation management work programs are managed in a away to ensure Aurora is running a safe and reliable system using cost efficient approaches.

The vegetation management plan provides detail relating to how works volume and costs were determined. The vegetation management plan includes items such as:

- Aurora's approach to vegetation management, as reflected through legislative and regulatory obligations, the network management strategy and vegetation management strategy;
- An outline of the Vegetation Management Program for the *Forthcoming Regulatory Control Period*; and
- forecast expenditure, including the basis upon which these forecasts are derived.

Aurora's risk management framework provides the basis for determining work volumes (expressed in 'spans'). These volumes were determined through application of a risk management methodology covered within section 10 of Aurora's vegetation management plan. The methodology used within the vegetation management plan links directly to Aurora's risk management framework. Application of the risk management methodology ensures that appropriate vegetation (highest ranking risks) is being targeted for action. This ensures prudency within the program.

2.3.21.9. Expenditure during preceding Regulatory Control Periods

Aurora considers that its current practices are appropriate and that current vegetation management practices should continue. Actual volumes have been used as a basis for the development of future forecasts. These forecasts have been adjusted in line with the distribution business strategy.

Achievement of the distribution business strategy will be achieved through the vegetation management program through a:

- restructure of the internal vegetation management team;
- restructure of the external vegetation management contract models;
- review of 'cut type' undertaken within each span; and
- review of current risk profiles associated with vegetation management.

Accordingly, the program costs included within the vegetation management work program reflect a three percent decrease in costs per annum.

2.3.21.10. Relative prices of inputs

Whilst the strategic and management activities of the vegetation management program are determined within Aurora, all field works (requiring tree trimming or removal) is done through Aurora's external tree clearing contractors.

The competitive tender process used by Aurora ensures prices are market tested and are the best available. It is envisaged that these contracts will be re-tendered again during 2011.

Additionally, through the introduction of improved reporting, Aurora has implemented a process that monitors contractor productivity by determining cost per unit of work in various work categories. This process not only ensures Aurora has up to date information regarding the costs associated with individual tree related activities (such as '$ per trim', '$ per removal category'), but also allows Aurora to compare productivity between contracting companies, regions and feeders throughout the State.

2.3.21.11. Substitution between operating and capital expenditure

Substitution possibilities for this expenditure are also discussed in sections 11.4, 12.4.4 and 12.4.5, and chapter 13 of Aurora's Regulatory Proposal.

In the vast majority of instances where vegetation is in close proximity to powerlines, the vegetation is assessed as having limited or no conservation value and rarely passes a cost/benefit analysis required in order to proceed with the option of powerline relocation or redesign options (capital expenditure options), and as such is generally trimmed or removed.

In isolated instances where the vegetation has high conservation value (such as an 'Avenue of Honour', historically significant, or rare and endangered species), or where cost/benefit analysis shows that it may be more prudent to relocate the powerline, works are assessed for inclusion into the capital works program.

2.3.21.12. Consistency of labour costs

As Aurora has not been subject to a STPIS arrangement during the *Current Regulatory Control Period*, it has utilised a consistent approach for all labour costs. Labour rates for service provision have had a three percent efficiency factor applied for each year of the *Forthcoming Regulatory Control Period*.

Aurora has not considered the interactions between total labour costs and the incentives provided by STPIS when developing its forecasts.

2.3.21.13. Non-network alternatives

Aurora does not consider non-network alternatives when preparing the forecast for this RIN category.

2.3.21.14. Base year

Aurora has not applied a base year approach for this RIN category.

2.3.21.15. Non-recurrent costs

There are no non-recurrent or one-off costs associated with network asset maintenance – zone substations work programs.

2.3.21.16. Models or methodology

Aurora's vegetation management tool/database, VEGEMITe is utilised in the development of vegetation management work programs.

VEGEMITe is a Geographic Information System (GIS) used by Aurora and vegetation management contractors to capture information regarding vegetation management requirements around Aurora's distribution network.

VEGEMITe has been developed for Aurora by consulting firm Sinclair Knight Merz SKM). Aurora Energy retains all rights and intellectual property to the VEGEMITe application.

Prior to 2008 it was recognised that the type of data that was being captured related to quantities of 'work undertaken' by the crews (ie numbers of trees trimmed and removed). Aurora therefore had a fairly accurate idea of 'what has been done in the past', but did not have reporting available that enabled quantification of 'what needs to be done in the future' without making significant assumptions based upon historical data.

As an outcome of a strategic risk review, and to ensure Aurora was able to justify future vegetation management business case development, an upgrade project was undertaken in 2008 to enable VEGEMITe to:

- predict future workloads and costs;
- enable modelling of various strategies; and
- measure operational progress against the chosen model/strategy.

This upgrade project was completed in 2010.

A VEGEMITe User Guide was developed to ensure correct field application and data integrity was achieved as part of the upgrade roll-out.

The upgrade rollout and associated field staff training was completed in early 2010.

Follow-up training and minor modifications continue into late 2010.

Data obtained from VEGEMITe is now used on a day to day operational basis by vegetation management field crews and forms an integral part of strategy decisions for future works modelling and financial forecasting.

2.3.21.17. Differences from previous models or methodology

Changes to VEGEMITe has ensured the capture of more accurate data, however the modeling used by Aurora to prepare the opex forecast is essentially unchanged (see section 11 of the vegetation management plan).

2.3.21.18. Previous models or methodology

Aurora has made no changes to the architecture of its models (with the exception of updates for categories, volumes, prices and periods) or methodologies from those of the *Current Regulatory Control Period*.

2.3.21.19. Reasons for change of models or methodology

As Aurora has not changed its models or methodology this question is not applicable.

2.3.21.20. Asset maintenance plans

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.3.21.21. Network planning standards

Vegetation clearing cycles form a planning standard for vegetation management.

The vegetation clearing cycles have been developed over many years taking into account regulatory requirements, stakeholder requirements and operational factors that determine optimum efficiencies and effectiveness. These cycles (12 months in urban areas and 24 months in rural areas) are incorporated into planning regimes and regional works schedules.

As discussed previously, work programs can be referenced to specific sections of Aurora's management plans, and these management plans reference the requirements of Aurora's internal planning standards. These management plans are appended as an attachment to Aurora's Regulatory Proposal.

2.4. Policies and strategies, and regulatory obligations

This section of Aurora's RIN Response will discuss the policies, strategies and consultants reports and any changed regulatory obligation or requirement applicable to its forecasts for operating expenditure for each Opex Category.

2.4.1. Connection asset repair

2.4.1.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the connection asset repair Opex Category:

- network management strategy;
- LV service replacement strategy;
- Aurora compliance policy;
- Aurora's distribution customer charter;
- meter technical specification;
- asbestos management plan;
- installation and replacement of current transformers; and
- installation and replacement of high voltage instrument transformers.

No consultants reports were relied upon for the connection asset repair work program.

2.4.1.2. Changed *regulatory obligations or requirements*

There are no changed *regulatory obligations or requirements* applicable to the forecasts for the connection asset repair Opex Category.

2.4.2. Corporate and shared services

2.4.2.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the corporate and shared services Opex Category.

The key governance documents relating to corporate and shared services asset management are:

- Aurora IT strategy;
- strategic fleet management plan; and
- facilities management plan.

The key governance documents for procurements of goods and services are:

- procurement policy; and
- procurement framework.

Tendering and contracts assists with the above by ensuring:

- that Aurora's relationships with suppliers of goods and services are developed and maintained in a fair, equitable and consistent manner; and
- services are sourced competitively from suitable suppliers of the goods and services required by internal customers.

Aurora's business plan and financial forecasts are based upon achievement of the above procurement outcomes.

The compliance policy and non compliance management policy are the business wide governance documents that outline requirements and expectations of the business in respect to its compliance obligations.

The risk management framework is a board approved corporate governance document. The purpose of risk management is to increase the likelihood of achieving Aurora's stated vision, purpose and strategic objectives by providing the basis for integration of effective risk management within strategic and operational planning and decision making at all levels and across all activities.

Aurora's indirect cost allocation methodology (ICAM) dictates the processes that will be followed in the allocation of shared services costs to the divisions and subsidiaries of Aurora.

The following consultants reports were relied upon by Aurora in its preparation of its forecasts for the corporate and shared service Opex Category:

- the information technology architecture road maps produced by Enterprise Architects providing the basis for the IT capital and operating expenditure forecasts for the business;
- the ICAM allocation methodology allocators reviewed by Deloitte; and
- the ICAM models reviewing by KPMG.

2.4.2.2. Changed *regulatory obligations or requirements*

There are no changed *regulatory obligations or requirements* applicable to the forecasts for the corporate and shared services Opex Category.

2.4.3. Electrical safety and installation inspection

2.4.3.1. Policies and strategies, procedures or consultants reports

There are no policies and strategies or procedures applicable to Aurora's forecasts for the electrical safety and installation inspection Opex Category.

No consultants reports were relied upon for the electrical safety and installation inspection work program.

2.4.3.2. Changed *regulatory obligations or requirements*

There are no changed *regulatory obligations or requirements* applicable to the forecasts for the electrical safety and installation inspection Opex Category.

2.4.4. Emergency and unscheduled power system

2.4.4.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the emergency and unscheduled power system Opex Category:

- network management plan; and
- system operations management plan.

No consultants reports were relied upon for the emergency and unscheduled power system work program.

2.4.4.2. Changed *regulatory obligations or requirements*

There are no changed *regulatory obligations or requirements* applicable to the forecasts for the emergency and unscheduled power system Opex Category.

2.4.5. NEM and contestability related costs

2.4.5.1. Policies and strategies, procedures or consultants reports

There are no policies and strategies or procedures applicable to Aurora's forecasts for the NEM and contestability related costs Opex Category.

No consultants reports were relied upon for the NEM and contestability related costs work program.

2.4.5.2. Changed *regulatory obligations or requirements*

Changes were made to the contestable customer regulations during the *Current Regulatory Control Period* that are applicable to the forecasts for the NEM and contestability related costs Opex Category.

2.4.6. Network asset maintenance

2.4.6.1. Policies and strategies, procedures or consultants reports

Network asset maintenance is an aggregate of the following asset maintenance subcategories:

- connection assets;
- decommissioned assets;
- ground mounted substations;
- overhead network and structures;
- underground network; and
- zone substations.

There are a number of policies and strategies or procedures that generally apply to each of these subcategories. This include:

- Network Management Strategy;
- ENA Guidelines for Design and Maintenance of Overhead Distribution and Transmission Lines – C(b)1;
- Aurora compliance policy;
- AuroraGreen policy; and
- AuroraSafe policy.

Each of these subcategories will also have its own policies and strategies, procedures or consultants reports and these are discussed within that section of this RIN Response.

A listing of policies, procedures, guidelines and standards applicable to the management of Aurora's assets is at table 7.2 of the RIN Template.

2.4.6.2. Changed *regulatory obligations or requirements*

Network asset maintenance is an aggregate of the following asset maintenance subcategories:

- connection assets;
- decommissioned assets;
- ground mounted substations;
- overhead network and structures;
- underground network; and
- zone substations.

Each of these subcategories may have its own *regulatory obligations or requirements* and these are discussed within that section of this RIN Response.

2.4.7. Network asset maintenance – connection assets

Aurora has not forecast any operating expenditure for the network asset maintenance – connection assets Opex Category in the *Forthcoming Regulatory Control Period* and has no actual expenditure in the *Current Regulatory Control Period*.

All operating expenditure relating to Aurora's connection assets has been included within the connection asset repair Opex Category.

2.4.8. Network asset maintenance – decommissioned assets

2.4.8.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the network asset maintenance – decommissioned assets Opex Category:

- EDOs Volume and Line Item Strategy;
- Network Policy – Inspection and Maintenance of Distribution Overhead Lines;
- Network Policy – Substandard HV Distribution Conductors;
- Network Procedure – Identification and Management of Overhead Line Component Defects; and
- Substandard Conductor Audit spreadsheet.

No consultants reports were relied upon for the network asset maintenance – decommissioned assets work program.

2.4.8.2. Changed *regulatory obligations or requirements*

There are no changed *regulatory obligations or requirements* applicable to the forecasts for the network asset maintenance – decommissioned assets Opex Category.

2.4.9. Network asset maintenance – ground mounted substations

2.4.9.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the network asset maintenance – ground mounted substations Opex Category:

- Australian and New Zealand Environment and Conservation Council (ANZECC) Polychlorinated Biphenyls Management Plan (Revised Edition April 2003);
- ENA EG0 – Power System earthing guide part 1: Management principles;
- ENA Interim Guideline for the fire protection of electricity substations;
- Management of PCBs;

- Management Plan – Ferro Resonance;
- Distribution Substation Design and Construction Standard;
- Network Maintenance Manual;
- Network Procedure – Identification and Management of Ground-Mounted Substation and Zone Substation Defects; and
- Program of Work Process.

The following consultants reports were relied upon for the asset maintenance – ground mounted substations work program.

- Entura - Earth Testing Reports;
- MegaVar - Earth Testing Reports;
- Oil Sampling Testing;
- White & McAllister - Audit review of Asbestos Containing Material in substations;
- Injury Prevention management – Created Asbestos Containing Material register; and
- Confined Space Management Plan.

2.4.9.2. Changed *regulatory obligations or requirements*

Changes to the *Occupational Licensing Act 2005* that became effective 19 January 2009 required Aurora to be compliant with AS/NZS 3000:2007 and all corresponding standards. Prior to this date, AS/NZS 3000:2007 and C(b)1 were used as a guide to industry best practice.

2.4.10. Network asset maintenance – overhead network and structures

2.4.10.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the network asset maintenance – overhead network and structures Opex Category:

- Network Policy – Inspection and Maintenance of Distribution Overhead Lines;
- Structures – Annual Equivalent Calculation;
- Network Procedure – Identification and Management of Overhead Line Component Defects;
- Network Procedure – Wood Pole Reinstatement by Ground-Line Reinforcement;
- Network Procedure – Pole Inspection and Maintenance (Part 1 – Wood Poles);
- Network Procedure – Pole Inspection and Maintenance (Part 2 – Railway Section Steel Poles); and

- Network Procedure – Pole Inspection and Maintenance (Part 3 – Spun Concrete, Steel and Steel Concrete Poles).

No consultants reports were relied upon for the network asset maintenance – overhead network and structures work program.

2.4.10.2. Changed *regulatory obligations or requirements*

Changes to the *Occupational Licensing Act 2005* that became effective 19 January 2009 required Aurora to be compliant with AS/NZS 3000:2007 and all corresponding standards. Prior to this date, AS/NZS 3000:2007 and C(b)1 were used as a guide to industry best practice.

2.4.11. Network asset maintenance – underground network

2.4.11.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the network asset maintenance – underground network Opex Category:

- Network Manual – Design, Maintenance, Testing, Operation, Fault Location, Repair and Refurbishment of Low Pressure Oil Filled Cables (with notes on XLPE insulated EHV cables); and
- Network Underground Design and Construction Manual.

No consultants reports were relied upon for the network asset maintenance – underground network work program.

2.4.11.2. Changed *regulatory obligations or requirements*

Changes to the *Occupational Licensing Act 2005* that became effective 19 January 2009 required Aurora to be compliant with AS/NZS 3000:2007 and all corresponding standards. Prior to this date, AS/NZS 3000:2007 and C(b)1 were used as a guide to industry best practice.

2.4.12. Network asset maintenance – zone substations

2.4.12.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the network asset maintenance – zone substations Opex Category:

- Network Procedure – Identification and Management of Ground Mounted Substation and Zone Substation Defects.

Aurora takes into consideration a number of consultant reports from external service providers for specialised testing and condition monitoring as per following:

- earthing injection testing;
- partial discharge testing;
- thermal inspection testing; and
- transformer and regulators oil testing.

All these testing reports are incorporated through either routine maintenance or corrective maintenance programs.

There is no separate program based solely on consultation reports.

2.4.12.2. Changed *regulatory obligations or requirements*

Changes to the *Occupational Licensing Act 2005* that became effective 19 January 2009 required Aurora to be compliant with AS/NZS 3000:2007 and all corresponding standards. Prior to this date, AS/NZS 3000:2007 was used as a guide to industry best practice.

2.4.13. Network division management

2.4.13.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the network division management Opex Category:

- Aurora Capitalisation policy Fixed Asset Policy;
- Guidelines for the capitalisation of Distribution Assets;
- Procurement Policy;
- Procurement Framework;
- Procurement ordering system (online);
- Aurora Delegations Manual;
- Business Case Framework;
- Functional Ringfencing Guidelines;
- Compliance policy and framework;
- Distribution Executive Sign off of annual Budget and Business Plan;
- Internal Audit Plans and internal controls;
- Risk Management Frameworks;
- Procurement Framework; and
- Aurora Delegations Manual.

The following consultants reports were relied upon for the network division management work program:

- Energy Advisory Services (EAS) – Preparation of Cost allocation (CAM); and
- EAS – Preparation of shared services papers.

2.4.13.2. Changed *regulatory obligations or requirements*

There are no changed *regulatory obligations or requirements* applicable to the forecasts for the network division management Opex Category.

2.4.14. Network division management – customer service

2.4.14.1. Policies and strategies, procedures or consultants reports

No additional policies and strategies or procedures to those outlined in section 2.4.13.1 of this RIN Response are applicable to Aurora's forecasts for the network division management – customer service Opex Category.

No specific consultants reports were relied upon for the network division management – customer service work program. Consultants reports that are generally relied upon for network division management work programs are discussed in section 2.4.13.1 of this RIN Response.

2.4.14.2. Changed *regulatory obligations or requirements*

There are no specific changed *regulatory obligations or requirements* applicable to the forecasts for the network division management – customer service Opex Category.

Changed *regulatory obligations or requirements* generally applicable to the forecasts for the network division management Opex Categories are discussed in section 2.4.13.2 of this RIN Response.

2.4.15. Network division management – electrical safety levy

2.4.15.1. Policies and strategies, procedures or consultants reports

No additional policies and strategies or procedures to those outlined in section 2.4.13.1 of this RIN Response are applicable to Aurora's forecasts for the network division management – electrical safety levy Opex Category:

No specific consultants reports were relied upon for the network division management – electrical safety levy work program. Consultants reports that are generally relied upon for network division management work programs are discussed in section 2.4.13.1 of this RIN Response.

2.4.15.2. Changed *regulatory obligations or requirements*

There are no specific changed *regulatory obligations or requirements* applicable to the forecasts for the network division management – electrical safety levy Opex Category.

Changed *regulatory obligations or requirements* generally applicable to the forecasts for the network division management Opex Categories are discussed in section 2.4.13.2 of this RIN Response.

2.4.16. Network division management – GSL payments

2.4.16.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the network division management – GSL payments Opex Category:

- GSL Guideline.

No specific consultants reports were relied upon for the network division management – GSL payments work program. Consultants reports that are generally relied upon for network division management work programs are discussed in section 2.4.13.1 of this RIN Response.

2.4.16.2. Changed *regulatory obligations or requirements*

There are no specific changed *regulatory obligations or requirements* applicable to the forecasts for the network division management – GSL payments Opex Category.

Changed *regulatory obligations or requirements* generally applicable to the forecasts for the network division management Opex Categories are discussed in section 2.4.13.2 of this RIN Response.

2.4.17. Network division management – national electricity market levy

2.4.17.1. Policies and strategies, procedures or consultants reports

No additional policies and strategies or procedures to those outlined in section 2.4.13.1 of this RIN Response are applicable to Aurora's forecasts for the network division management – national electricity market levy Opex Category.

No specific consultants reports were relied upon for the network division management – national electricity market levy work program. Consultants reports that are generally relied upon for network division management work programs are discussed in section 2.4.13.1 of this RIN Response.

2.4.17.2. Changed *regulatory obligations or requirements*

There are no specific changed *regulatory obligations or requirements* applicable to the forecasts for the network division management – national electricity market levy Opex Category.

Changed *regulatory obligations or requirements* generally applicable to the forecasts for the network division management Opex Categories are discussed in section 2.4.13.2 of this RIN Response.

2.4.18. Network division management – network management

2.4.18.1. Policies and strategies, procedures or consultants reports

No additional policies and strategies or procedures to those outlined in section 2.4.13.1 of this RIN Response are applicable to Aurora's forecasts for the network division management – network management Opex Category.

No specific consultants reports were relied upon for the network division management – network management work program. Consultants reports that are generally relied upon for network division management work programs are discussed in section 2.4.13.1 of this RIN Response.

2.4.18.2. Changed *regulatory obligations or requirements*

There are no specific changed *regulatory obligations or requirements* applicable to the forecasts for the network division management – network management Opex Category.

Changed *regulatory obligations or requirements* generally applicable to the forecasts for the network division management Opex Categories are discussed in section 2.4.13.2 of this RIN Response.

2.4.19. Network division management – regulatory

2.4.19.1. Policies and strategies, procedures or consultants reports

No additional policies and strategies or procedures to those outlined in section 2.4.13.1 of this RIN Response are applicable to Aurora's forecasts for the network division management – regulatory Opex Category.

No specific consultants reports were relied upon for the network division management – regulatory work program. Consultants reports that are generally relied upon for network division management work programs are discussed in section 2.4.13.1 of this RIN Response.

2.4.19.2. Changed *regulatory obligations or requirements*

There are no specific changed *regulatory obligations or requirements* applicable to the forecasts for the network division management – regulatory Opex Category.

Changed *regulatory obligations or requirements* generally applicable to the forecasts for the network division management Opex Categories are discussed in section 2.4.13.2 of this RIN Response.

2.4.20. System operations

2.4.20.1. Policies and strategies, procedures or consultants reports

There are no policies and strategies or procedures applicable to Aurora's forecasts for the system operations Opex Category.

No consultants reports were relied upon for the system operations work program.

2.4.20.2. Changed *regulatory obligations or requirements*

There are no changed *regulatory obligations or requirements* applicable to the forecasts for the system operations Opex Category.

2.4.21. Vegetation management

2.4.21.1. Policies and strategies, procedures or consultants reports

The following policies and strategies or procedures are applicable to Aurora's forecasts for the vegetation management Opex Category:

- TEC, Chapter 8A;

- Management Strategy – Vegetation Management;
- Management Plan – Vegetation Management;
- GHD Report – Vegetation Contract Model Review;
- Aurora Risk Management Framework;
- Aurora Procurement Policy;
- Vegetation Management Contracts (Contracting Model & Technical Specification);
- Network Procedure – Vegetation Management;
- Operational Plan – Vegetation Management;
- Network Procedure – Fire Mitigation Management;
- Network Procedure – Environmental Management; and
- Regional Works Schedules.

No consultants reports were relied upon for the vegetation management work program.

GHD was contracted to carry out a review into Aurora's Vegetation Management Contracting Model. Given the timing of this review (February 2011), it is envisaged that it will assist Aurora in application of continuous improvement principles to be applied within the ongoing vegetation management program. This report was not relied upon for the vegetation management work program.

2.4.21.2. Changed *regulatory obligations or requirements*

There are no changed *regulatory obligations or requirements* applicable to the forecasts for the vegetation management Opex Category.

2.5. Policies, strategies, procedures and consultants reports

This section of Aurora's RIN Response will discuss the following matters relating to the policies, strategies and consultants reports applicable to its forecasts for operating expenditure for each Opex Category:

- how each policy and strategy and procedure was taken into account and complied with;
- any changes were made to any policies and strategies or procedures in the *Current Regulatory Control Period* and the effect such changes had; and
- any departures from any conclusions and recommendations contained in the consultants reports.

2.5.1. Connection asset repair

2.5.1.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the connection asset repair Opex Category was taken into account and complied with is discussed in the following sections of this RIN Response.

All programs in the connection asset repair work programs are consistent with the objectives of Aurora's Network Division and are aligned to achieve the business direction outlined in the Network Management Strategy. They also ensure Aurora achieves compliance with legal, regulatory and ethical responsibilities as outlined in the Aurora Compliance Policy.

Programs relating to service asset repair, inspection and replacement are designed to align with the LV Service Replacement Strategy, which outlines asset types and replacement priorities for such work.

Chapter 9 of the TEC and chapter 7 of the Rules outline Aurora's regulatory responsibilities concerning metering and metering assets. Connection asset repair work programs for the installation, inspection and replacement of metering ancillary assets (such as CTs and VTs) must align with the requirements outlined in these documents.

All customer generated work in the program is derived from Aurora's Distribution Customer Charter, a document approved by the OTTER that outlines a responsibility to provide and maintain customer connections. This document is a requirement of the TEC.

Meter Panels are covered under the asset scope of connection assets and may contain asbestos. Therefore Aurora's policy, procedures and work practices around asbestos are relevant to the panel replacement program.

2.5.1.2. Changes to policies, strategies or procedures

There are no changes made to any policies and strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the connection asset repair Opex Category.

2.5.1.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the connection asset repair Opex Category.

2.5.2. Corporate and shared services

2.5.2.1. Application of policies, strategies or procedures

Each of the following policies, strategies or procedures applicable to Aurora's forecasts for the corporate and shared services Opex Category and how it was taken into account and complied with is discussed in the following sections of this RIN Response.

The underlying principles of managing IT have not changed significantly during the *Current Regulatory Control Period*. However, the work being undertaken in developing the Enterprise Architecture Road Maps will result in a significant review of the IT directions for Aurora.

The Strategic Fleet Asset Management Plan provides guidance on all aspects of fleet management and the development of both capital expenditure and operational expenditure plans that are converted to financial forecasts as part of the budgeting process. The underlying principles of managing fleet have not changed significantly during the *Current Regulatory Control Period*.

Capital and operational expenditure plans are developed (both for existing and new facilities if applicable) that are converted to financial forecasts as part of the budgeting process. These forecasts are aligned with the Facilities Management Plan. The underlying principles of managing facilities have not changed significantly during the *Current Regulatory Control Period*. The properties utilised by Aurora have changed with the development of the Cambridge site for Aurora's field workers, the impending sale of the Moonah site and the relocation of all staff from Moonah to Aurora's head office at 21 Kirksway Place.

The Procurement Policy and Framework outline a procurement direction with a focus on good practice and continuous improvement to be implemented by the business when procuring goods and services. This direction ensures that any person undertaking procurement activities for and on behalf of Aurora will have regard for sustainability, safety, quality and value for money over the 'whole of life' procurement cycle, resulting in positive commercial outcomes for the business. Core benefits of purchasing within this policy include: security of supply, lower costs, reduced risk, improved quality, greater added value, increased efficiency, innovation and enhanced environmental outcomes.

Compliance requirements, including compliance with the ESI act, are assessed by the business and are part of the process of developing strategies and plans which are funded and supported through the development of financial forecasts included into the planning and budgeting process.

Risk management principles are applied throughout the business and are an integral part of the process of developing strategies and plans which are funded and supported through the development of financial forecasts included into the planning and budgeting process. The Risk Management Framework outlines key supporting risk management documents such as risk management policy and processes. They are applied by the business in the same manner as the risk management framework.

Risk management by Aurora's external contractors is managed through the Tendering and Contracts processes administered by Supply Chain Services in Commercial Services Division.

2.5.2.2. Changes to policies, strategies or procedures

There are no changes made to any policies and strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the corporate and shared services Opex Category.

2.5.2.3. Departures from consultants reports

Where there are departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the corporate and shared services Opex Category they are discussed in the following sections of this RIN Response.

In allocating Aurora's Corporate and Shared Services, differentiation has been made between the corporate services which are non-causal and non-discretionary in nature and relate to the Governance of the organisation, and shared services which are more likely to be discretionary and causal in nature.

Weighted Average (the weighted average of all other shared service cost allocations) was proposed by Aurora as the primary allocator for (non-causal) corporate costs.

Deloitte undertook a review of the Aurora ICAM and in relation to the Corporate non-causal costs concluded that weighted average should be replaced with Operating Budget as the allocator (weighted average was considered to be the second most appropriate allocator).

> Operating Budget is defined as, "Labour, Materials, Contractors, and Other Expense for each division. It excludes internal charges and recoveries, depreciation, interest and cost of goods sold." This definition was developed from IPART, "Regulatory Information Requirements for Electricity Distributors in New South Wales, Appendix 4 – Accounting Separation Code page 31." Deloitte considered operating budget to be the best proxy for the size of divisions available.

In determining this, Deloitte considered various options for allocation, which included Operating Budget, Weighted Average, # FTEs, Asset Value, Managerial Estimates and Revenue. The following table outlines the pro's and con's of each of the option (in order of merit) as supplied by Deloitte:

Causality Analysis

Option *(In order of merit)*		Advantages	Disadvantages
1	Operating Budget[1]	• IPART recommend direct (operating costs) as the allocator for corporate costs[2] • Stable • Directly sourced from financial systems	• Differences in input costs may not reflect consumption of corporate services • Operating budgets are driven by efficiency of operations
2	Weighted Average	• Leverages other drivers	• Assumes consumption of shared services is reflective of corporate governance priorities
3	# of FTEs	• Relatively stable • Directly sourced from systems	• Does not account for changes in the operating model (eg – outsourcing, use of contractors) (Note – equivalent FTE is an option)
4	Asset Value	• Relatively stable • Directly sourced from systems	• Asset value not necessarily indicative of consumption of corporate services
5	Managerial Estimates	• Indicator of corporate management priorities	• Subjective • High margin of error as not objective source
6	Revenue	• Good indicator of business size	• Unstable – revenue can fluctuate • Inappropriate for Aurora due to nature of Retail

There were a number of factors identified by Aurora management that have led to the retention of weighted average as the most appropriate allocator:

- operating budget costs include costs that are not operational in nature, such as costs that would be considered cost of sales (e.g. AETV Power water costs);

- costs would have to be manually manipulated to remove items not operational in nature which would make the data less reliable and would unnecessarily increase the resources required to perform the calculations; and
- the operating budgets of the divisions are not considered to accurately reflect the consumption of corporate and shared services costs due to the nature of the distribution business having large operational costs compared to the energy business. Deloitte noted this as a disadvantage for Revenue as an allocator (the nature of Retail), which Aurora management believes is also the case for operating costs.

Management are of the opinion that the divisional consumption of shared services (weighted average of all other cost allocations) is the best reflective measure of the corporate governance priorities. The use of weighted average is considered to be the most reliable, robust and least resource intensive approach.

2.5.3. Electrical safety and installation inspection

2.5.3.1. Application of policies, strategies or procedures

As there are no policies, strategies or procedures applicable to Aurora's forecasts for the electrical safety and installation inspection Opex Category this question is not applicable.

2.5.3.2. Changes to policies, strategies or procedures

There are no changes made to any policies and strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the electrical safety and installation inspection Opex Category.

2.5.3.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the electrical safety and installation inspection Opex Category.

2.5.4. Emergency and unscheduled power system

2.5.4.1. Application of policies, strategies or procedures

Each of the following policies, strategies or procedures applicable to Aurora's forecasts for the emergency and unscheduled power system Opex Category and how it was taken into account and complied with is discussed in the following sections of this RIN Response.

The TEC provides, inter alia, a statement of the relevant technical standards of the electricity supply industry, an access regime to facilitate new entry, guidance on price setting methodologies, a means of resolving disputes that may arise and establishes advisory committees to assist the Regulator. There has been on-going development and refinement of the TEC to ensure that it best meets the needs of the Tasmanian electricity supply industry and customers.

Aurora's System Operations team must comply with the conditions of Aurora's Distribution License, which requires compliance with regulatory obligations and requirements, to fulfil its requirements as a DNSP. Aurora has the regulatory responsibility to operate the network in a safe way to assist in meeting reliability objectives set by the Regulator.

Aurora's System Operations team use the Network Management Plan to ensure alignment of the work programs to the long term direction for the management of Aurora's network assets to assist in the delivery of the organisational objectives. High level documents relating to strategy and legislative acts were used to create the overall management plan framework

Aurora's System Operations team use the System Operations Management Plan to define its programs and ensure they meet the distribution business Strategy.

2.5.4.2. Changes to policies, strategies or procedures

There are no changes made to any policies and strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the emergency and unscheduled power system Opex Category.

2.5.4.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the emergency and unscheduled power system Opex Category.

2.5.5. NEM and contestability related costs

2.5.5.1. Application of policies, strategies or procedures

As there are no policies, strategies or procedures applicable to Aurora's forecasts for the NEM and contestability related costs Opex Category this question is not applicable.

2.5.5.2. Changes to policies, strategies or procedures

There are no changes made to any policies and strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the NEM and contestability related costs Opex Category.

2.5.5.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the NEM and contestability related costs Opex Category.

2.5.6. Network asset maintenance

Network asset maintenance is an aggregate of the following asset maintenance subcategories:

- connection assets;
- decommissioned assets;
- ground mounted substations;
- overhead network and structures;

- underground network; and
- zone substations.

While each of these subcategories may have its own policies and strategies, procedures or consultants reports, the application and utilisation of these documents is generally common to each subcategory and is discussed within this section of this RIN Response.

Should there be issues specific to any of the network asset maintenance subcategories they are discussed within that section of this RIN Response.

2.5.6.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network asset maintenance Opex Category, and each of the network asset maintenance subcategories, was taken into account and complied with is discussed in the following sections of this RIN Response.

Aurora's management plan for each asset thread is created using a top down approach, where each policy is used within the various work categories to create the structure of the management plan. Documents relating to strategy and legislative acts are used to create the overall management plan framework. The finalised management plan is then used as the basis of Aurora's forecasts.

The relevant procedures are used to understand and implement specific industry best practice solutions to the various issues that Aurora must address. These procedures also frame the compliance obligations within Aurora's work programs.

2.5.6.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network asset maintenance Opex Category, and each of the network asset maintenance subcategories, these are discussed in the following sections of this RIN Response.

Changes to the *Occupational Licensing Act 2005* that became effective on 19 January 2009 require Aurora to be compliant with the ENA Guidelines for Design and Maintenance of Overhead Distribution and Transmission Lines – C(b)1 in the construction and operation of its distribution network. Before this date, C(b)1 was taken as standard industry practice for design and construction of distribution networks in Australia.

2.5.6.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network asset maintenance Opex Category, and each of the network asset maintenance subcategories.

2.5.7. Network asset maintenance – connection assets

Aurora has not forecast any operating expenditure for the network asset maintenance – connection assets Opex Category in the *Forthcoming Regulatory Control Period* and has no actual expenditure in the *Current Regulatory Control Period*.

All operating expenditure relating to Aurora's connection assets has been included within the connection asset repair Opex Category.

2.5.8. Network asset maintenance – decommissioned assets

2.5.8.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network asset maintenance – decommissioned assets Opex Category was taken into account and complied with is discussed in section 2.5.6.1 of this RIN Response.

2.5.8.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network asset maintenance – decommissioned assets Opex Category they are discussed in section 2.5.6.2 of this RIN Response.

2.5.8.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network asset maintenance – decommissioned assets Opex Category.

2.5.9. Network asset maintenance – ground mounted substations

2.5.9.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network asset maintenance – ground mounted substations Opex Category was taken into account and complied with is discussed in section 2.5.6.1 of this RIN Response.

2.5.9.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network asset maintenance – ground mounted substations Opex Category they are discussed in section 2.5.6.2 of this RIN Response.

2.5.9.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network asset maintenance – ground mounted substations Opex Category.

2.5.10. Network asset maintenance – overhead network and structures

2.5.10.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network asset maintenance – overhead network and structures Opex Category was taken into account and complied with is discussed in section 2.5.6.1 of this RIN Response.

2.5.10.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network asset maintenance – overhead network and structures Opex Category they are discussed in section 2.5.6.2 of this RIN Response.

2.5.10.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network asset maintenance – overhead network and structures Opex Category.

2.5.11. Network asset maintenance – underground network

2.5.11.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network asset maintenance – underground network Opex Category was taken into account and complied with is discussed in section 2.5.6.1 of this RIN Response.

2.5.11.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network asset maintenance – underground network Opex Category they are discussed in section 2.5.6.2 of this RIN Response.

2.5.11.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network asset maintenance – underground network Opex Category.

2.5.12. Network asset maintenance – zone substations

2.5.12.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network asset maintenance – zone substations Opex Category was taken into account and complied with is discussed in section 2.5.6.1 of this RIN Response.

2.5.12.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network asset maintenance – zone substations Opex Category they are discussed in section 2.5.6.2 of this RIN Response.

2.5.12.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network asset maintenance – zone substations Opex Category.

2.5.13. Network division management

Network divisional management is an aggregate of the following Opex Categories:

- network management;
- GSL payments;
- customer service;
- regulatory;
- electrical safety levy; and
- national electricity market levy.

While each of these subcategories may have its own policies and strategies, procedures or consultants reports, the application and utilisation of these documents is generally common to each subcategory and is discussed within this section of this RIN Response.

Should there be issues specific to any of the network division management subcategories they are discussed within that section of this RIN Response.

2.5.13.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network division management Opex Category, and each of the subcategories, was taken into account and complied with is discussed in the following sections of this RIN Response.

Capitalised costs

Network division management costs are primarily operating in nature, with the exception of capitalised indirect labour costs. The policy that is used to provide guidance as to the labour costs that can be capitalised is Aurora's capitalisation policy for fixed assets, which has been written in accordance with accounting standard AASB 116.

The percentage of labour costs to be allocated to capital is based on a deemed appropriate managerial estimate in accordance to AASB 116. AASB 116 states that indirect overhead costs incurred in bringing internally constructed assets into a condition to be capitalised are to be included in the capitalised cost. Due to the technical nature of Network's workforce responsible for delivering the program of work, 50 percent of their labour is deemed an appropriate apportionment between operating and capital. This ensures the full cost of construction is recorded.

The percentage estimate is reviewed annually as part of the budget setting process, and where there is a significant change to the skills set of the network management workforce (for example a restructure).

This process has been applied to the forecasts that Aurora has prepared for the network division management Opex Category and each of the subcategories.

Procurement

Procurement policies govern the procedures that must be followed when purchasing goods and services within the business. This includes all expenditure incurred within the network division management program and each of the subcategories.

Aurora is committed to continuously improving the management and standards of the procurement of goods and services. The primary objective of the procurement policy and framework is to ensure that the procurement framework effectively supports and enhances Aurora's strategy and operational objectives by improving purchasing efficiencies across the business and ensuring consistent practice and continuous improvement. The purpose of this policy is to set direction for the way Aurora procures goods and services ensuring that the procurement framework effectively supports and enhances Aurora's strategy and operational initiatives.

Ringfencing

OTTER's ringfencing guidelines set out the reporting categories for network management costs. Aurora ensures compliance with the ringfencing guidelines when preparing annual regulatory accounts. These accounts are audited by an external Auditor to provide assurance that the ringfencing guidelines have been complied with.

2.5.13.2. Changes to policies, strategies or procedures

There are no changes made to any policies and strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network division management Opex Category and each of the subcategories.

2.5.13.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network division management Opex Category and each of the subcategories.

2.5.14. Network division management – customer service

2.5.14.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network division management – customer service Opex Category was taken into account and complied with is discussed in section 2.5.13.1 of this RIN Response.

2.5.14.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network division management – customer service Opex Category they are discussed in section 2.5.13.2 of this RIN Response.

2.5.14.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network division management – customer service Opex Category.

2.5.15. Network division management – electrical safety levy

2.5.15.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network division management – electrical safety levy Opex Category was taken into account and complied with is discussed in section 2.5.13.1 of this RIN Response.

2.5.15.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network division management – electrical safety levy Opex Category they are discussed in section 2.5.13.2 of this RIN Response.

2.5.15.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network division management – electrical safety levy Opex Category.

2.5.16. Network division management – GSL payments

2.5.16.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network division management – GSL payments Opex Category was taken into account and complied with is discussed in section 2.5.13.1 of this RIN Response.

2.5.16.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network division management – GSL payments Opex Category they are discussed in section 2.5.13.2 of this RIN Response.

2.5.16.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network division management – GSL payments Opex Category.

2.5.17. Network division management – national electricity market levy

2.5.17.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network division management – national electricity market levy Opex Category was taken into account and complied with is discussed in section 2.5.13.1 of this RIN Response.

2.5.17.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network division management – national electricity market levy Opex Category they are discussed in section 2.5.13.2 of this RIN Response.

2.5.17.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network division management – national electricity market levy Opex Category.

2.5.18. Network division management – network management

2.5.18.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network division management – network management Opex Category was taken into account and complied with is discussed in section 2.5.13.1 of this RIN Response.

2.5.18.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network division management – network management Opex Category they are discussed in section 2.5.13.2 of this RIN Response.

2.5.18.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network division management – network management Opex Category.

2.5.19. Network division management – regulatory

2.5.19.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the network division management – regulatory Opex Category was taken into account and complied with is discussed in section 2.5.13.1 of this RIN Response.

2.5.19.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the network division management – regulatory Opex Category they are discussed in section 2.5.13.2 of this RIN Response.

2.5.19.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the network division management – regulatory Opex Category.

2.5.20. System operations

2.5.20.1. Application of policies, strategies or procedures

As there are no policies, strategies or procedures applicable to Aurora's forecasts for the system operations Opex Category this question is not applicable.

2.5.20.2. Changes to policies, strategies or procedures

There are no changes made to any policies and strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the system operations Opex Category.

2.5.20.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the system operations Opex Category.

2.5.21. Vegetation management

2.5.21.1. Application of policies, strategies or procedures

How each of the policies, strategies or procedures applicable to Aurora's forecasts for the vegetation management Opex Category was taken into account and complied with is discussed in the following sections of this RIN Response.

TEC

The TEC provides, inter alia, a statement of the relevant technical standards of the electricity supply industry, an access regime to facilitate new entry, guidance on price setting methodologies, a means of resolving disputes that may arise and establishes advisory committees to assist the Regulator. There has been on-going development and refinement of the TEC to ensure that it best meets the needs of the Tasmanian electricity supply industry and customers.

Specifically, Chapter 8A of the TEC includes a framework for the management of vegetation around distribution powerlines. This framework is explicit regarding works requirements and practices in various fire hazard categories.

Chapter 8A of the TEC also contains high level guidelines, procedures and practices relating to vegetation management activities such as:

- program development,
- retention/removal of specific vegetation,
- standards required for various fire danger areas,
- customer consultation, and
- issue resolution.

Vegetation management strategy

The purpose of vegetation management strategy is to outline the strategy guiding Aurora's program of vegetation management in accordance with legislative requirements, stakeholder expectations and good industry practice.

Vegetation management plan

The purpose of the vegetation management plan is to detail:

- Aurora's approach to vegetation management, as reflected through legislative and regulatory obligations, the Network Management Strategy and Vegetation Management Strategy;
- an outline of the vegetation management work program for the *Forthcoming Regulatory Control*; and
- forecast expenditure, including the basis upon which these forecasts are derived.

GHD report – vegetation contract model review

The GHD report into Aurora's vegetation contract model provides approaches and recommendations that will assist Aurora in ensuring efficiency and effectiveness within the vegetation management work program both internally and through management of external contractor models. This document has only been available to Aurora since mid February 2011 and is in the process of being reviewed for development of action plans.

Aurora risk management framework

Aurora's risk management framework provides a common basis for Aurora to identify and rank risks. Highest-ranking risks are captured within risk registers and have appropriate risk treatment plans developed for each risk. Control actions that come from these treatment plans form a key part of the vegetation management work program.

Vegetation management contracts

Considerable study was carried out prior to 2006 (when Aurora bought the vegetation management function back 'in-house') to ensure the appropriate internal and contracting models were implemented. The detail covering this process was included as part of the business case for the *Current Regulatory Control Period*. No significant changes have taken place during the *Current Regulatory Control Period*.

Cyclic risk based vegetation management approach

Section 8A.5.1 of the TEC requires Aurora to implement a risk assessment approach in the application of clearing cycles undertaken within the vegetation management program.

Network procedure – vegetation management

The purpose of this procedure is to ensure that activities associated with vegetation management comply with Aurora's vegetation management strategy and management plan.

Operational plan – vegetation management

The purpose of the operational plan – vegetation management is to manage the operational and day-to-day detail of issues pertaining to vegetation management, contractor management and stakeholder management. This document also contains some procedures associated with vegetation management activities.

Network procedure - fire mitigation management

The purpose of the fire mitigation management procedure is to provide a framework for activities associated with pre-summer vegetation management preparedness and reporting. Pre-summer activities generally occur annually between September and January.

Network procedure - environmental management

The purpose of the environmental management procedure is to provide a framework for activities that impact on environmental issues whilst carrying out the vegetation management program. Environmental issues include such items as prevention of the spread of weeds, management of threatened and endangered species, protection of sensitive areas, etc.

Regional Works Schedules

Aurora has developed regional works schedules (for each of the three defined vegetation management regions) to ensure that the vegetation management program adheres to the determined clearing cycles (12 month cycle for urban areas, 24 month cycles for rural areas). These works schedules are managed by Aurora's internal vegetation management structure and utilises Microsoft Project as a tool to ensure effective project management. Detail and guidelines for management at an operational level are also included within Chapter 8A of the TEC and the operational plan – vegetation management.

2.5.21.2. Changes to policies, strategies or procedures

Where changes were made to the policies, strategies or procedures in the *Current Regulatory Control Period* applicable to the forecasts for the vegetation management Opex Category they are discussed in the following sections of this RIN Response.

No significant changes were made during the *Current Regulatory Control Period*, however it is envisaged that actions will be developed following the completion of the GHD review discussed previously.

A review is underway within the vegetation management document framework to ensure clearer linkages throughout the suite of documentation relating to vegetation management.

2.5.21.3. Departures from consultants reports

There are no departures from any conclusions and recommendations contained in the consultants reports applicable to the forecasts for the vegetation management Opex Category.

3. Forecast shared services expenditure

3.1. RIN requirements

RIN paragraph 5.3 requires that in relation to forecast opex for services shared across multiple functions of Aurora, including the provision of services for the National Broadband Network, in the *Forthcoming Regulatory Control Period*, Aurora provide where relevant:

(a) a detailed explanation of these services and how they relate to the multiple functions of Aurora;

(b) the total costs of these services;

(c) a break down of the total costs between:

  (i) regulated distribution services;

  (ii) unregulated distribution services;

  (iii) regulated retail services;

  (iv) unregulated retail services;

  (v) other unregulated services; and

  (vi) not allocated;

(d) where costs occur in the not allocated category, provide:

  (i) a detailed explanation of these costs; and

  (ii) a breakdown of costs if they are incurred across multiple drivers.

3.2. Service classifications

The AER's RIN has not defined the meaning of the services outlined at sections 5.3(c)(i) – (vi) and Aurora has interpreted those service classifications to be in accordance with those provided within OTTER's Accounting Ringfencing Guidelines.

OTTER's Accounting Ringfencing Guidelines defines regulated distribution services as those services that have been declared in accordance with the *Electricity Supply (Price Control) Regulations 2003*, encompassing:

(1) distribution network services, provided by Aurora, as the distribution network service provider, being the conveyance of electricity (from the connection point with the transmission system to the customer connection point including entry services, use of system services and exit services, excluding any connection assets owned and maintained by the customer) including:

  (a) the undertaking of works or the provision of maintenance or repairs for the purposes of carrying out conveyance of electricity; and

  (b) the provision, installation and maintenance or repairs of any switchgear or other electrical plant essential to the transportation and delivery of electricity.

(2) special services, including but not limited to connections, disconnections (including disconnections made at the request of the retailer) and reconnections.

(3) metering services, being the provision, installation and maintenance of any Type 5, 6 or 7 meter and related meter data capture provided by Aurora, excluding the provision of integrated prepayment meters and the provision of metering to a standard in excess of that required for the billing of customer services, but including special meter readings and meter testing of Type 5, 6 or 7 meters.

OTTER's Accounting Ringfencing Guidelines defines unregulated distribution services as services provided by a distribution system which are associated with the conveyance of electricity through the distribution system (including entry services, distribution network use of system services and exit services), and which have not been declared in accordance with the *Electricity Supply (Price Control) Regulations 2003*.

OTTER's Accounting Ringfencing Guidelines defines Regulated Retail Services as Retail Services that have been declared in accordance with the *Electricity Supply (Price Control) Regulations 2003* being:

Retail Services comprising:

(1) the sale of electricity to non-contestable tariff customers under the tariffs and generic contracts, including HydroHeat and Winterpac, and any new or equivalent tariffs or generic contracts, but excluding supply by Aurora Pay As You Go; and

(2) special services for non-contestable customers, including but not limited to:

- charge variation;
- additional charge;
- overdue payment; and
- overdue non-payment.

OTTER's Accounting Ringfencing Guidelines defines unregulated retail services as retail services which have not been declared in accordance with the *Electricity Supply (Price Control) Regulations 2003*.

OTTER's Accounting Ringfencing Guidelines defines other unregulated services as services provided by Aurora other than regulated distribution services, unregulated distribution services, regulated retail services and unregulated retail services.

OTTER's Accounting Ringfencing Guidelines defines not allocated as the content of those account headings that are not required by the Accounting Ringfencing Guideline to be allocated between business segments.

OTTER's Accounting Ringfencing Guidelines defines distribution services as the entirety of both regulated distribution services, and unregulated distribution services.

OTTER's Accounting Ringfencing Guidelines defines retail services as the services of retailing electricity.

3.3. Explanation of shared services

Shared service costs and their allocation are also discussed in chapter 16 of Aurora's Regulatory Proposal.

Shared services can be classified into four broad categories:

- overheads within the network division;
- overheads with the network services division;
- services that are provided for the entirety of the distribution business; and
- services that are provided by the corporate divisions for the other divisions and subsidiaries of Aurora.

3.3.1. Network division overheads

The overhead costs incurred by the network division include necessary management costs such as:

- fault and operations relating to labour and associated costs with manning switchboards and fault operators;
- the network customer group that facilitates the customer dispute process, implements and improves customer service strategies that meet customer needs and expectations, and administers the customer charter;
- regulatory costs relating to the preparation and delivery of regulatory submissions, information requests, responses, setting tariffs, revenue and pricing submissions;
- commercial services relating to the provision of commercial awareness and advice, financial services and analysis across the distribution business, and the preparation of Board reports, revenue recovery analysis, modelling, regulated and year end accounts, and management of policies and guidelines for the distribution business;
- asset management teams which are responsible for the management and planning of distribution assets;
- distribution IT systems relating to the management costs associated with strategic planning and IT architecture;
- executive teams - one business development executive team providing shared service across the two divisions (strategic vision, leadership);
- the market services team that has responsibility for NEM and retail competition related activities;
- compliance with all the metering and connection work undertaken, including the meter technical specification, metering procedures, work instructions and the Service and Installation Rules; and
- the IT licence fees and maintenance contractor and consultancy costs incurred running the business.

3.3.2. Network services division overheads

The network services division is responsible for delivery of the distribution work program; and the provision of a skilled workforce for the construction, operation and maintenance of the distribution network.

The overhead costs incurred by the network services division include management and support costs such as:

- the projects group responsible for proving project management expertise to both small and large scale projects. This projects group value-adds to the network services division by providing clarity around project timeframes, costs, quality and safety; and
- training centre costs – which are a critical component in ensuring that Aurora's workforce is appropriately trained for specific job functions.

3.3.3. Distribution business shared services

Distribution business expenses that are shared between the network services and network divisions are also incurred to support the delivery of distribution and other services. These costs are associated with the following vital services:

- the distribution finance team that provides specialist finance-related support for both divisions;
- the distribution executive that provides strategic direction and management for the distribution business as a whole; and
- the distribution safety team that is critical to ensure that Aurora is able to comply with its health and safety obligations.

3.3.4. Corporate and shared services

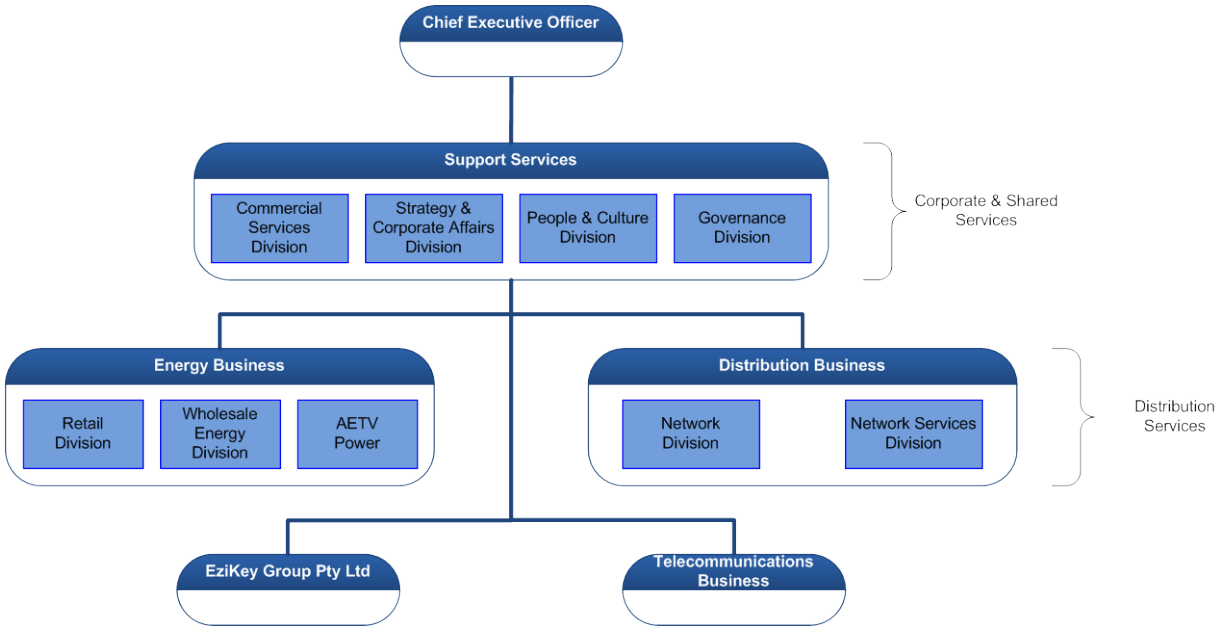
Corporate and shared services costs are associated with the provision of the following vital services to the other divisions and subsidiaries of Aurora:

- the Chief Financial Officer and the commercial services division which is responsible for the organisation's financial and procurement strategies, financial discipline and cash flow management and financial reporting to key stakeholders;
- the strategy and corporate affairs division which is responsible for the organisation's positioning from a business strategy and development perspective, market monitoring and policy development and public affairs and external relationships;
- the governance division which is responsible for the provision of legal services, company secretariat, compliance, business risk and information services management. The GM Governance is also the Company Secretary and General Counsel;
- the people and culture division which focuses on the provision of systems and professional advice for attracting, retaining, motivating, managing, developing and rewarding the organisation's employees in line with Aurora's overall business strategic aims; and

- the Office of the CEO which provides support to the Chief Executive Officer and Company Secretary.

The organisational structure of Aurora and the grouping of certain divisions to form shared services are shown in Figure 1.

Figure 1: Aurora's organisational structure



The functions and relationships within the Aurora business are discussed in detail in chapter 3 of Aurora's Regulatory Proposal.

3.3.5. National Broadband Network

The provision of services for the installation, maintenance and operation of the National Broadband Network (NBN) within Tasmania are managed and co-ordinated by the telecommunications business of Aurora. The telecommunications business manages all aspects of the relationships between NBNCo, NBN Tasmania, Aurora and external contractors.

The distribution business has an access arrangement with the NBN companies for the use of the distribution assets, but does not undertake any services that are shared between Aurora and NBN. Where the distribution business provides any services to NBN they are on a contractual basis and are ringfenced from the distribution business operations.

The network services division provides construction and maintenance services to NBN on a contractual basis. These services are provided in accordance with the tender provisions managed by the telecommunications business and do not form part of the provision of distribution related activities for the distribution business.

3.4. Total costs of the services

The total shared service costs (including corporate shared services costs allocated in accordance with Aurora's ICAM) that are allocated within the distribution business are shown in section 16.6 of Aurora's Regulatory Proposal. These costs are allocated to the services provided by the distribution business in accordance with the Aurora CAM. The allocation of the operating costs to the services described in the Accounting Ringfencing Guideline is shown in Table 6.

Table 6: Shared distribution cost allocations

Service ($2009-10)	2012-13 ($m)	2013-14 ($m)	2014-15 ($m)	2015-16 ($m)	2016-17 ($m)
Regulated distribution services	47.051	45.959	46.164	46.143	45.018
Unregulated distribution services	0.890	0.901	0.928	0.921	0.910
Regulated retail services	-	-	-	-	-
Unregulated retail services	-	-	-	-	-
Other unregulated services	6.210	6.067	5.944	5.829	5.712
Not allocated	-	-	-	-	-
Total	**54.152**	**52.928**	**53.036**	**52.893**	**51.640**

The total corporate and shared services costs, including their allocation to the other divisions and subsidiaries of Aurora, in accordance with the Aurora ICAM, are shown in Table 7.

Table 7: Forecast corporate and shared services costs

Division ($2009-10)	2012-13 ($m)	2013-14 ($m)	2014-15 ($m)	2015-16 ($m)	2016-17 ($m)
Network division	13.394	13.364	13.374	13.386	13.386
Network services division	17.847	17.669	17.624	17.630	17.630
Retail division	9.586	9.823	9.801	9.760	9.760
Wholesale energy division	2.276	2.225	2.226	2.225	2.225
AETV	1.575	1.486	1.563	1.561	1.561
Telecommunications	1.154	1.149	1.149	1.151	1.151
EziKey	0.415	0.413	0.413	0.413	0.413
Total	**46.248**	**46.128**	**46.151**	**46.127**	**46.127**

The allocation of these costs to the services described in the Accounting Ringfencing Guideline is shown in Table 8.

Table 8: Corporate and shared services cost allocations

Service ($2009-10)	2012-13 ($m)	2013-14 ($m)	2014-15 ($m)	2015-16 ($m)	2016-17 ($m)
Regulated distribution services	28.319	28.319	28.110	28.127	28.127
Unregulated distribution services	0.245	0.244	0.244	0.244	0.244
Regulated retail services	9.416	9.485	9.524	9.517	9.493
Unregulated retail services	4.021	4.049	4.066	4.029	4.053
Other unregulated services	4.246	4.212	4.206	4.209	4.209
Not allocated	-	-	-	-	-
Total	**46.248**	**46.128**	**46.151**	**46.127**	**46.127**

3.5. Costs not allocated

There are no corporate and shared services costs that have not been allocated.

4. Historic expenditure variations

4.1. RIN requirements

RIN paragraph 5.4 requires that in relation to opex incurred in the *Current Regulatory Control Period*, for each variation from the approved OTTER allowance identified in response to Regulatory Template 2.5, Aurora:

(a) explain:

(i) the reasons for the variation;

(ii) whether this is recurrent or a one off variation;

(iii) the factors which generally influenced the variation; and

(iv) whether the variation is due to factors beyond Aurora's control;

(b) provide supporting documents.

The RIN defines Document to include correspondence, notices, circulars, memoranda, minutes, notes, reports, contracts or agreements in the possession, power or control of Aurora.

4.2. Variations

Aurora has identified significant variations from the OTTER allowance in response to Regulatory Template 2.5.

Operating expenditure variations from the OTTER allowance for the *Previous* and *Current Regulatory Control Period* are also discussed in sections 12.2 and 12.3 of Aurora's Regulatory Proposal. The AER should refer to these sections of Aurora's Regulatory Proposal for explanations of those variations.

4.3. Reasons for the variation

The significant variations reported within Regulatory Template 2.5 arise from Aurora's inability to reforecast the OTTER allowance to reflect Aurora's amended CAM, impacting shared services allocations, and the classifications within the final Framework and Approach Paper. The OTTER allowances were given at the highest level in the majority of cases and Aurora did not have the underlying assumptions used by OTTER that would allow a reclassification into the appropriate Opex Categories and a one-to-one comparison of the actual operating expenditure within Regulatory Template 2.5.

4.4. Supporting Documents

There are no supporting documents provide in response to this RIN question.

5. Actual shared services expenditure

5.1. RIN requirements

RIN paragraph 5.5 requires that in relation to actual opex for services shared across multiple functions of Aurora, including the provision of services for the National Broadband Network, over the *Current* and *Previous Regulatory Control Period*, Aurora provide where relevant:

(a) a detailed explanation of these services and how they relate to the multiple functions of Aurora;

(b) the total costs of these services;

(c) a break down of the total costs between:

  (i) regulated distribution services;

  (ii) unregulated distribution services;

  (iii) regulated retail services;

  (iv) unregulated retail services;

  (v) other unregulated services; and

  (vi) not allocated;

(d) where costs occur in the not allocated category, provide:

  (i) a detailed explanation of these costs; and

  (ii) a breakdown of costs if they are incurred across multiple drivers.

5.2. Service classifications

Aurora has used the same service classification definitions as those described in section 3.2 of this RIN Response.

5.3. Explanation of shared services

Actual shared services can be classified into three broad categories:

- overheads within the network division;
- overheads with the network services division; and
- services that are provided by the corporate divisions for the other divisions and subsidiaries of Aurora.

5.3.1. Network division overheads

The overhead costs incurred by the network division include necessary management costs such as:

- the network executive that provides strategic direction and management for the network division;
- fault and operations relating to labour and associated costs with manning switchboards and fault operators;

- the network customer group that facilitates the customer dispute process, implements and improves customer service strategies that meet customer needs and expectations, and administers the customer charter;
- regulatory costs relating to the preparation and delivery of regulatory submissions, information requests, responses, setting tariffs, revenue and pricing submissions;
- commercial services relating to the provision of commercial awareness and advice, financial services and analysis, and the preparation of Board reports, revenue recovery analysis, modelling, regulated and year end accounts, and management of policies and guidelines for the distribution business;
- asset management teams which are responsible for the safety, management and planning of distribution assets;
- distribution IT systems relating to the management costs associated with strategic planning and IT architecture;
- the market services team that has responsibility for NEM and retail competition related activities;
- compliance with all the metering and connection work undertaken, including the meter technical specification, metering procedures, work instructions and the Service and Installation Rules; and
- the IT licence fees and maintenance contractor and consultancy costs incurred running the business.

5.3.2. Network services division overheads

The network services division is responsible for delivery of the distribution work program, and the provision of a skilled workforce for the construction, operation and maintenance of the distribution network.

The overhead costs incurred by the network services division include management and support costs such as:

- the network services executive that provides strategic direction and management for the network services division;
- the network services finance team that provides specialist finance-related support for the network services division;
- the safety team that is critical to ensure that network services is able to comply with its health and safety obligations;
- the projects group responsible for proving project management expertise to both small and large scale projects. This projects group value-adds to the network services division by providing clarity around project timeframes, costs, quality and safety; and
- training centre costs – which are a critical component in ensuring that Aurora's workforce is appropriately trained for specific job functions.

5.3.3. Corporate and shared services

Corporate and shared services costs are associated with the provision of the following vital services to the other divisions and subsidiaries of Aurora:

- the Chief Financial Officer and the commercial services division which is responsible for the organisation's financial and procurement strategies, financial discipline and cash flow management and financial reporting to key stakeholders;
- the strategy and corporate affairs division which is responsible for the organisation's positioning from a business strategy and development perspective, market monitoring and policy development and public affairs and external relationships;
- the governance division which is responsible for the provision of legal services, company secretariat, compliance, business risk and information services management. The GM Governance is also the Company Secretary and General Counsel;
- the people and culture division which focuses on the provision of systems and professional advice for attracting, retaining, motivating, managing, developing and rewarding the organisation's employees in line with Aurora's overall business strategic aims; and
- the Office of the CEO which provides support to the Chief Executive Officer and Company Secretary.

The functions and relationships within the Aurora business are discussed in detail in chapter 3 of Aurora's Regulatory Proposal.

5.3.4. National Broadband Network

The provision of services for the installation, maintenance and operation of the National Broadband Network (NBN) within Tasmania are managed and co-ordinated by the telecommunications business of Aurora. The telecommunications business manages all aspects of the relationships between NBNCo, NBN Tasmania, Aurora and external contractors.

The distribution business has an access arrangement with the NBN companies for the use of the distribution assets, but does not undertake any services that are shared between Aurora and NBN. Where the distribution business provides any services to NBN they are on a contractual basis and are ringfenced from the distribution business operations.

The network services division provides construction and maintenance services to NBN on a contractual basis. These services are provided in accordance with the tender provisions managed by the telecommunications business and do not form part of the provision of distribution related activities for the distribution business.

5.4. Total costs of the services

The total shared service costs (including corporate shared services costs allocated in accordance with Aurora's ICAM) that are allocated within the distribution business are shown in section 16.6 of Aurora's Regulatory Proposal. These costs are allocated to the services provided by the distribution business in accordance with the Aurora CAM. The allocation of these costs to the services described in the Accounting Ringfencing Guideline for the *Current Regulatory Control Period* is shown in Table 9.

Table 9: Shared distribution costs for the *Current Regulatory Control Period*

Service ($2009-10)	2007-08 ($m)	2008-09 ($m)	2009-10 ($m)
Regulated distribution services	62.619	70.054	74.173
Unregulated distribution services	0.113	0.176	0.512
Regulated retail services	-	-	-
Unregulated retail services	-	-	-
Other unregulated services	6.972	7.022	6.533
Not allocated	-	-	-
Total	**69.704**	**77.252**	**81.218**

The allocation of these costs to the services described in the Accounting Ringfencing Guideline for the *Previous Regulatory Control Period* is shown in Table 10.

Table 10: Shared distribution costs for the *Previous Regulatory Control Period*

Service ($2009-10)	2003-04 ($m)	2004-05 ($m)	2005-06 ($m)	2006-07 ($m)
Regulated distribution services	48.005	61.162	65.899	71.157
Unregulated distribution services	0.116	0.141	0.090	0.087
Regulated retail services	-	-	-	-
Unregulated retail services	-	-	-	-
Other unregulated services	7.915	7.873	8.918	8.823
Not allocated	-	-	-	-
Total	**56.036**	**69.176**	**74.907**	**80.067**

The total corporate and shared services costs, including their allocation to the other divisions and subsidiaries of Aurora, in accordance with the Aurora ICAM, for the *Current Regulatory Control Period* are shown in Table 11.

Table 11: Corporate and shared services costs for the *Current Regulatory Control Period*

Service ($2009-10)	2007-08 ($m)	2008-09 ($m)	2009-10 ($m)
Network division	12.211	13.501	12.877
Network services division	8.007	11.751	13.695

Service ($2009-10)	2007-08 ($m)	2008-09 ($m)	2009-10 ($m)
Retail division	10.506	11.578	10.756
Wholesale energy division	-	-	2.780
AETV	-	-	-
Telecommunications	0.748	0.507	0.636
Unallocated	0.765	0.520	1.361
Total	**32.237**	**37.857**	**42.105**

The total corporate and shared services costs, including their allocation to the other divisions and subsidiaries of Aurora, in accordance with the Aurora ICAM, for the *Previous Regulatory Control Period* are shown in Table 12.

Table 12: Corporate and shared services costs for the *Previous Regulatory Control Period*

Division ($2009-10)	2003-04 ($m)	2004-05 ($m)	2005-06 ($m)	2006-07 ($m)
Network division	7.794	8.040	7.650	11.802
Network services division	9.724	9.818	9.681	8.309
Retail division	7.634	7.815	9.118	8.847
Wholesale energy division	-	-	-	-
AETV	-	-	-	-
Telecommunications	-	-	-	-
Unallocated	0.926	1.042	1.295	3.941
Total	**26.078**	**26.715**	**27.744**	**32.899**

The allocation of these costs to the services described in the Accounting Ringfencing Guideline for the *Current Regulatory Control Period* is shown in Table 13.

Table 13: Corporate and shared services allocations for the *Current Regulatory Control Period*

Service ($2009-10)	2007-08 ($m)	2008-09 ($m)	2009-10 ($m)
Regulated distribution services	18.980	23.433	24.297
Unregulated distribution services	0.037	0.056	0.221
Regulated retail services	6.882	8.046	9.808
Unregulated retail services	3.624	3.532	3.728
Other unregulated services	1.949	2.270	2.690
Not allocated	0.765	0.520	1.361
Total	**32.237**	**37.857**	**42.105**

The allocation of these costs to the services described in the Accounting Ringfencing Guideline for the *Previous Regulatory Control Period* is shown in Table 14.

Table 14: Shared Corporate and shared services allocations for the *Previous Regulatory Control Period*

Service ($2009-10)	2003-04 ($m)	2004-05 ($m)	2005-06 ($m)	2006-07 ($m)
Regulated distribution services	16.023	16.357	15.859	18.846
Unregulated distribution services	0.037	0.029	02.020	0.019
Regulated retail services	6.387	5.487	6.842	6.366
Unregulated retail services	1.247	2.328	2.276	2.481
Other unregulated services	1.459	1.473	1.452	1.246
Not allocated	0.926	1.042	1.295	3.941
Total	**26.078**	**26.715**	**27.744**	**32.899**

5.5. Costs not allocated

5.5.1. Current Regulatory Control Period

The following corporate and shared services costs for the *Current Regulatory Control Period* have been classified as not allocated:

- costs associated with the New Ventures division;
- costs associated with the Office of the CEO; and
- costs associated with the Strategy and Corporate Affairs division.

Each of these 'unallocated' costs is discussed in detail below.

5.5.1.1. New Ventures

Unallocated costs within New Ventures division are related to the exploration of alternate business opportunities for Aurora.

5.5.1.2. Office of the CEO

Unallocated costs within the Office of the CEO are related to consultant's costs. These consultant's costs were for advice sought on the future direction of the Aurora business.

5.5.1.3. Strategy and Corporate Affairs

Unallocated costs within Strategy and Corporate Affairs division are related to activities associated with future business direction considerations.

5.5.2. Previous Regulatory Control Period

The following corporate and shared services costs for the *Previous Regulatory Control Period* have been classified as not allocated:

- costs associated with the New Ventures division; and

- costs associated with the broadband over powerline (BPL) project.

Each of these 'unallocated' costs is discussed in detail below.

5.5.2.1. New Ventures

Unallocated costs within New Ventures division are related to the exploration of alternate business opportunities for Aurora.

5.5.2.2. BPL

Unallocated costs associated with the BPL project are related to Aurora's trial of technology that would allow the use of its distribution network to send and receive data that could be used as a communications medium.

6. Scale escalation - inputs

6.1. RIN requirements

RIN paragraph 5.6 requires that Aurora:

(a) Provide data in response to Regulatory Template 2.8 as specified below for each of the following inputs, which may be applied as drivers of distribution network growth:

  (i) the number of Aurora's distribution customers;

  (ii) the total number of distribution transformers in Aurora's distribution network (including both ground mounted and pole mounted type substations);

  (iii) the total capacity of Aurora's zone substations (MVA);

  (iv) the total line length of Aurora's distribution network (km); and

  (v) any other driver of distribution network growth considered by Aurora to be appropriate and reasons why Aurora considers it appropriate.

(b) Provide historical volume data from 2002-03 to 2010-2011 and forecast volume data from 2011-12 to 2016-17 for each input identified in paragraph 5.6(a) above.

(c) Provide year on year historical and forecast growth rates for each input identified in 5.6(a) above.

(d) Provide a compound growth rate for each period for each input.

(e) If data is not available for any input, provide reasons as to why data is not available for that input

Responses to these questions are included in Regulatory Template 2.8.

7. Scale escalation – growth drivers

7.1. RIN requirements

RIN paragraph 5.7 requires that Aurora:

(a) From the inputs supplied pursuant to 5.6 above, generate:

(i) a growth driver to be applied to operating expenditure for *standard control services*; and

(ii) a growth driver to be applied to maintenance expenditure for *standard control services*.

(b) Provide reasons why the drivers chosen are appropriate.

(c) In responding to paragraph 5.7(a), a composite driver may be generated (i.e. more than one input can be used to generate the driver). If a composite driver is generated, provide the weightings for each input supported by data and reasons. A simple average (i.e. equal weighting) may be appropriate. The total weighting of any composite driver must equate to 100%.

Responses to these questions are included in Regulatory Template 2.8.

8. Scale escalation – application of drivers

8.1. RIN requirements

RIN paragraph 5.8 requires that Aurora:

(a) Apply the growth driver for operating expenditure to unescalated Base Year Standard Control Operating Expenditure.

(b) Apply the growth driver for maintenance expenditure to unescalated Base Year Standard Control Maintenance Expenditure.

(c) Determine the forecast amount of gross scale escalation expenditure for *Forthcoming Regulatory Control Period*. Amounts must be in real 2011-12 dollars.

Responses to these questions are included in Regulatory Template 2.8.

9. Scale escalation – adjustments

9.1. RIN requirements

RIN paragraph 5.9 requires that Aurora:

(a) For each disaggregated category of Standard Control Operating Expenditure and Standard Control Maintenance Expenditure

  (i) Provide a negative adjustment (as a percentage) for economies of scale efficiencies. For example, -90 per cent means 10 per cent net growth due to 90 per cent efficiency, and -40 per cent means 60 per cent net growth, etc.

  (ii) Provide reasons for each adjustment. Apply the adjustments to the unescalated Base Year standard control operating or maintenance expenditure for each disaggregated category. Amounts must be in real 2011-12 dollars.

(b) Provide the overall economies of scale factor for operating expenditure and for maintenance expenditure.

(c) Determine the net growth rates using the following formula:

net growth rate = gross growth rate x (1 – economies of scale factor)

Responses to these questions are included in Regulatory Template 2.8.

10. Scale escalation – net growth

10.1. RIN requirements

RIN paragraph 5.10 requires that Aurora:

(a) Apply the net growth rates for operating and maintenance expenditure to unescalated Base Year standard control operating and maintenance expenditure to determine the forecast amount of net scale escalation expenditure for the *Forthcoming Regulatory Control Period*. Amounts must be in real 2011-12 dollars.

Responses to this question are included in Regulatory Template 2.8.

11. Step changes – Current Regulatory Control Period

11.1. RIN requirements

RIN paragraph 5.11 requires that for Step Changes incurred in the *Current Regulatory Control Period* that Aurora:

(a) provide:

(i) each relevant Step Change including a description;

(ii) whether the Step Change is recurrent in nature;

(iii) whether the Step Change relates to a *regulatory obligation or requirement* and how it differs from previous *regulatory obligations or requirements*;

(1) for each step change relating to a *regulatory obligation or requirement* provide, with reference to specific clauses, versions of both the previous and new *regulatory obligations or requirements* driving the Step Change.

The RIN defines Step Change as incremental increased or decreased costs incurred primarily arising from new, changed or ceased *regulatory obligations or requirements*, changes in operating environment or where the Base Year allowance is not sufficient to meet forecast operating expenditure. This excludes any changes in real costs or input costs for expenditure relating to Aurora's existing operating activities.

11.2. Description of step change

The following Step Changes occurred in Aurora's operating and maintenance expenditure during the *Current Regulatory Control Period*:

- business restructure;
- regulatory costs;
- severe weather and storm events;
- NEM and retail contestability; and
- accounting adjustments.

Each of these Step Changes is discussed in more detail in the following sections.

11.2.1. Business restructure

Aurora has begun the restructure of its distribution business as part of the implementation of its distribution strategy. This restructure has resulted in the separation of a number of staff from the business with their associated separation payments.

These separations will result in one off increases associated with separation payments and ongoing reductions in labour costs.

These changes are not the result of changes to Aurora's *regulatory obligations or requirements*.

11.2.2. Regulatory costs

The preparation of Aurora's Regulatory Proposal is both resource and cost intensive. Aurora will engage additional staff and consultants as it works through the process of preparing, reviewing and finalising its Regulatory Proposal and AER Distribution Determination.

These costs are not recurrent in nature and only occur in the periods immediately prior to a Distribution Determination.

These changes are not the result of changes to Aurora's *regulatory obligations or requirements*.

11.2.3. Severe weather and storm events

There are a number of occasions during the *Current Regulatory Control Period* where severe weather and storm events have adversely impacted on Aurora's distribution network. These events have resulted in increased fault and emergency costs and associated GSL payments to customers.

These cost increases only occur in the year of the severe weather or storm impact. Whilst these impacts may appear to occur on a continuing basis, they are not considered recurrent in nature.

These changes are not the result of changes to Aurora's *regulatory obligations or requirements*.

11.2.4. NEM and retail contestability

Following Aurora's entry into the National Electricity Market in 2005, tranches of retail contestability have occurred during the *Current Regulatory Control Period*. These additional tranches have resulted in a number of process and policy changes within the distribution business as Aurora prepared for each tranche and then undertook the resultant administrative functions arising from those changes.

These changes have resulted in the one off installation of IT systems and the ongoing costs associated with the administrative staff required to undertake functions that were previously the domain of Aurora's retail business.

These changes are the result of changes to Aurora's *regulatory obligations or requirements*. Prior to retail contestability all NEM related functions associated with the management of Aurora's distribution customers were managed as part of the retailer process. Jurisdictional regulations and NEM and Rule requirements have meant that these functions must now be performed by a ring-fenced distribution business.

These obligations arise from:

- clauses 3.1, 3.2 and 3.3 of Aurora's distribution licence, renewed by the Office of the Tasmanian Economic Regulator 21 December 2008;

- clauses 3 and 4 of the Functional Ringfencing Guideline issued by the Office of the Tasmanian Economic Regulator October 2004;
- the *Electricity Supply Industry (Contestable Customer) Regulations 2005*, amendments up to and including number 78 of 2005, Electricity Supply Industry (Miscellaneous Amendments) Act 2005; and
- the *Electricity Supply Industry (Contestable Customer) Regulations 2005*, current consolidation.

These changed *regulatory obligations or requirements* documents are appended as an attachment to this RIN Response.

11.2.5. Accounting adjustments

The change in *Regulatory Control Periods* between 31 December 2007 and 1 January 2008 required a number of adjustments to be made to the accounts of Aurora in the 2007-08 financial year.

These adjustments have resulted in expenditure levels for a number of categories that are lower than would otherwise be expected. These adjustments occur in the 2007-08 financial year only and are not recurrent in nature.

These changes are not the result of changes to Aurora's *regulatory obligations or requirements*.

12. Step changes for matters listed at paragraph 5.1

12.1. RIN requirements

RIN paragraph 5.12 requires that for each of the matters listed at paragraph 5.1 that Aurora:

(a) provide:

(i) each relevant Step Change, including a description;

(ii) supporting material that demonstrates how any Step Change identified in response to paragraph 5.12(a)(i) will result in a change in opex incurred.

The RIN defines Step Change as incremental increased or decreased costs incurred primarily arising from new, changed or ceased *regulatory obligations or requirements*, changes in operating environment or where the Base Year allowance is not sufficient to meet forecast operating expenditure. This excludes any changes in real costs or input costs for expenditure relating to Aurora's existing operating activities.

12.2. Description of step change

Aurora has identified a single Step Change that is applicable to Aurora's operating and maintenance expenditure proposed for the *Forthcoming Regulatory Control Period*, being a self imposed efficiency factor.

As discussed in section 11.2.1 Aurora has begun the restructure of its distribution business as part of the implementation of its distribution strategy. This restructure has already resulted in the separation of a number of staff from the business. These separations will result in ongoing reductions in labour costs.

To further consolidate the distribution strategy, Aurora has also applied a three percent efficiency factor to all field staff labour rates. This efficiency factor has also been applied to a number of the team costs within the 'overhead' categories of Aurora's proposed operating expenditure.

The application of the Step Change will result in lower operating expenditure, for each Opex Category, during the *Forthcoming Regulatory Control Period* than would occur if this factor had not been applied.

13. Step changes identified at paragraph 5.12

13.1. RIN requirements

RIN paragraph 5.13 requires that for each Step Change identified at paragraph 5.12(a)(i) that Aurora provide:

(a) the process undertaken for identifying and quantifying the Step Change,

(b) whether the Step Change is recurrent in nature;

(c) any relevant Policies and Strategies, Procedures and consultants reports provided;

(d) whether the Step Change relates to a *regulatory obligation or requirement* and how it differs from previous *regulatory obligations or requirements*;

(e) for each Step Change relating to a *regulatory obligation or requirement* provide, with reference to specific clauses, versions of both the previous and new *regulatory obligations or requirements* driving the Step Change;

(f) any cost benefit analysis that was undertaken in determining the efficient costs in addressing the Step Change, including:

  (i) any alternative options considered to address the Step Change;

  (ii) the costs and benefits of each option considered including that of the option chosen;

  (iii) why the preferred option was chosen over each alternative option identified or, if no alternative options were identified, why;

  (iv) whether or not a 'do nothing' option was considered and how the risks of this option were assessed and compared with other options;

  (v) all contingency factors included in the costs of the options considered including in that of the option chosen;

(g) whether and how Aurora considers it is required to:

  (i) meet or manage expected demand for *standard control services* over the *Forthcoming Regulatory Control Period*;

  (ii) comply with all applicable *regulatory obligations or requirements* associated with the provision of *standard control services*;

  (iii) maintain the quality, reliability, and security of supply for *standard control services*;

  (iv) maintain the reliability, safety and security of the distribution system through the supply of *standard control services;*

(h) whether and how Aurora considers that it reasonably reflects

  (i) the efficient costs of achieving the *operating expenditure objectives*;

(ii) the costs that a prudent operator in the circumstances of Aurora would require to achieve the *operating expenditure objectives*; and

(iii) a realistic expectation of the demand forecast and cost inputs required to achieve the *capital expenditure objectives*

(i) whether and how Aurora considers it takes into consideration

(i) benchmark operating expenditure that would be incurred by an efficient *Distribution Network Service Provider* over the *Forthcoming Regulatory Control Period*;

(ii) the actual and expected operating expenditure of the *Distribution Network Service Provider* during any preceding *Regulatory Control Periods*;

(iii) the relative prices of operating and capital inputs;

(iv) the substitution possibilities between operating and capital expenditure;

(v) the consistency of the total labour costs included with the incentives provided by the STPIS;

(vi) efficient non-network alternatives

The RIN defines Step Change as incremental increased or decreased costs incurred primarily arising from new, changed or ceased *regulatory obligations or requirements*, changes in operating environment or where the Base Year allowance is not sufficient to meet forecast operating expenditure. This excludes any changes in real costs or input costs for expenditure relating to Aurora's existing operating activities.

The RIN defines Policies and Strategies as short-term and long-term policies, strategies, guidelines, principles, statements of intent, plans, schemes, internal minutes, committee papers and approaches which include, depending on the context, which relate to:

(a) asset management;

(b) asset security;

(c) augmentation and planning;

(d) business cases;

(e) capital expenditure (e. g. capex approval and replacement);

(f) condition monitoring and replacement;

(g) corporate governance;

(h) demand management;

(i) disaster recovery;

(j) energy supply and customer growth forecasting;

(k) information technology;

(l) internal reviews;

(m) investment decision making and evaluation;

(n) land and easement acquisition;

(o) prioritisation and options analysis;

(p) procurement;

(q) project management;

(r) regulatory compliance;

(s) risk management and assessment; and

(t) self insurance.

The RIN defines Procedures as including procedures or processes which relate to the matters referred to in the definition of Policies and Strategies.

The NEL defines a *regulatory obligation or requirement* as:

(a) in relation to the provision of an electricity network service by a regulated network service provider:

  (i) a distribution system safety duty or transmission system safety duty; or

  (ii) a distribution reliability standard or transmission reliability standard; or

  (iii) a distribution service standard or transmission service standard; or

(b) an obligation or requirement under:

  (i) this Law or Rules; or

  (ii) an Act of a participating jurisdiction, or any instrument made or issued under or for the purposes of that Act, that levies or imposes a tax or other levy that is payable by a regulated network service provider; or

  (iii) an Act of a participating jurisdiction, or any instrument made or issued under or for the purposes of that Act, that regulates the use of land in a participating jurisdiction by a regulated network service provider; or

  (iv) an Act of a participating jurisdiction or any instrument made or issued under or for the purposes of that Act that relates to the protection of the environment; or

  (v) an Act of a participating jurisdiction, or any instrument made or issued under or for the purposes of that Act (other than national electricity legislation or an Act of a participating jurisdiction or an Act or instrument referred to in subparagraphs (ii) to (iv)), that materially affects the provision, by a regulated network service provider, of electricity network services that are the subject of a distribution determination or transmission determination.

13.2. Identifying and quantifying the Step Change

The Step Change was identified as part of the development and implementation of the distribution strategy. It is designed as a means of achieving Aurora's intention to 'not increase customer prices as a result of our efforts'.

13.3. Recurrence of Step Change

The Step Change is recurrent in nature, in that the three percent efficiency is applied to each year of the proposed operating expenditure for the *Forthcoming Regulatory Control Period*.

13.4. Policies and Strategies, Procedures and consultants reports

Aurora has developed this Step Change in accordance with the distribution strategy.

13.5. Regulatory obligations or requirements

This Step Change is not related to any changes in any regulatory obligations or requirements.

13.6. Cost benefit analysis

As this Step Change is negative in nature, minimal cost benefit analysis was undertaken by Aurora. The intention of this Step Change was to assist Aurora reduce its operating expenditure and thereby achieve its aim of minimising price increase to customers.

13.7. Considerations and requirements

This Step Change has been applied in addition to all other considerations undertaken by Aurora for each Opex Category. Aurora therefore considers that this Step Change will not:

- adversely impact on Aurora's ability to comply with all applicable regulatory obligations or requirements;
- impact on the demand for standard control services;
- adversely impact on Aurora's ability to maintain the quality, reliability, and security of supply for *standard control services*; and
- adversely impact on Aurora's ability to maintain the reliability, safety and security of the distribution system through the supply of *standard control services*.

Aurora also considers that this is an efficient mechanism for the reduction of operating costs and would be a methodology that would be considered by a prudent operator in the same circumstance as Aurora.

The remaining considerations outlined in RIN paragraph 5.13(i) are not applicable to this Step Change as they are considerations that have been taken account of within the development of the work programs for each Opex Category.

14. Provisions

14.1. RIN requirements

RIN paragraph 5.14 requires that for each provision provided in response to Regulatory Template 2.7 Aurora provide:

(a) a detailed definition;

(b) Aurora's capitalisation policy;

(c) a reconciliation of the movement of provisions for the *Current Regulatory Control Period*;

(d) where provisions have been increased due to a consultant's advice, include the actuarial report and provide reasons for the increase; and

(e) if there is no actuarial report, identify and provide the process Aurora undertook in determining the increase in provisions

RIN paragraph 5.15 requires that Aurora identify the annual amount of any movement in provisions that is provided in the Regulatory Templates for historical annual expenditure

14.2. Provisions

The following sections of this RIN Response provides a description of each provision provided in response to Regulatory Template 2.7

14.2.1. Long Service Leave

The long service leave provision represents the unused amount of employee entitlements in relation to long service leave.

14.2.2. Annual Leave

The annual leave provision represents the unused amount of employee entitlements in relation to annual leave.

14.2.3. Annual Leave Loading

The annual leave loading provision represents the unused amount of employee entitlements in relation to annual leave loading. Annual leave loading is an additional payment made to employees usually at the time of taking annual leave, calculated and applied in accordance with Aurora's condition of employment as outlined in the Aurora Energy Agreement 2008.

14.2.4. Workers Compensation

The workers compensation provision provides for an estimated liability for Aurora for future payments including medical expenses for employees who have been injured in the course of their employment with Aurora, where such costs are not covered by workers compensation insurance.

14.2.5. Retirement Benefits Fund

The retirement benefits fund provision represents the amount of employee entitlements in relation to the Retirement Benefits Fund (RBF) defined benefits superannuation scheme for Tasmanian Government employees. The RBF liability carried represents the present value of the defined benefit obligation adjusted for unrecognised service cost net of the fair value of the plan assets.

14.2.6. Superannuation Accumulation Fund

The superannuation accumulation fund provision represents the amount of employee entitlements in relation to Aurora's superannuation accumulation provisions.

14.2.7. Public Holidays

There is no statutory obligation or employee entitlements into the future. The public holidays provision is used during the year for administrative reasons in relation to the costing of salaries. The balance is nil at each year end.

14.2.8. Time Bank

The time bank provision represents an employee's entitlement in relation to time bank provision contained within the Aurora Energy Agreement 2008. The use of time bank allows the payment of a consistent fortnightly pay to the employee although the hours of work may differ from the standard hours paid. The entitlements represents hours worked by employee's for which they have not yet been paid, and will be paid for in the future when they don't work.

14.2.9. Dividend

No provision is made at year end for future dividend payments in accordance with statutory requirements.

14.2.10. Income Tax

The income tax provision represents Aurora's liability in relation to its tax obligations under the National Tax Equivalent Regime.

14.2.11. Payroll Tax

The payroll tax provision represents Aurora's notional payroll tax liability for leave provisions. It applies to those provisions where payroll tax is paid to the State when the entitlement is paid to the employee.

14.3. Capitalisation policy

Aurora's capitalisation policy is appended as an attachment to Aurora's Regulatory Proposal.

14.4. Reconciliation

Aurora has reconciled the provision movements and they are provided in Table 2.7.1 of the Regulatory Template 2.7.

14.5. Increases arising from consultant's advice

The retirement benefits fund provision increased as a result of advice provide to Aurora in an actuarial report. The Actuarial Report for the RBF Defined Benefits Scheme for 30 June 2010 is appended as an attachment to this RIN Response.

The increase in the RBF provision in the 2009-10 financial year was due to changes in the long term bond rate and changes in actuarial assumptions for retirement age and mortality rates.

For provisions other than the RBF Provision, Aurora calculates the liability at 30 June each year based upon the requirements of the Australian Accounting Standards (AASB's). Employee entitlement reports are available from Aurora's payroll system which is the basis of calculating the liability owing. During the year the provisions:

- decrease as leave is taken (to match the decrease in liability); or
- increase through the application of labour oncost rates as people work and accrue entitlements.

At year end the accumulated balance of the provision is adjusted to equal the liability owing through a provisions under/over recovery journal.

14.6. Annual movements

The annual movement in provisions is included in Tale 2.7.1 of Regulatory Template 2.7.

15. Self insurance

15.1. RIN requirements

RIN paragraph 5.16 requires that for each self insurance risk for which a self insurance allowance is proposed in the Regulatory Proposal that Aurora:

(a) provide:

(i) a description of the risk;

(ii) a description of the calculation of the self insurance risk premium (e. g. probability multiplied by consequence) including the size of the premium proposed for each regulatory year;

(iii) a report from an actuary who is qualified to provide such advice on the calculation of each self insurance risk premium; and

(iv) any quote obtained from an external insurer;

(b) explain

(i) why compensation should be provided for the risk;

(ii) where insurance is available from an external insurer and an insurance quote has been obtained:

(1) the amount insured for which the quote related;

(2) the annual amount of the premium so obtained;

(3) the size of the deductible; and

(4) the terms and conditions of the insurance; and

(iii) how and whether the risk for which self insurance is being sought is not recovered through any other mechanism.

RIN paragraph 5.17 requires that if self insurance for asset failure risk is proposed in the Regulatory Proposal that Aurora:

(a) provide

(i) the number of failures for each asset category for which self insurance is being sought for each year for as long as records allow;

(ii) the historical costs for each asset failure; and

(iii) describe what those costs relate to, including a split between capex and opex;

(b) explain:

(i) where the self insurance premium is not based on the actual historical asset failure rates and costs, why; and

(ii) how the proposed capex, particularly for reliability and quality maintained, has been taken into account in calculating the probability of asset failure for each asset category for which self insurance is being sought

RIN paragraph 5.18 requires that if a self insurance premium has not been sought for a particular risk in the *Current Regulatory Period*; provide an explanation of how this risk is relevant in the *Forthcoming Regulatory Control Period*.

RIN paragraph 5.17 requires that for each self insurance allowance proposed, explain whether or not that allowance relates to a deductable or an excess on an externally held insurance policy. Identify and provide where relevant, the amount of deductable risk to which Aurora is exposed.

As Aurora has not proposed or identified any self insurance risks for the *Forthcoming Regulatory Control Period* this question is not applicable to this RIN Response.