

**Expenditure Forecast Assessment Guidelines**

**Summary of meeting – 27 September 2013**

***Category analysis data templates***

Held via video link between AER’s Brisbane, Melbourne and Canberra offices

On 27 September 2013, the AER, as part of its Better Regulation work program, hosted a meeting to discuss the category analysis data templates published with the AER Draft Expenditure Assessment Guidelines on 9 August 2013. The meeting ran from 9:00 am to 1:00 pm and was chaired by Anthony Hynes of the AER. A full attendee list can be found in Attachment A.

This summary outlines the key topics and themes of the meeting, including views expressed at the meeting. The outline broadly follows that of the agenda.

1. ***Objectives and general comments***

The objectives of the workshop were to:

* discuss how the businesses could complete the templates
* discuss comments in response to the Category Analysis Survey and relevant comments in the businesses submissions, and
* where businesses has indicated challenges existed to completing the templates:
	+ identify what specific issues are; and
	+ how specific issues can be overcome.

AER staff indicated at the start of the meeting the objectives above, that the views expressed were AER staff member views, and that minutes and actions would be recorded and published.

AER staff then worked through each of the key expenditure assessment categories and associated templates.

1. ***Demand forecasting***

AER staff noted the indicative templates contained two formats for collecting demand data:

* for demand forecast assessments (tabs 3.1 and 3.2)
* for populating the augex model (tabs 3.3 and 3.4)

The two formats would collect very similar information and may be consolidated to avoid potential duplication. This depends on segments used for demand forecasting purposes being consistent with the segments for the augex model.

The NSPs stated they would like to see the consolidated templates so they can provide feedback on this question, and also noted the potential overlap with data requested in the economic benchmarking RIN. AER staff stated that work had begun to consolidate the templates and may provide them to the NSPs for feedback when they are in a more completed state.

Energex stated it was relatively comfortable with system and substation level demand data in MW however demand forecasts for 11kV feeders are only produced in amps. Ergon produces 11kV feeder forecasts; however its forecasting group does not produce these forecasts. Rather, such forecasts are based on information regarding individual feeders such as development plans and historical growth rates.

AER staff noted Ergon’s and Energex’s feedback that they do not necessarily collect demand data in MVA, or MW, terms for all levels of the network, and asked for an explanation for this. Specifically, AER staff noted that demand, in MVA terms, is the appropriate measure to observe when assessing whether sections of the network require augmentation. Energex stated certain parts of the network are forecasted in terms of amps (i.e. 132kV, 110kV, 33kV and 11kV feeders), although these can be converted into MVA. Energex further clarified that demand in MVA terms is the appropriate measure when assessing augex needs at the zone substation level and above. However, amps are the appropriate demand units when assessing augex needs at lower levels such as 11kV or 33kV feeders. AER staff requested the DNSPs to provide the appropriate demand units for different levels of the network for the purposes of assessing augmentation needs.

AER staff noted the DNSPs’ concern regarding the collection of the half hourly temperature data, particularly the temperature at the time of maximum demand. It was suggested that DNSPs would collect such information because it is an important input in demand forecasting. Energex stated they use daily minimum and maximum temperatures for demand forecasting purposes as this provides a better correlation between temperature and daily maximum demand. Ergon stated they use maximum temperatures for demand forecasting purposes.

The DNSPs noted the high number of distribution feeders on their network. Further, the configuration of these feeders, and hence the associated maximum demand, can often change. Hence the use of half hourly demand data may be of limited value. DNSPs would only investigate demand conditions at a feeder in detail if an imminent overload is detected.

Powerlink noted the indicative templates are not clear. For example, the concepts of 10% or 50% PoE do not apply to raw maximum demand, which are historical data. Powerlink also asked what the definition of demand is for the templates, for example, ‘as generated’ demand, or ‘delivered’ demand or ‘native’ demand.

Powerlink also noted that it was a combination of connection points that drive augmentation works, and that it has more than 100 connection points. Ergon also sought clarity on what defined “connection point”, for example, customers or distribution transformers at the feeder level.

AER staff took these comments on board and acknowledged the templates require some work and re-formatting to clarify concepts and definitions.

The NSPs sought clarity more generally on whether the templates would collect historic or forecast information, and for which years. AER staff noted this wasn’t clear from the templates, which had been prepared to generally reflect a single year. They clarified that, for category analysis templates:

* all NSPs would be required to provide 5-years historic information i.e. from 2008/09 to 2012/13; and
* at the time of their price reviews, NSPs would also be required to submit 5 years of forecast information in the same format.
1. ***Augmentations capex***

AER staff noted the indicative templates would collect augex information for two separate processes:

* To populate the augex model (templates 4.6 to 4.13)
* For asset data analysis (templates 4.1 to 4.5)

AER staff noted that the augex model, by itself, may not be sufficient to assess augex forecasts. Hence, the AER would consider looking into collect cost information for individual augex projects, including physical metrics, unit costs and volumes for the major assets that comprise augex projects (such as transformers and switches for substation augmentations), and other labour and material costs.

The NSPs sought clarity on the timing of project information requested in the templates, for example, at the time the project was approved or commissioned.

AER staff clarified that information for each project would not be collected for distribution substations or LV feeders. For such high volume, low cost projects, DNSPs would be required to aggregate projects to common activities. The indicative templates, for example, require DNSPs to group distribution substation augex into either “New substations” or “Substation upgrade”. AER staff noted that they would be open to suggestions of more appropriate subcategories.

The NSPs were asked whether they can provide augex project data at this level of disaggregation. Energex stated they can provide augex projects disaggregated into labour, materials and contracts. Energex also stated they collect total labour costs per project; however it does not further disaggregate labour costs per asset installed as part of the project. The DNSPs stated the AER should be mindful that each augex project may have specific factors that affect labour and civil works costs. In addition, overheads for each project will need to be estimated.

AER staff stated their understanding that augmentation of lines (at the transmission and subtransmission levels) and substations (at the transmission, subtransmission and zone substation levels) are often significant projects with material costs. NSPs should therefore be able to disaggregate such costs beyond labour, materials and contracts. For example, NSPs would disaggregate such costs when they are budgeting for such projects, or deriving their augex forecasts for regulatory determinations. The NSPs agreed that they keep disaggregated cost information for large project estimates. However, it may not be disaggregated in the format specified in the indicative templates, and it may be more difficult to break down augex project costs where contracts are involved. In addition, providing historical project data may be difficult because there may be time lags between the establishment of contracts and the completion of augex projects and detailed disaggregation of costs by installed part is not captured as projects are constructed.

Powerlink commented that there would be a disconnect between historical and forecast project cost data. That is, historical project cost data would contain actual incurred costs for the categories, whereas forecast project cost data would contain costs calculated from their databases that contained different categories. AER staff noted that this was an issue faced by NSPs in updating their forecasting/ budgeting estimates with historic outturn costs. AER staff requested further information from NSPs on how the indicative templates could be better aligned to minimise any inconsistency with their internal reporting.

It was agreed that the Queensland NSPs will provide feedback on how they can break down augex project costs, both for historical data and future augex projects.

Energex asked AER staff to clarify the value in which they must report easement costs. For example, will NSPs be required to report easement costs in today’s value given they may have been purchased several years prior? When questioned how this was currently captured, Energex noted that strategic purchases of land were reported (i.e. for RAB/ depreciation purposes) in the year of purchase, however this land was not being used. AER staff undertook to consider this issue further and develop appropriate definitions for easement values.

1. ***Replacement capex***

AER staff initiated the discussion of the repex data requirements by noting the objective in repex is to standardise the asset categories making up the asset groups that NSPs are currently required to report against. AER staff then briefly recapped the process so far taken to meet these standardisation objectives.

AER staff noted that the Issues Paper proposed to maintain the approach of collecting asset volumes and unit costs. NSPs provided feedback on using repex model asset groups used in the AER’s latest determinations. AER staff noted that NSPs generally supported that the asset groups capture material differences in work processes and asset lives.

AER staff noted the major issues identified at the Issues Paper stage by NSPs were that they should have discretion to classify assets below the asset groups. Some NSPs indicated a preference for some groups to aggregate into major categories. AER staff noted that after receiving responses to the Issues Paper there was a pre–draft guideline consultation period, where AER staff circulated a “straw-man” outlining standardised asset types, proposing they be based on design specifications materially affecting cost. The repex data template released with the draft guidelines is an illustration of staff’s further reflection on NSP responses to the straw-man.

AER staff provided the following clarifications in response to NSP concerns around the indicative repex templates:

* AER staff noted that the unit cost data needs to be back-cast for the last five years of historical data and forecast for the future regulatory period when prepared as part of the determination process. NSPs sought further clarification around the specific 5 years of back-cast data given the transitional period.
* AER staff noted that the level of discretion NSPs have to disaggregate the asset categories are at a lower level than those in the template. AER staff clarified that NSPs were free to disaggregate the asset categories provided they were transparent in documenting how they did this.
* AER staff sought NSPs views on the definitions of high, medium and low ampere rating bands applying to various repex asset categories. AER staff clarified that the AER purposely did not specify the rating bands, considering it likely only a few discrete rating bands applied to each asset type. The AER considered NSPs would be in the best position to classify these. NSPs agreed to provide feedback on this approach after consulting with their relevant technical experts.
* AER staff sought NSPs views on an issue raised in earlier consultation where NSPs advocated including a distribution substations group, containing asset categories specific to substations such as transformers and switchgear. NSPs were in general supportive of this approach and agreed to provide feedback on this approach after consulting with their relevant technical experts.

AER staff noted that the comments provided in response to the survey were comprehensive and self-contained.

1. ***Connections and customer driven works***

### Connections – Distribution

AER staff outlined the definition of simple connections as a single span of wire connecting the customer’s premises to an existing portion of the network and was expected to represent the majority of connection works performed by DNSPs over a regulatory period. AER staff expected that this connection activity was similar across DNSPs in different locations and businesses and had the potential to benchmark DNSPs across the NEM. Additionally, AER staff explained that complex connections would be any connection that is not simple, for instance a connection involving the installation of a transformer or any augmentation of the upstream distribution network. Ergon indicated that most connections performed within the rural areas of their network would not be classified as simple connections.

Ergon and Energex indicated that they would not be able to report connections expenditure by CBD, Urban and Rural areas. AER staff asked the DNSPs whether they reported connections expenditure data by location (i.e. Depot or planning region). Ergon indicated that they have developed a CICW model which forecasts connection costs by 8-12 customer types based on historical cost estimates and using numerous economic variables. The model assumes travel time is expected to be constant over time. AER staff asked whether they could arrange an inspection of the model for the purpose of informing its expenditure forecast data template. Ergon suggested that a follow-up meeting should be held to discuss the AER’s access to the CICW model. Energex indicated it could not report connections expenditure data by CBD, Urban and Rural areas but would investigate if expenditure data could be provided by its 5 planning regions. AER staff suggested a follow-up meeting with Energex’s technical staff to discuss how connections expenditure data can be reported by location.

### Connections – Transmission

Powerlink sought clarity about which connection services were covered by the expenditure forecast templates. AER staff advised that it was only seeking to record expenditure data for prescribed transmission services and would continue to perform a detailed engineering assessment of transmission connection projects. Powerlink indicated that the level of connection related enquiries had reduced and so expected to undertake few connections within the next regulatory period, most of which would be transmission connections to the distribution network. AER staff asked whether such connections could be generalized by the type of plant/equipment and labour employed. Powerlink suggested that the template include typical sub-categories for material and labour inputs for connections to the distribution network and that reporting by CBD, Urban and Rural areas was not useful to explain the cost of connection projects. Developing the template to account for the most material expenditure items for common connection projects would need to be clarified in further discussion between Powerlink and AER staff.

### Metering – Distribution

The DNSPs indicated that expenditure related to metering activities was not split into material, labour and contract categories. Many metering activities were contracted out to third parties and contracts provided little disaggregation. Additionally, Energex indicated difficulty in consistent reporting of metering activities following from re-classification of metering services from the last regulatory period to the current regulatory period. The extent to which expenditure stated within contracts can be disaggregated would need to be clarified in further discussion between NSP technical staff and AER staff.

### Public lighting – Distribution

Energex noted that public lighting works were contracted out to third parties and limited data is available to capture expenditure disaggregated into material, labour and contractor costs. Ergon echoed similar concerns that some public lighting work was contracted out (depending on location) and limited disaggregated data is available. The extent to which expenditure stated within contracts can be disaggregated would need to be clarified in further discussion between NSP technical staff and AER staff.

### Fee based and quoted services – Distribution

AER staff outlined its intended assessment approach to directly benchmark those fee-based and quoted services which are commonly provided by DNSPs across the NEM. Those services which are not commonly provided by DNSPs would be categorised as miscellaneous services and be targeted for a more detailed engineering assessment.

Energex indicated they could report 3 years of historical data but would have difficulty in providing 5 years of historical data for disaggregated fee-based and quoted service expenditures due to reclassification of these services for the current determination period and sought further clarity of the services’ definitions. Identifying services that are intended for benchmarking and the definition of services, more generally would need to be clarified in further discussion between NSP technical staff and AER staff.

1. ***Non-network expenditure***

AER staff re-capped issues raised by Energex and Ergon Energy in their survey responses to the AER’s draft reporting template for category analysis. In particular, Ergon Energy and Energex’s survey responses indicated that IT and communication services are provided by a third party provider with the exception of personal computing hardware. Additionally, software, maintenance and other costs associated with personal computers are incorporated into the annual fee charged by the provider. Finally, detailed information relating to corporate system infrastructure, maintenance and support costs are not captured by the NSPs’ reporting systems. AER staff questioned how Ergon Energy and Energex could budget their costs and negotiate contracts without a detailed breakdown of unit cost information. AER staff also asked whether contracts made with third parties included key performance indicators and how contracted third parties performance was measured if unit cost information was unavailable. Energex asked if they could take the AER’s questions on notice and follow up with answers at a future time. Similarly, Ergon Energy stated that only high-level costs were able to be reported for expenditure related to non-network activities which were contracted out to third parties. Ergon Energy indicated that they would need to check whether contracts with third parties included key performance indicators and if service-level agreements were agreed to at arms-length and follow up with answers to the AER at a future date. It was noted that mobile substations were used by NSPs and this should be reflected in the templates e.g. whether as vehicles or another expenditure type.

Powerlink sought clarity on the definition of employee numbers, vehicles and buildings. It indicated that it currently reports capex for vehicles and buildings as separate line items.

1. ***Vegetation management***

AER staff explained that the intention behind the concept of vegetation management zones was to account for differences in costs caused by regulations and volumes of work performed. Collecting data on tree growth rates has been proposed as it was raised in previous workshops as a driver of tree cutting cycles and, by extension, the amount for tree trimming work required to be performed by different NSPs.

Ergon said they split their network up by ‘bio-regions’ which they could apply as their vegetation management zones for the purpose of this template. Within their bio-regions they have an understanding of tree growth rates, which they use to determine the frequency of inspections and cutting. They noted they do not have data on tree species. Ergon were unsure if they collected actual tree growth data. They said growth rates are estimated based on historical work.

The Energex area (SEQ) is covered by a single bio-region. Energex currently contracts out vegetation management on a postcode basis and stated that proposed zones could be based on these and would review. Energex does not currently capture the information in the format requested by the AER. They do not have the number and the species of trees across their network. Energex recognised that tree growth rates may be linked to weather.

Powerlink said they also don’t collect data on tree species and their growth rates.

AER staff asked if NSPs consider tree growth rates in their contractual arrangements. Powerlink responded that their focus with contractual arrangements is the efficient delivery of services.

AER staff asked if NSPs’ contractors consider the specifics of work required in negotiation. Energex replied that this was the case. Energex will indicate what work is required in the upcoming 12 months; contractors will nominate their price to do the work.

Powerlink commented that legislative requirements were a more relevant driver of vegetation management costs.

Powerlink and Energex sought clarification on what information AER staff were expecting to collect with information on regulatory requirements. AER staff responded that they would expect NSPs to indicate how the frequency and scope of certain work is affected by the regulations. By extension, NSPs would explain through the table why unit costs for some work activities may be higher than otherwise.

Ergon noted that in some circumstances they consciously make a decision to cut beyond the minimum requirements as stipulated by relevant legislation; for example, in some rural areas they cut back enough to ensure they won’t have to return for 10 years.

Energex noted that some vegetation management work can be performed when providing other services e.g. some tree clearance with line work.

AER staff queried Powerlink on their ability to populate the vegetation management transmission spreadsheet. Powerlink said the activity categories were relevant, noting they do engage in tree trimming and access track clearance. They suggested work including chemical treatment and wash downs be in included within the categories. Powerlink noted that their urban/rural categorisation could be made to align with the proposed geographical categorisation (forest/grassland/cities and townships/etc). Powerlink said they will provide additional written feedback on what they collect and what they consider should be collected.

AER staff queried Energex and Ergon on their ability to populate the vegetation management distribution spreadsheet. Energex said they capture costs by distribution and sub-transmission but not by urban/rural, or from low/high voltage feeders. They don’t separate out costs for easement clearance and some other activities, but systems could put in place to collect this information. AER staff asked Energex if they consider the voltage off feeders to be a differentiator of vegetation management costs. They considered this was not the case.

Ergon commented that the frequencies of their tree cutting cycles differ across regions, and it was not clear how differences in cutting cycles will be taken into account when comparing costs. They noted that they do not engage in any ground clearance costs as defined in the template. They could provide areas (by hectares) of area treated with herbicide. This would require to definition of ground clearance to be amended. They also noted that they do not undertake any easement clearance work. Travel costs are considered in contract arrangements; they noted that they engage in long-term contracts with their contractors. Ergon said they might have information on spans cut by feeder at an aggregate level; they use this information to set budgets for vegetation management work.

Energex and Ergon sought clarification on vegetation management outage events. They considered it was not clear how the information requested in this spreadsheet is differentiated from the information collected in the emergency response spreadsheet.

Ergon followed up on an earlier discussion, noting that they have split their network into 19 bio-regions for vegetation management purposes.

1. ***Maintenance and emergency response***

AER staff clarified the following:

* The discussion on asset groups, subcategories and asset details under the Repex discussion is relevant here. The asset groups for both Repex and Maintenance should be the same as the AER will analyse the repair/replace trade-off decisions of the NSPs and the effect on expenditures.
* The AER will collect data on direct costs as well as allocated overheads. The differences in overhead allocation will not matter as the AER will compare direct costs across businesses.

Energex commented that is currently only able to provide maintenance data based on voltage level and asset type. It does not consider equipment rating to be a maintenance cost driver and questions the benefit of providing maintenance costs at the level of disaggregation requested. It does not currently capture maintenance expenditure by the categories CBD, urban and rural. In the timeframe associated with the first RIN it may be possible to disaggregate to a regional hub locality and this is currently under investigation. The disaggregation to CBD, urban, rural will require changes to the way Energex captures information.

Ergon commented that it operates and reports on maintenance programs activities on a state-wide basis, not by region and does not differentiate between voltage levels for asset inspection activities such as pole inspections.

On emergency response data requirements, Energex commented it is currently only able to provide emergency response data based on voltage level split by overhead/underground. It does not consider equipment rating to be an emergency response cost driver and questions the benefit of providing costs at the level of disaggregation requested. It does not currently capture emergency repair expenditure by the categories CBD, urban and rural. In the timeframe associated with the first RIN it may be possible to disaggregate to a regional hub locality and this is currently under investigation. Whilst Energex captures the cause of emergency response events e.g. wildlife, vegetation etc. this is not currently reconciled with cost data. Energex currently captures the cost associated with major storm events separately; however, this is not reported against individual asset categories. The reporting required by this template will require significant changes to the way Energex currently captures this information.

In relation to emergency response work, Ergon Energy can provide expenditure information at a "rolled up" level and separate out major events only.

1. ***Overheads***

Energex commented that its corporate financial and reporting systems are not structured to capture the overheads in the categories as defined in the template. Energex's corporate financial system has been developed to facilitate data capture and reporting consistent with statutory and management reporting expectations and in compliance with the AER approved CAM. Wherever possible, the structure has also been aligned with current AER regulatory reporting requirements. Some of Energex's current reporting categories are consistent with the definitions in the template. However, many, while similarly named, do not align with the definitions in the template. Energex's corporate financial system has been structured with a hierarchy of Responsibility Centre, Activity and Product, however all reporting is reflective of the Responsibility Centre as the lowest level. The requested categories within the template represent a mix of costs at each of these three levels and also between each of the levels. To facilitate reporting as requested will require complete disaggregation of all information, restructuring to the categories requested and subsequent reconciliation back to statutory, management and current regulatory reporting values. Where disaggregated data does not facilitate or align directly with the requested categories, assumptions will be required to allocate to appropriate categories.

Ergon Energy stated it can provide expenditure information and overhead allocations at a "rolled up" level only. Any further disaggregation in the categories as defined in the template would require arbitrary apportionments which may deem comparatives irrelevant. Corporate systems have been developed to facilitate data capture and reporting consistent with statutory and management reporting expectations and in compliance with the AER approved CAM. Whilst some of the overhead categories align closely with Ergon's internal categories, definitions / inclusions of costs in those categories may differ. To meet requirements, costs would need to be completely disaggregated, re-mapped to the categories, and reconciled to statutory, management and current regulatory reporting values. It is also unclear how this template meets requirements set out in "Instructions" tab, for data to be provided in accordance with, and in consistent form with, the approved CAM in place at the time of submitting the RIN data. CAMs may also change within and across periods - it is unclear how requirements will be set in this regard.

AER staff clarified the following:

* There will be no change to the NSPs’ approved CAMs and the AER will not require a standardised CAM; the NSPs will continue with their individual CAMs. However, the AER will require more visibility and transparency in regard to the application of the CAMs, including how overheads are allocated at the level below the categories of services. The template’s data requirements therefore are not inconsistent with existing CAMs.
* The AER will benchmark Network Overheads as one expenditure group, and Corporate Overheads as another expenditure group, across businesses and across time. Hence, differences in NSPs’ overhead allocation methods will not matter in comparing costs across NSPs.
* In the template, Corporate Overhead line items are indicative only. NSPs can specify their corporate overhead line items according to their organisational structure and current cost captures. These items are normally cost or responsibility centres of the business.
* Definitions of expenditure categories under Network Overhead and Corporate Overhead should be clear and should be agreed upon with the NSPs.
1. ***Actions***

### Demand forecasting

1. AER staff to consider the possibility of providing consolidated demand templates to NSPs for feedback when they are in a more completed state.
2. AER staff to amend templates to improve their clarity. This includes work on the instructions, and including definitions in the demand sheets, and the formatting of the templates.
3. Queensland NSPs to provide the appropriate demand units for different levels of the network for the purposes of assessing augmentation needs.
4. Queensland DNSPs to describe how the methods and datasets they use to produce spatial demand forecasts given the changing configuration of the network.

### Augmentations

1. Queensland DNSPs to provide comments on appropriate ways to classify high volume, low cost augex such as augex for distribution substations or LV feeders.
2. Queensland NSPs to provide feedback on how they can break down augex project costs for historical data and future augex projects. In particular, the AER is interested in ascertaining whether NSPs can disaggregate augex project costs into major plant items (for example, transformers in substations, and overhead cable for subtransmission lines), and other labour and materials costs, as proposed in the indicative templates.
3. AER staff to amend templates to improve their clarity. This includes work on the instructions and definitions.
4. AER staff to consider issues around the timing recognition and calculation of easement purchases.

### Repex

1. NSPs to provide feedback on appropriate ratings bands for various asset types after consulting with their relevant technical experts.
2. NSPs to provide feedback on creation of “distribution substations” category after consulting with their relevant technical experts.

### Connections and customer-driven works

1. AER staff to further discuss with Energex’s technical staff to discuss how connections expenditure data can be reported by location.
2. AER staff to arrange a further discussion with Powerlink to develop the template to account for the most material expenditure items for common connection projects.
3. AER staff to arrange a further discussion with NSPs to clarify the extent to which expenditure stated within contracts (for both metering and public lighting) can be disaggregated.
4. AER staff to arrange a further discussion with NSPs to identify services that are intended for benchmarking and the definition of services, more generally.

### Non-network expenditure

1. Ergon Energy to check whether contracts with third parties included key performance indicators and if service-level agreements were agreed to at arms-length and follow up with the AER.
2. AER staff to consider approaching Sparq directly regarding IT data.

### Vegetation management

1. Powerlink to provide additional written feedback on what they collect and what they consider should be collected.

### Maintenance

N/A

### Emergency response

N/A

### Overheads

1. NSPs to provide more detailed feedback on definitions of line items under Network Overhead and Corporate Overhead.

### Other

1. When issuing the draft RIN, the AER would provide a statement explaining changes with respect to the indicative category templates

## *Attachment A: Attendee list*

### Brisbane office

|  |  |
| --- | --- |
| **Name** | **Organisation** |
| Nicola Roscoe | Energex |
| Mick Ryan | Energex |
| Dave Simpson | Energex |
| Jennifer Harris | Powerlink |
| Grant Robinson | Powerlink |
| Anthony Hynes | AER |
| Lawrence Irlam | AER |

### Melbourne office

|  |  |
| --- | --- |
| **Name** | **Organisation** |
| Max Hooper | AER |
| Jess Manahan | AER |
| Cameron Smith | AER |
| Paul Dunn  | AER  |
| Israel del Mundo | AER |
| Toby Holder | AER |

### Townsville (Ergon) office

|  |  |
| --- | --- |
| **Name** | **Organisation** |
| Kim Casey | Ergon Energy |
| Kylie Douglas | Ergon Energy |
| Shane Brunker | Ergon Energy |
| Peter Kane | Ergon Energy |
| Andy Chan | Ergon Energy |
| Grujica Ivanovich | Ergon Energy |
| Lisa Harry | Ergon Energy |
| Paul Reynolds | Ergon Energy |
| Karl Romano | Ergon Energy |

### Canberra office

|  |  |
| --- | --- |
| **Name** | **Organisation** |
| Yili Zhu | AER |